Minor Industrial
Permit No.: MT0030279

MONTANA DEPARTMENT OF ENVIRONMENTAL QUALITY

AUTHORIZATION TO DISCHARGE UNDER THE
MONTANA POLLUTANT DISCHARGE ELIMINATION SYSTEM

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

Montanore Minerals Corporation

is authorized to discharge from its **Montanore Project**

located in the **Upper Libby Creek drainage near Libby, MT; Section 15, Township 27 North Range 31 West, Lincoln County**

to receiving waters named, **Libby Creek and alluvial ground water, Ramsey Creek, and Poorman 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: **March 1, 2017**.

This permit and the authorization to discharge shall expire at midnight, **February 28, 2022**.

FOR THE MONTANA DEPARTMENT OF
ENVIRONMENTAL QUALITY

Jon Kenning, Chief
Water Protection Bureau

Issuance Date: January 17, 2017

TABLE OF CONTENTS

Cover Sheet--Issuance and Expiration Dates

I. EFFLUENT LIMITATIONS, MONITORING REQUIREMENTS, & OTHER CONDITIONS 3
- A. Description of Discharge Points and Mixing Zones 3
- B. Interim Effluent Limitations 4
- C. Final Effluent Limitations 11
- D. Monitoring Requirements 18
- E. Special Conditions 23
- F. Action & Reporting Schedule 33

II. MONITORING, RECORDING, AND REPORTING REQUIREMENTS 34
- A. Representative Sampling 34
- B. Monitoring Procedures 34
- C. Penalties for Tampering 34
- D. Reporting of Monitoring Results 34
- E. Compliance Schedules 34
- F. Additional Monitoring by the Permittee 34
- G. Records Contents 34
- H. Retention of Records 35
- I. Twenty-four Hour Notice of Noncompliance Reporting 35
- J. Other Noncompliance Reporting 36
- K. Inspection and Entry 36

III. COMPLIANCE RESPONSIBILITIES 37
- A. Duty to Comply 37
- B. Penalties for Violations of Permit Conditions 37
- C. Need to Halt or Reduce Activity not a Defense 37
- D. Duty to Mitigate 37
- E. Proper Operation and Maintenance 37
- F. Removed Substances 38
- G. Bypass of Treatment Facilities 38
- H. Upset Conditions 39
- I. Toxic Pollutants 39
- J. Changes in Discharge of Toxic Substances 39

IV. GENERAL REQUIREMENTS 41
- A. Planned Changes 41
- B. Anticipated Noncompliance 41
- C. Permit Actions 41
- D. Duty to Reapply 41
- E. Duty to Provide Information 41
- F. Other Information 41
- G. Signatory Requirements 41
- H. Penalties for Falsification of Reports 42
- I. Availability of Reports 43
- J. Oil and Hazardous Substance Liability 43
- K. Property Rights 43
- L. Severability 43
- M. Transfers 43
- N. Fees 43
- O. Reopener Provisions 44

V. DEFINITIONS 46

I. EFFLUENT LIMITATIONS, MONITORING REQUIREMENTS, & OTHER CONDITIONS

A. Description of Discharge Points 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 Section 75-5-632 of the Montana Water Quality Act.

Outfall	Description
001	**Location:** Percolation pond located at 48°06'08" North latitude and 115 ° 34'18" West longitude. **Mixing Zone:** The maximum extent of the chronic mixing zone of ground water discharged to Libby Creek receiving waters shall extend downgradient to monitoring station LB-300 for the following parameters: nitrate + nitrite, total inorganic nitrogen, chromium, copper, iron, lead, manganese, and zinc. **Treatment Works:** Settling, ultrafiltration, and percolation through alluvial sediments.
002	**Location:** Drainfield located at 48°06'10" North latitude and 115°34'27" West longitude. **Mixing Zone:** The maximum extent of the chronic mixing zone of ground water discharged to Libby Creek receiving waters shall extend downgradient to monitoring station LB-300 for the following parameters: nitrate + nitrite, total inorganic nitrogen, chromium, copper, iron, lead, manganese, and zinc. **Treatment Works:** Settling, ultrafiltration, and percolation through alluvial sediments.
003	**Location:** End of pipe discharge from percolation pond to Libby Creek located at 48°06'08" North latitude and 115°34'18" West longitude. **Mixing Zone:** The maximum extent of the chronic mixing zone in Libby Creek extends downgradient from the point of discharge downstream two stream widths for the following parameters: nitrate + nitrite, total inorganic nitrogen, chromium, copper, iron, lead, manganese, and zinc. **Treatment Works:** Settling and ultrafiltration.

004	**Location:** Storm water discharging to Libby Creek located at 48°05'37" North latitude and 115°35'04" West longitude. **Mixing Zone:** No authorized mixing zone. **Treatment Works**: Ditches, sediment traps, and Best Management Practices.
005	**Location:** Storm water discharging to Libby Creek located at 48°05'37" North latitude and 115°35'22" West longitude. **Mixing Zone:** No authorized mixing zone. **Treatment Works**: Ditches, sediment traps, and Best Management Practices.
006	**Location:** Storm water discharging to Ramsey Creek located at 48°07'50" North latitude and 115°33'09" West longitude. **Mixing Zone:** No authorized mixing zone. **Treatment Works**: Ditches, sediment traps, and Best Management Practices.
007	**Location:** Storm water discharging to Poorman Creek located at 48°08'39" North latitude and 115°33'09" West longitude. **Mixing Zone:** No authorized mixing zone. **Treatment Works**: Ditches, sediment traps, and Best Management Practices.
008	**Location:** Storm water discharging to Poorman Creek located at 48°08'52" North latitude and 115°32'49" West longitude. **Mixing Zone:** No authorized mixing zone. **Treatment Works**: Ditches, sediment traps, and Best Management Practices.

B. Interim Effluent Limitations

1. Outfalls 001 and 002

Beginning on March 1, 2017, and ending December 31, 2019, the quality of effluent discharged by the facility from Outfalls 001 and 002 shall, as a minimum, meet the numeric limitations as set forth below in Table 1 and the narrative limits immediately below Table 1:

Table 1. Interim Effluent Limitations, Outfalls 001 and 002

Parameter	Units	Average Monthly Limitation (AML)	Maximum Daily Limitation (MDL)
Total Suspended Solids	mg/L	20	30
Total Nitrogen, as N	lbs/day	9.3(1)	NA
Total Inorganic Nitrogen, as N	mg/L	2.5	NA
Cadmium, Total Recoverable	µg/L	0.8	1.2
Chromium, Total Recoverable	µg/L	13	20
Copper, Total Recoverable	µg/L	7	10
Iron, Total Recoverable	µg/L	250	380
Lead, Total Recoverable	µg/L	0.6	0.9
Manganese, Total Recoverable	µg/L	110	150
Mercury, Total Recoverable	µg/L	0.01	0.015
Zinc, Total Recoverable	µg/L	100	150
Oil & Grease	mg/L	NA	10
pH	s.u.	Within the range of 6.5 – 8.5 at all times	

Footnotes:
NA = Not Applicable
1. Limit effective July 1st through September 30th of each year.

There shall be no discharge that settles to form objectionable sludge deposits or emulsions beneath the surface of the water or upon adjoining shorelines

There shall be no discharge that produces odors, colors, or other conditions as to which create a nuisance or render undesirable tastes to fish flesh or make fish inedible

a. ***Prior to Commencement of Milling Operations or Completion of the Tailings Impoundment***

Prior to commencement of milling operations or completion of the tailings impoundment, the facility is authorized to discharge mine drainage at Outfalls 001 and 002 subject to the numeric effluent limits in Table 1 and the narrative limits listed immediately below Table 1. However, the permittee will be considered exempt from the above limits if the permittee documents and demonstrates that a 10-year 24-hour precipitation event caused the discharge, in conformance with the storm exemption outlined in 40 CFR 440.131(b). The permittee's demonstration must include all of the following:

- The facility is designed, constructed and maintained to contain the maximum volume of wastewater which would be generated by the facility during normal operating conditions without an increase in volume from precipitation and the maximum volume of wastewater resulting from a 10-year, 24-hour precipitation

event. In computing the maximum volume of wastewater which would result from a 10-year, 24-hour precipitation event; the facility must include the volume which would result from all areas contributing runoff to the individual treatment facility, i.e., all runoff that is not diverted from the active mining area and runoff which is not diverted from the mill area;

- The facility takes all reasonable steps to maintain treatment of the wastewater and minimize the amount of overflow; and
- The facility complies with the notification requirements of this MPDES permit Part III.G and H.

This documentation must be submitted to the Montana Department of Environmental Quality (DEQ). This exemption is designed to provide an affirmative defense to an enforcement action. Therefore, the permittee has the burden of demonstrating to DEQ that the above conditions have been met.

b. After Commencement of Milling Operations or Completion of the Tailings Impoundment

The permittee must notify DEQ in writing 90 days prior to the beginning of any milling operations at the facility or completing construction of the tailings impoundment. Once either the milling operations commence or construction of the tailings impoundment is complete, allowing for the potential commingling of mine drainage with either raw materials and/or process wastewater from the mill, the facility is then considered a "zero discharge" facility and is no longer authorized to discharge from Outfalls 001 and 002 except under the specific exemptions as outlined in this MPDES permit and in accordance with 40 CFR 440.104(b)(2) and 40 CFR 440.131(c).

Alternative TBELs for Outfalls 001 and 002

Annual Precipitation
A discharge is allowed if the permittee documents and demonstrates that the discharge occurs as a result of annual precipitation that exceeds annual evaporation, in conformance with the conditions outlined in 40 CFR 440.104(b)(2)(i). The facility is then allowed to discharge the volume of water (equal to the difference between annual precipitation falling on the treatment facility and the drainage area contributing surface runoff to the treatment facility and annual evaporation) subject to the numeric effluent limits in Table 1 and the narrative limits listed immediately below Table 1.

This documentation must be submitted to DEQ and must include, at a minimum, the following:

- The annual evaporation value for the treatment facility and how this value was determined;
- The drainage area contributing runoff to these outfalls and how this value was determined;

- The rainfall hyetograph for each individual storm event in excess of the 10-year, 24-hour design storm; and
- Conformational monitoring for each discharge resulting from this type of storm event in accordance with the storm water monitoring requirements of this MPDES permit as outlined below in Table 8.

Interference
If the permittee documents and demonstrates the need for a discharge due to interference that meets all of the requirements under 40 CFR 440.104(b)(2)(ii), then a discharge of process wastewater in an amount necessary to correct the interference problem after installation of appropriate treatment may be discharged subject to, at a minimum, the numeric effluent limits in Table 1 and the narrative limits listed immediately below Table 1. The facility has the burden of demonstrating to DEQ that a discharge of this nature is necessary to eliminate interference in the ore recovery process and that the interference could not be eliminated through appropriate treatment of the recycle water.

Storm Exemption– Outfalls 001 and 002
A discharge is also allowed if the permittee documents and demonstrates that the discharge occurs as a result of a 10-year, 24-hour precipitation event in conformance with the storm exemption conditions outlined in 40 CFR 440.131(c). The facility is allowed to discharge during such an event subject to the following:

- The facility is designed, constructed and maintained to contain the maximum volume of wastewater which would be generated by the facility during normal operating conditions without an increase in volume from precipitation and the maximum volume of wastewater resulting from a 10-year, 24-hour precipitation event. In computing the maximum volume of wastewater which would result from a 10-year, 24-hour precipitation event; the facility must include the volume which would result from all areas contributing runoff to the individual treatment facility, i.e., all runoff that is not diverted from the active mining area and runoff which is not diverted from the mill area;
- The facility takes all reasonable steps to minimize the overflow or excess discharge; and
- The facility complies with the notification requirements of this MPDES permit Part III.G and H.

This exemption is designed to provide an affirmative defense to an enforcement action. Therefore, the permittee has the burden of demonstrating to DEQ that the above conditions have been met.

2. Outfall 003

Beginning on March 1, 2017, and ending December 31, 2019, the quality of effluent discharged by the facility from Outfall 003 shall, as a minimum, meet the numeric effluent limits in Table 2 and the narrative limits listed immediately below Table 2:

Table 2. Interim Effluent Limitations, Outfall 003			
Parameter	**Units**	**Average Monthly Limitation (AML)**	**Maximum Daily Limitation (MDL)**
Total Suspended Solids	mg/L	20	30
Total Nitrogen, as N	lbs/day	9.3(1)	NA
Total Inorganic Nitrogen, as N	mg/L	2.2	NA
Cadmium, Total Recoverable	µg/L	0.7	1.0
Chromium, Total Recoverable	µg/L	11	16
Copper, Total Recoverable	µg/L	6	9
Iron, Total Recoverable	µg/L	220	330
Lead, Total Recoverable	µg/L	0.6	0.9
Manganese, Total Recoverable	µg/L	90	140
Mercury, Total Recoverable	µg/L	0.01	0.015
Zinc, Total Recoverable	µg/L	57	86
Oil & Grease	mg/L	NA	10
pH	s.u.	Within the range of 6.5 – 8.5 at all times	

Footnotes:
NA = Not Applicable
1. Limit effective July 1st through September 30th of each year.

There shall be no discharge that settles to form objectionable sludge deposits or emulsions beneath the surface of the water or upon adjoining shorelines

There shall be no discharge that produces odors, colors, or other conditions as to which create a nuisance or render undesirable tastes to fish flesh or make fish inedible

a. Prior to Commencement of Milling Operations or Completion of the Tailings Impoundment

Prior to commencement of milling operations or completion of the tailings impoundment, the facility is authorized to discharge mine drainage at Outfall 003 subject to the numeric effluent limits in Table 2 and the narrative limits listed immediately below Table 2. However, the permittee will be considered exempt from the above limits if the permittee documents and demonstrates that a 10-year 24-hour precipitation event caused the discharge, in conformance with the storm exemption outlined in 40 CFR 440.131(b). The permittee's demonstration must include all of the following:

- The facility is designed, constructed and maintained to contain the maximum volume of wastewater which would be generated by the facility during normal operating conditions without an increase in volume from precipitation and the maximum volume of wastewater resulting from a 10-year, 24-hour precipitation

event. In computing the maximum volume of wastewater which would result from a 10-year, 24-hour precipitation event; the facility must include the volume which would result from all areas contributing runoff to the individual treatment facility, i.e., all runoff that is not diverted from the active mining area and runoff which is not diverted from the mill area;

- The facility takes all reasonable steps to maintain treatment of the wastewater and minimize the amount of overflow; and
- The facility complies with the notification requirements of this MPDES permit Part III.G and H

This documentation must be submitted to DEQ. This exemption is designed to provide an affirmative defense to an enforcement action. Therefore, the permittee has the burden of demonstrating to DEQ that the above conditions have been met.

b. After Commencement of Milling Operations or Completion of the Tailings Impoundment

The permittee must notify DEQ in writing 90 days prior to the beginning of any milling operations at the facility or completing construction of the tailings impoundment. Once either the milling operations commence or construction of the tailings impoundment is complete, allowing for the potential commingling of mine drainage with either raw materials and/or process wastewater from the mill, the facility is then considered a "zero discharge" facility and is no longer authorized to discharge from Outfall 003 except under the specific exemptions as outlined in this MPDES permit and in accordance with 40 CFR 440.104(b)(2) and 40 CFR 440.131(c).

Alternative TBELs for Outfall 003

Annual Precipitation
A discharge is allowed if the permittee documents and demonstrates that the discharge occurs as a result of annual precipitation that exceeds annual evaporation, in conformance with the conditions outlined in 40 CFR 440.104(b)(2)(i). The facility is then allowed to discharge the volume of water (equal to the difference between annual precipitation falling on the treatment facility and the drainage area contributing surface runoff to the treatment facility and annual evaporation) subject to the numeric effluent limits in Table 2 and the narrative limits listed immediately below Table 2.

This documentation must be submitted to DEQ and must include, at a minimum, the following:

- The annual evaporation value for the treatment facility and how this value was determined;
- The drainage area contributing runoff to these outfalls and how this value was determined;

- The rainfall hyetograph for each individual storm event in excess of the 10-year, 24-hour design storm; and
- Conformational monitoring for each discharge resulting from this type of storm event in accordance with the storm water monitoring requirements of this MPDES permit as outlined below in Table 8.

Interference
If the permittee documents and demonstrates the need for a discharge due to interference that meets all of the requirements under 40 CFR 440.104(b)(2)(ii), then a discharge of process wastewater in an amount necessary to correct the interference problem after installation of appropriate treatment may be discharged subject to, at a minimum, the numeric effluent limits in Table 2 and the narrative limits listed immediately below Table 2. The facility has the burden of demonstrating to DEQ that a discharge of this nature is necessary to eliminate interference in the ore recovery process and that the interference could not be eliminated through appropriate treatment of the recycle water.

Storm Exemption– Outfall 003
A discharge is also allowed if the permittee documents and demonstrates that the discharge occurs as a result of a 10-year, 24-hour precipitation event in conformance with the storm exemption conditions outlined in 40 CFR 440.131(c). The facility is allowed to discharge during such an event subject to the following:

- The facility is designed, constructed and maintained to contain the maximum volume of wastewater which would be generated by the facility during normal operating conditions without an increase in volume from precipitation and the maximum volume of wastewater resulting from a 10-year, 24-hour precipitation event. In computing the maximum volume of wastewater which would result from a 10-year, 24-hour precipitation event; the facility must include the volume which would result from all areas contributing runoff to the individual treatment facility, i.e., all runoff that is not diverted from the active mining area and runoff which is not diverted from the mill area;
- The facility takes all reasonable steps to minimize the overflow or excess discharge; and
- The facility complies with the notification requirements of this MPDES permit Part III.G and H

This exemption is designed to provide an affirmative defense to an enforcement action. Therefore, the permittee has the burden of demonstrating to DEQ that the above conditions have been met.

C. Final Effluent Limitations

1. Outfalls 001 and 002

Beginning on January 1, 2020, and lasting through the term of the permit, the quality of effluent discharged by the facility shall, as a minimum, meet the numeric effluent limits in Table 3 and the narrative limits listed immediately below Table 3:

Table 3. Final Numeric Effluent Limitations, Outfalls 001 and 002

Parameter	Units	Average Monthly Limitation (AML)	Maximum Daily Limitation (MDL)
Total Suspended Solids	mg/L	20	30
Total Dissolved Solids	mg/L	86	172
Oil & Grease	mg/L	NA	10
pH	s.u.	Within the range of 6.5 – 8.5 at all times	
Total Ammonia, as N	mg/L	1.2	2.5
Nitrate + Nitrite, as N	mg/L	1.37	2.74
Total Inorganic Nitrogen, as N	mg/L	1.37	NA
Total Nitrogen, as N	lbs/day	1.65(1)	NA
Antimony, Total Recoverable	µg/L	0.69	1.38
Cadmium, Total Recoverable	µg/L	0.012	0.025
Chromium, Total Recoverable	µg/L	4.78	9.58
Copper, Total Recoverable	µg/L	1.89	3.79
Iron, Total Recoverable	µg/L	116	233
Lead, Total Recoverable	µg/L	0.07	0.13
Manganese, Total Recoverable	µg/L	61	123
Mercury, Total Recoverable	µg/L	0.007	0.013
Zinc, Total Recoverable	µg/L	18	37

Footnotes:
NA = Not Applicable
1. Limit effective July 1st through September 30th of each year beginning on August, 2034.

There shall be no discharge that settles to form objectionable sludge deposits or emulsions beneath the surface of the water or upon adjoining shorelines

There shall be no discharge that produces odors, colors, or other conditions as to which create a nuisance or render undesirable tastes to fish flesh or make fish inedible

a. Prior to Commencement of Milling Operations or Completion of the Tailings Impoundment

After January 1, 2020, and prior to commencement of milling operations or completion of the tailings impoundment, the facility is authorized to discharge mine drainage at Outfalls 001 and 002 subject to the numeric effluent limits in Table 3 and the narrative limits listed immediately below Table 3. However, the permittee will be considered exempt from the above limits if the permittee documents and demonstrates that a 10-year 24-hour precipitation event caused the discharge, in conformance with the storm exemption outlined in 40 CFR 440.131(b). The permittee's demonstration must include all of the following:

- The facility is designed, constructed and maintained to contain the maximum volume of wastewater which would be generated by the facility during normal operating conditions without an increase in volume from precipitation and the maximum volume of wastewater resulting from a 10-year, 24-hour precipitation event. In computing the maximum volume of wastewater which would result from a 10-year, 24-hour precipitation event; the facility must include the volume which would result from all areas contributing runoff to the individual treatment facility, i.e., all runoff that is not diverted from the active mining area and runoff which is not diverted from the mill area;
- The facility takes all reasonable steps to maintain treatment of the wastewater and minimize the amount of overflow; and
- The facility complies with the notification requirements of this MPDES permit Part III.G and H

This documentation must be submitted to DEQ. This exemption is designed to provide an affirmative defense to an enforcement action. Therefore, the permittee has the burden of demonstrating to DEQ that the above conditions have been met.

b. After Commencement of Milling Operations or Completion of the Tailings Impoundment

The permittee must notify DEQ in writing 90 days prior to the beginning of any milling operations at the facility or completing construction of the tailings impoundment. Once either the milling operations commence or construction of the tailings impoundment is complete, allowing for the potential commingling of mine drainage with either raw materials and/or process wastewater from the mill, the facility is then considered a "zero discharge" facility and is no longer authorized to discharge from Outfalls 001 and 002 except under the specific exemptions as outlined in this MPDES permit and in accordance with 40 CFR 440.104(b)(2) and 40 CFR 440.131(c).

Alternative TBELs for Outfalls 001 and 002

Annual Precipitation
A discharge is allowed if the permittee documents and demonstrates that the discharge occurs as a result of annual precipitation that exceeds annual evaporation, in conformance with the conditions outlined in 40 CFR 440.104(b)(2)(i). The facility is then allowed to discharge the volume of water (equal to the difference between annual precipitation falling on the treatment facility and the drainage area contributing surface runoff to the treatment facility and annual evaporation) subject to the numeric effluent limits in Table 3 and the narrative limits listed immediately below Table 3.

This documentation must be submitted to DEQ and must include, at a minimum, the following:

- The annual evaporation value for the treatment facility and how this value was determined;
- The drainage area contributing runoff to these outfalls and how this value was determined;
- The rainfall hyetograph for each individual storm event in excess of the 10-year, 24-hour design storm; and
- Conformational monitoring for each discharge resulting from this type of storm event in accordance with the storm water monitoring requirements of this MPDES permit as outlined below in Table 8.

Interference
If the permittee documents and demonstrates the need for a discharge due to interference that meets all of the requirements under 40 CFR 440.104(b)(2)(ii), then a discharge of process wastewater in an amount necessary to correct the interference problem after installation of appropriate treatment may be discharged subject to, at a minimum, the numeric effluent limits in Table 3 and the narrative limits listed immediately below Table 3. The facility has the burden of demonstrating to DEQ that a discharge of this nature is necessary to eliminate interference in the ore recovery process and that the interference could not be eliminated through appropriate treatment of the recycle water.

Storm Exemption– Outfalls 001 and 002
A discharge is also allowed if the permittee documents and demonstrates that the discharge occurs as a result of a 10-year, 24-hour precipitation event in conformance with the storm exemption conditions outlined in 40 CFR 440.131(c). The facility is allowed to discharge during such an event subject to the following:

- The facility is designed, constructed and maintained to contain the maximum volume of wastewater which would be generated by the facility during normal operating conditions without an increase in volume from precipitation and the maximum volume of wastewater resulting from a 10-year, 24-hour precipitation event. In computing the maximum volume of wastewater which would result from a 10-year, 24-hour precipitation event; the facility must include the volume which

would result from all areas contributing runoff to the individual treatment facility, i.e., all runoff that is not diverted from the active mining area and runoff which is not diverted from the mill area;

- The facility takes all reasonable steps to minimize the overflow or excess discharge; and
- The facility complies with the notification requirements of this MPDES permit Part III.G and H

This exemption is designed to provide an affirmative defense to an enforcement action. Therefore, the permittee has the burden of demonstrating to DEQ that the above conditions have been met.

2. Outfall 003

Beginning January 1, 2020, and lasting through the term of the permit, the quality of effluent discharged by the facility from Outfall 003 shall, as a minimum, meet the numeric effluent limits in Table 4 and the narrative limits listed immediately below Table 4:

Table 4. Final Numeric Effluent Limitations, Outfall 003

Parameter	Units	Average Monthly Limitation (AML)	Maximum Daily Limitation (MDL)
Total Suspended Solids	mg/L	20	30
Total Dissolved Solids	mg/L	85	170
Oil & Grease	mg/L	NA	10
pH	s.u.	Within the range of 6.5 – 8.5 at all times	
Total Ammonia, as N	mg/L	1.2	2.5
Nitrate + Nitrite, as N	mg/L	1.27	2.54
Total Inorganic Nitrogen, as N	mg/L	1.27	NA
Total Nitrogen, as N	lbs/day	1.65(1)	NA
Antimony, Total Recoverable	µg/L	0.69	1.38
Cadmium, Total Recoverable	µg/L	0.012	0.025
Chromium, Total Recoverable	µg/L	4.65	9.33
Copper, Total Recoverable	µg/L	1.89	3.79
Iron, Total Recoverable	µg/L	110	220
Lead, Total Recoverable	µg/L	0.07	0.13
Manganese, Total Recoverable	µg/L	58	116
Mercury, Total Recoverable	µg/L	0.007	0.013
Zinc, Total Recoverable	µg/L	18	37

Footnotes:
NA = Not Applicable
1. Limit effective July 1st through September 30th of each year beginning on August, 2034.

There shall be no discharge that settles to form objectionable sludge deposits or emulsions beneath the surface of the water or upon adjoining shorelines

There shall be no discharge that produces odors, colors, or other conditions as to which create a nuisance or render undesirable tastes to fish flesh or make fish inedible

a. Prior to Commencement of Milling Operations or Completion of the Tailings Impoundment

After January 1, 2020, and prior to commencement of milling operations or completion of the tailings impoundment, the facility is authorized to discharge mine drainage at Outfall 003 subject to the numeric effluent limits in Table 4 and the narrative limits listed immediately below Table 4. However, the permittee will be considered exempt from the above limits if the permittee documents and demonstrates that a 10-year 24-hour precipitation event caused the discharge, in conformance with the storm exemption outlined in 40 CFR 440.131(b). The permittee's demonstration must include all of the following:

- The facility is designed, constructed and maintained to contain the maximum volume of wastewater which would be generated by the facility during normal operating conditions without an increase in volume from precipitation and the maximum volume of wastewater resulting from a 10-year, 24-hour precipitation event. In computing the maximum volume of wastewater which would result from a 10-year, 24-hour precipitation event; the facility must include the volume which would result from all areas contributing runoff to the individual treatment facility, i.e., all runoff that is not diverted from the active mining area and runoff which is not diverted from the mill area;
- The facility takes all reasonable steps to maintain treatment of the wastewater and minimize the amount of overflow; and
- The facility complies with the notification requirements of this MPDES permit Part III.G and H

This documentation must be submitted to DEQ. This exemption is designed to provide an affirmative defense to an enforcement action. Therefore, the permittee has the burden of demonstrating to DEQ that the above conditions have been met.

b. After Commencement of Milling Operations or Completion of the Tailings Impoundment

The permittee must notify DEQ in writing 90 days prior to the beginning of any milling operations at the facility or completing construction of the tailings impoundment. Once either the milling operations commence or construction of the tailings impoundment is complete, allowing for the potential commingling of mine drainage with either raw materials and/or process wastewater from the mill, the facility is then considered a "zero discharge" facility and is no longer authorized to discharge from Outfalls 003 except under the specific exemptions as outlined in this MPDES permit and in accordance with 40 CFR 440.104(b)(2) and 40 CFR 440.131(c).

Alternative TBELs for Outfall 003

Annual Precipitation
A discharge is allowed if the permittee documents and demonstrates that the discharge occurs as a result of annual precipitation that exceeds annual evaporation, in conformance with the conditions outlined in 40 CFR 440.104(b)(2)(i). The facility is then allowed to discharge the volume of water (equal to the difference between annual precipitation falling on the treatment facility and the drainage area contributing surface runoff to the treatment facility and annual evaporation) subject to the numeric effluent limits in Table 4 and the narrative limits listed immediately below Table 4.

This documentation must be submitted to DEQ and must include, at a minimum, the following:

- The annual evaporation value for the treatment facility and how this value was determined;
- The drainage area contributing runoff to these outfalls and how this value was determined;
- The rainfall hyetograph for each individual storm event in excess of the 10-year, 24-hour design storm; and
- Conformational monitoring for each discharge resulting from this type of storm event in accordance with the storm water monitoring requirements of this MPDES permit as outlined below in Table 8.

Interference
If the permittee documents and demonstrates the need for a discharge due to interference that meets all of the requirements under 40 CFR 440.104(b)(2)(ii), then a discharge of process wastewater in an amount necessary to correct the interference problem after installation of appropriate treatment may be discharged subject to, at a minimum, the numeric effluent limits in Table 4 and the narrative limits listed immediately below Table 4. The facility has the burden of demonstrating to DEQ that a discharge of this nature is necessary to eliminate interference in the ore recovery process and that the interference could not be eliminated through appropriate treatment of the recycle water.

Storm Exemption– Outfall 003
A discharge is also allowed if the permittee documents and demonstrates that the discharge occurs as a result of a 10-year, 24-hour precipitation event in conformance with the storm exemption conditions outlined in 40 CFR 440.131(c). The facility is allowed to discharge during such an event subject to the following:

- The facility is designed, constructed and maintained to contain the maximum volume of wastewater which would be generated by the facility during normal operating conditions without an increase in volume from precipitation and the maximum volume of wastewater resulting from a 10-year, 24-hour precipitation event. In computing the maximum volume of wastewater which would result from

a 10-year, 24-hour precipitation event; the facility must include the volume which would result from all areas contributing runoff to the individual treatment facility, i.e., all runoff that is not diverted from the active mining area and runoff which is not diverted from the mill area;

- The facility takes all reasonable steps to minimize the overflow or excess discharge; and
- The facility complies with the notification requirements of this MPDES permit Part III.G and H

This exemption is designed to provide an affirmative defense to an enforcement action. Therefore, the permittee has the burden of demonstrating to DEQ that the above conditions have been met.

3. Storm Water Outfalls 004-008

Beginning on March 1, 2017, and lasting through the term of the permit, the quality of storm water discharged by the facility from Outfalls 004 through 008 shall, as a minimum, meet the numeric effluent limits in Table 5 and the narrative limits listed immediately below Table 5:

Table 5. Final Numeric Effluent Limitations, Outfalls 004 – 008

Parameter	Units	Average Monthly Limitation (AML)	Maximum Daily Limitation (MDL)
Oil & Grease	mg/L	NA	10
pH	s.u.	Within the range of 6.5 – 8.5 at all times	

Footnotes:
NA = Not Applicable

There shall be no discharge that settles to form objectionable sludge deposits or emulsions beneath the surface of the water or upon adjoining shorelines

There shall be no discharge that produces odors, colors, or other conditions as to which create a nuisance or render undesirable tastes to fish flesh or make fish inedible

There shall be no discharge that creates concentrations or combinations of materials which are toxic or harmful to human, animal, plant, or aquatic life

There shall be no discharge that creates conditions which produce undesirable aquatic life

There shall be no discharge allowed from Outfalls 004-008 unless the measured precipitation exceeds 2.8 inches, or an equivalent amount of snowmelt runoff, in a 24-hour period as recorded at the rain gage for the facility.

The facility shall be designed, constructed, and maintained to contain the maximum volume of storm water generated during a 10-year, 24-hour precipitation event.

The discharge of any process wastewater or any water resulting from mine dewatering activities at Outfalls 004-008 is prohibited.

D. Monitoring Requirements

1. General Requirements, Outfalls 001-008

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

All effluent and ambient monitoring must conducted in accordance with test procedures approved under 40 CFR 136 unless another method is specified in 40 CFR Subchapters N or O. Analytical methods must achieve the required reporting value (RRV) listed in Department Circular DEQ-7 unless otherwise specified in this permit. The permittee may use any approved analytical method capable of achieving the RRV or the level of accuracy specified in the permit.

2. Annual Monitoring, Outfalls 001-008

Monitoring locations, sampling frequencies, and reporting requirements for the facility are provided in Table 6.

Table 6. Annual Reporting Requirements, Outfalls 001-008

Parameter	Monitoring Location(s)	Units	Sample Type(1)	Minimum Sampling Frequency	Reporting Requirements(1)(2)	Reporting Frequency	Reporting Level
Total Suspended Solids	All permitted outfalls	tons/year	Calculated	1/Year	Annual Maximum	Annually	1.0

Footnotes:
1. See definitions in Part V of the permit.
2. Load calculation: the sum of all individual daily average loads (in lbs/day) for each calendar day from all outfalls recorded during the entire calendar year, converted to tons/year.

3. Effluent Monitoring, Outfalls 001-003

Monitoring locations, sampling frequencies, and reporting requirements for Outfalls 001 - 003 are provided in Table 7 below.

Table 7. Effluent Monitoring and Reporting Requirements, Outfalls 001-003

Parameter	Monitoring Location(s)	Units	Sample Type[1]	Minimum Sampling Frequency	Reporting Requirements[1][2][3]	Reporting Frequency	Reporting Level
Flow Rate	Effluent Flow Meter[4]	gpm	Instantaneous	1/Week	Maximum Daily and Average Monthly	Monthly	± 10% of actual flow
Total Suspended Solids	Distribution Box	mg/L lbs/day[5]	Composite Calculated	1/Week	Maximum Daily and Average Monthly	Monthly	4
Total Dissolved Solids	Distribution Box	mg/L	Composite	1/Week	Maximum Daily and Average Monthly	Monthly	4
pH	Distribution Box	s.u.	Instantaneous	1/Week	Daily Maximum and Daily Minimum	Monthly	0.1
Temperature	Distribution Box	°F	Instantaneous	1/Week	Daily Maximum and Daily Minimum	Monthly	0.1
Oil & Grease[6]	Distribution Box	mg/L	Grab	1/Month	Maximum Daily and Average Monthly	Monthly	5
Nitrate + Nitrite (as N)	Distribution Box	mg/L	Composite	1/Week	Maximum Daily and Average Monthly	Monthly	0.02
Total Ammonia (as N)	Distribution Box	mg/L	Composite	1/Week	Maximum Daily and Average Monthly	Monthly	0.07
Total Kjeldahl Nitrogen (as N)	Distribution Box	mg/L	Composite	1/Week	Maximum Daily and Average Monthly	Monthly	0.15
Total Inorganic Nitrogen (as N)[7]	Distribution Box	mg/L lbs/day[5]	Calculated	1/Week	Maximum Daily and Average Monthly	Monthly	0.01
Total Nitrogen (as N)[8]	Distribution Box	mg/L lbs/day[5]	Calculated	1/Week	Maximum Daily and Average Monthly	Monthly	0.01
Total Phosphorus (as P)	Distribution Box	mg/L lbs/day[5]	Composite Calculated	1/Month	Maximum Daily and Average Monthly	Monthly	0.001
Aluminum, Dissolved	Distribution Box	µg/L	Grab	1/Month	Maximum Daily and Average Monthly	Monthly	9
Antimony, Total Recoverable	Distribution Box	µg/L	Grab	1/Month	Maximum Daily and Average Monthly	Monthly	0.5
Arsenic, Total Recoverable	Distribution Box	µg/L	Grab	1/Month	Maximum Daily and Average Monthly	Monthly	1
Beryllium, Total Recoverable	Distribution Box	µg/L	Grab	1/Month	Maximum Daily and Average Monthly	Monthly	0.8
Cadmium, Total Recoverable	Distribution Box	µg/L	Grab	1/Month	Maximum Daily and Average Monthly	Monthly	0.03
Chromium, Total Recoverable	Distribution Box	µg/L	Grab	1/Month	Maximum Daily and Average Monthly	Monthly	5
Copper, Total Recoverable	Distribution Box	µg/L	Grab	1/Month	Maximum Daily and Average Monthly	Monthly	2
Iron, Total Recoverable	Distribution Box	µg/L	Grab	1/Month	Maximum Daily and Average Monthly	Monthly	20
Lead, Total Recoverable	Distribution Box	µg/L	Grab	1/Month	Maximum Daily and Average Monthly	Monthly	0.3
Manganese, Total Recoverable	Distribution Box	µg/L	Grab	1/Month	Maximum Daily and Average Monthly	Monthly	50
Mercury, Total Recoverable	Distribution Box	µg/L	Grab	1/Month	Maximum Daily and Average Monthly	Monthly	0.005
Nickel, Total Recoverable	Distribution Box	µg/L	Grab	1/Month	Maximum Daily and Average Monthly	Monthly	2
Selenium, Total Recoverable	Distribution Box	µg/L	Grab	1/Month	Maximum Daily and Average Monthly	Monthly	1

Table 7. Effluent Monitoring and Reporting Requirements, Outfalls 001-003

Parameter	Monitoring Location(s)	Units	Sample Type(1)	Minimum Sampling Frequency	Reporting Requirements(1)(2)(3)	Reporting Frequency	Reporting Level
Silver, Total Recoverable	Distribution Box	µg/L	Grab	1/Month	Maximum Daily and Average Monthly	Monthly	0.2
Thallium, Total Recoverable	Distribution Box	µg/L	Grab	1/Month	Maximum Daily and Average Monthly	Monthly	0.2
Zinc, Total Recoverable	Distribution Box	µg/L	Grab	1/Month	Maximum Daily and Average Monthly	Monthly	8
Whole Effluent Toxicity-Chronic, Static Renewal, Three-Brood, *Ceriodaphnia dubia*	Distribution Box(9)	%Effluent	Composite	1/Quarter	Pass/Fail	Quarterly	Per Method(10)
Whole Effluent Toxicity-Chronic, Static Renewal, 7-Day, *Pimephales promelas*	Distribution Box(9)	%Effluent	Composite	1/Quarter	Pass/Fail	Quarterly	Per Method(11)

Footnotes:
1. See definitions in Part V of the permit.
2. Maximum Daily: Report highest measured daily value for the reporting period on Discharge Monitoring Report (DMR) form.
3. If no discharge occurs during the reporting period then "No Discharge" shall be recorded on the DMR form.
4. Effluent flow rate must be reported for each individual outfall.
5. Load calculation: lbs/day = the average of all calculated individual daily average loads (lbs/day) recorded during the reporting period.
6. EPA method 1664 (hexane extraction method) or other 40 CFR 136 approved method.
7. Total Inorganic Nitrogen is the sum of the Nitrate + Nitrite and Total Ammonia parameters.
8. Total Nitrogen is the sum of the Nitrate + Nitrite and Total Kjeldahl Nitrogen parameters.
9. A WET sample collected at the distribution box is considered representative of Outfalls 001 and 002. The WET sampling location for Outfall 003 is at the end-of-pipe discharge into Libby Creek. WET tests for Outfall 003 are required when there is any discharge from Outfall 003 during a reporting period.
10. EPA method 1002.0.
11. EPA method 1000.0.

4. Storm Water Monitoring

Storm water monitoring is required for Outfalls 004-008. Storm water monitoring will also be required for Outfalls 001 – 003 during periods of discharge resulting from a 10-year 24-hour precipitation event, in order for the permittee to demonstrate the conditions of the storm exemption under 40 CFR 131(b) and (c) have been met.

A storm water discharge is any discharge or increase in the volume of a discharge as a result of either precipitation or snow melt runoff. Storm water monitoring must be performed for any event that results in a discharge. In the case of snow melt, the monitoring must be performed at a time when a measurable discharge occurs from the site. At a minimum, a sample must be collected within the first 30 minutes of discharge event at a permitted outfall.

Grab samples must be collected within the first 30 minutes of the storm water discharge. Unless a grab sample is specified, a flow weighted composite sample must be taken for either the entire discharge event or for the first three hours of a discharge event. The flow weighted composite sample for a storm water discharge event may be taken with a continuous sampler or as a combination of a minimum of three aliquots (with each aliquot separated by a minimum period of 15 minutes) taken in each hour of the

discharge over the course of either the entire discharge event or in the first three hours of the discharge event. Aliquots may be collected manually or automatically. For a flow weighted composite sample, only one analysis of the composite sample is required. The permittee may substitute a grab sample for a flow weighted composite sample for shorter duration discharge events (e.g. individual discharge events less than 40 minutes in duration) provided that the grab sample is collected within the first 30 minutes of the onset of the discharge event.

In addition to the collection and analysis of a sample for a discharge event, the permittee must provide flow information for the discharge event sampled and precipitation data for the storm event generating the discharge. The permittee must collect and report the total volume and maximum flow rate (in gallons per minute) for the discharge event sampled. If these values are estimated, the estimated values must follow those methods given in *Guidance Manual for the Preparation of NPDES Permit Application for Storm Water Discharges Associated with Industrial Activity* (EPA 505/8-91-002, April 1991) unless otherwise specified.

The permittee must record the date and duration (in minutes) of the storm event sampled, the rainfall measurements or estimates for the storm event sampled, and the interval between the storm event sampled and the previous measurable storm event. A measurable storm event is any storm event producing an amount of rainfall greater than 0.25 inch. This information is not required to be reported on a Discharge Monitoring Report but is subject to the record keeping (Part II.G) and retention requirements (Part II.H) of this permit. Storm water monitoring locations, sampling frequencies, and reporting requirements for the facility are provided in Table 8 below.

Table 8. Storm Water Monitoring Requirements

Parameter	Monitoring Location(s)	Units	Sample Type(1)	Minimum Sampling Frequency	Reporting Requirements(1)(2)(3)	Reporting Frequency	Reporting Level
Precipitation	Rain Gage	inches	Continuous	1/Discharge	Daily Total	Monthly	0.01
Flow Rate	Effluent Flow Meter(4)	gpm	Continuous	1/Discharge	Maximum Daily and Average Monthly	Monthly	± 10% of actual flow
Chemical Oxygen Demand (COD)	Each Outfall	mg/L	Grab	1/Discharge	Maximum Daily and Average Monthly	Monthly	1
Total Suspended Solids	Each Outfall	mg/L	Composite	1/Discharge	Maximum Daily and Average Monthly	Monthly	4
		lbs/day(5)	Calculated				
Total Dissolved Solids	Each Outfall	mg/L	Composite	1/Discharge	Maximum Daily and Average Monthly	Monthly	4
pH	Each Outfall	s.u.	Grab	1/Discharge	Daily Maximum and Daily Minimum	Monthly	0.1
Oil & Grease(6)	Each Outfall	mg/L	Grab	1/Discharge	Maximum Daily and Average Monthly	Monthly	5
Nitrate + Nitrite (as N)	Each Outfall	mg/L	Composite	1/Discharge	Maximum Daily and Average Monthly	Monthly	0.02
Total Ammonia (as N)	Each Outfall	mg/L	Composite	1/Discharge	Maximum Daily and Average Monthly	Monthly	0.07
Total Kjeldahl Nitrogen (as N)	Each Outfall	mg/L	Composite	1/Discharge	Maximum Daily and Average Monthly	Monthly	0.15
Total Inorganic	Each Outfall	mg/L	Calculated	1/Discharge	Maximum Daily and	Monthly	0.01

Table 8. Storm Water Monitoring Requirements

Parameter	Monitoring Location(s)	Units	Sample Type[1]	Minimum Sampling Frequency	Reporting Requirements[1][2][3]	Reporting Frequency	Reporting Level
Nitrogen (as N)[7]		lbs/day[5]			Average Monthly		
Total Nitrogen (as N)[8]	Each Outfall	mg/L lbs/day[5]	Calculated	1/Discharge	Maximum Daily and Average Monthly	Monthly	0.01
Total Phosphorus (as P)	Each Outfall	mg/L lbs/day[5]	Composite Calculated	1/Discharge	Maximum Daily and Average Monthly	Monthly	0.001
Aluminum, Dissolved	Each Outfall	µg/L	Grab	1/Discharge	Maximum Daily and Average Monthly	Monthly	9
Antimony, Total Recoverable	Each Outfall	µg/L	Grab	1/Discharge	Maximum Daily and Average Monthly	Monthly	0.5
Arsenic, Total Recoverable	Each Outfall	µg/L	Grab	1/Discharge	Maximum Daily and Average Monthly	Monthly	1
Beryllium, Total Recoverable	Each Outfall	µg/L	Grab	1/Discharge	Maximum Daily and Average Monthly	Monthly	0.8
Cadmium, Total Recoverable	Each Outfall	µg/L	Grab	1/Discharge	Maximum Daily and Average Monthly	Monthly	0.03
Chromium, Total Recoverable	Each Outfall	µg/L	Grab	1/Discharge	Maximum Daily and Average Monthly	Monthly	5
Copper, Total Recoverable	Each Outfall	µg/L	Grab	1/Discharge	Maximum Daily and Average Monthly	Monthly	2
Iron, Total Recoverable	Each Outfall	µg/L	Grab	1/Discharge	Maximum Daily and Average Monthly	Monthly	20
Lead, Total Recoverable	Each Outfall	µg/L	Grab	1/Discharge	Maximum Daily and Average Monthly	Monthly	0.3
Manganese, Total Recoverable	Each Outfall	µg/L	Grab	1/Discharge	Maximum Daily and Average Monthly	Monthly	50
Mercury, Total Recoverable	Each Outfall	µg/L	Grab	1/Discharge	Maximum Daily and Average Monthly	Monthly	0.005
Nickel, Total Recoverable	Each Outfall	µg/L	Grab	1/Discharge	Maximum Daily and Average Monthly	Monthly	2
Selenium, Total Recoverable	Each Outfall	µg/L	Grab	1/Discharge	Maximum Daily and Average Monthly	Monthly	1
Silver, Total Recoverable	Each Outfall	µg/L	Grab	1/Discharge	Maximum Daily and Average Monthly	Monthly	0.2
Thallium, Total Recoverable	Each Outfall	µg/L	Grab	1/Discharge	Maximum Daily and Average Monthly	Monthly	0.2
Zinc, Total Recoverable	Each Outfall	µg/L	Grab	1/Discharge	Maximum Daily and Average Monthly	Monthly	8

Footnotes:
1. See definitions in Part V of the permit.
2. Maximum Daily: Report highest measured daily value for the reporting period on Discharge Monitoring Report (DMR) form.
3. If no discharge occurs during the reporting period then "No Discharge" shall be recorded on the DMR form.
4. Effluent flow rate must be reported for each individual outfall
5. Load calculation: lbs/day = the average of all calculated individual daily average loads (lbs/day) recorded during the reporting period.
6. EPA method 1664 (hexane extraction method) or other 40 CFR Part 136 approved method.
7. Total Inorganic Nitrogen is the sum of the Nitrate + Nitrite and Total Ammonia parameters.
8. Total Nitrogen is the sum of the Nitrate + Nitrite and Total Kjeldahl Nitrogen parameters.

5. WET Monitoring, Outfalls 001-003

The permittee is required to conduct a chronic static renewal toxicity test on a composite sample of the effluent on a quarterly frequency. Testing will employ two species per quarter and will consist of 5 effluent concentrations (9%, 19%, 37%, 69%, and 100% effluent) and a control. Dilution water and the control shall consist of water from Libby

Creek and must be collected upstream of monitoring station LB-200. A minimum of three effluent samples are required for chronic toxicity tests. These samples must be collected within the same calendar week on days 1, 3, and 5. The first sample is used for WET test initiation and for test renewal on test day 2. The second sample is used for test renewal on test days 3 and 4. The third sample is used for test renewal on test days 5, 6, and 7.

The static renewal toxicity tests shall be conducted in general accordance with the procedures set out in the latest revision of *Short Term Methods for Estimating the Chronic Toxicity of Effluent and Receiving Waters to Freshwater Organisms,* EPA-821-R-02-013 (October 2002) and the *Region VIII NPDES Whole Effluent Toxics Control Program* (August 1997). 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). The control of pH in the toxicity test utilizing CO_2 enriched atmospheres is allowed to prevent rising pH drift. The target pH selected must represent the pH value of the receiving water at the time of sample collection. The use of CO_2 to control pH drift must be in accordance with the requirements of sections 12.3.5, 12.3.5.1 through 4, and 12.3.5.2, and all other test requirements in the chronic methods manual (EPA-821-R-02-013).

Chronic toxicity occurs when the inhibition concentration to 25% of the test population (IC_{25}) is less than or equal to the 37% effluent concentration. Control survival and growth or reproduction must meet the requirements specified in the method.

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, the WET testing frequency shall increase to once a month until further notified by DEQ and the permittee must initiate a TIE/TRE as required in Part I.E.6. In all cases, the results of all toxicity tests must be submitted to DEQ in accordance with Part II of this permit.

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

E. Special Conditions

1. Ambient Monitoring Requirements

The permittee is required to monitor the ambient conditions in Libby Creek upstream of the discharge at monitoring station LB-200. The permittee is also required to monitor temperature downstream at monitoring station LB-300. Monitoring for parameters (other than temperature) is required quarterly to capture high- and low-flow events in Libby

Creek. The ambient monitoring and reporting requirements for Libby Creek are summarized in Table 9 below.

Table 9. Upstream Monitoring and Reporting Requirements, Libby Creek

Parameter	Monitoring Location	Units	Sample Type[1]	Minimum Sampling Frequency	Reporting Requirements[1]	Reporting Frequency	Reporting Level
Total Suspended Solids	LB-200	mg/L	Grab	1/Quarter	Quarterly Maximum	Quarterly	4
Total Dissolved Solids	LB-200	mg/L	Grab	1/Quarter	Quarterly Maximum	Quarterly	4
pH	LB-200	s.u.	Grab	1/Quarter	Quarterly Maximum	Quarterly	0.1
Hardness (as $CaCO_3$)	LB-200	mg/L	Grab	1/Quarter	Quarterly Maximum	Quarterly	5
Oil & Grease[3]	LB-200	mg/L	Grab	1/Quarter	Quarterly Maximum	Quarterly	5
Temperature, Upstream	LB-200	°F	Instantaneous	Continuous	Average Daily	Monthly	0.1
Temperature, Downstream	LB-300	°F	Instantaneous	Continuous	Average Daily	Monthly	0.1
ΔT	NA	°F	Calculated[2]	1/Day	Temperature Difference	Monthly	0.1
Nitrate + Nitrite (as N)	LB-200	mg/L	Grab	1/Quarter	Quarterly Maximum	Quarterly	0.02
Total Ammonia (as N)	LB-200	mg/L	Grab	1/Quarter	Quarterly Maximum	Quarterly	0.07
Total Kjeldahl Nitrogen (as N)	LB-200	mg/L	Grab	1/Quarter	Quarterly Maximum	Quarterly	0.15
Total Inorganic Nitrogen (as N)	LB-200	mg/L	Calculated[4]	1/Quarter	Quarterly Maximum	Quarterly	0.01
Total Nitrogen (as N)	LB-200	mg/L	Calculated[5]	1/Quarter	Quarterly Maximum	Quarterly	0.01
Total Phosphorus (as P)	LB-200	mg/L	Grab	1/Quarter	Quarterly Maximum	Quarterly	0.001
Aluminum, Dissolved	LB-200	µg/L	Grab	1/Quarter	Quarterly Maximum	Quarterly	9
Antimony, Total Recoverable	LB-200	µg/L	Grab	1/Quarter	Quarterly Maximum	Quarterly	0.5
Arsenic, Total Recoverable	LB-200	µg/L	Grab	1/Quarter	Quarterly Maximum	Quarterly	1
Beryllium, Total Recoverable	LB-200	µg/L	Grab	1/Quarter	Quarterly Maximum	Quarterly	0.8
Cadmium, Total Recoverable	LB-200	µg/L	Grab	1/Quarter	Quarterly Maximum	Quarterly	0.03
Chromium, Total Recoverable	LB-200	µg/L	Grab	1/Quarter	Quarterly Maximum	Quarterly	5
Copper, Total Recoverable	LB-200	µg/L	Grab	1/Quarter	Quarterly Maximum	Quarterly	2
Iron, Total Recoverable	LB-200	µg/L	Grab	1/Quarter	Quarterly Maximum	Quarterly	20
Lead, Total Recoverable	LB-200	µg/L	Grab	1/Quarter	Quarterly Maximum	Quarterly	0.3
Manganese, Total Recoverable	LB-200	µg/L	Grab	1/Quarter	Quarterly Maximum	Quarterly	50

Table 9. Upstream Monitoring and Reporting Requirements, Libby Creek

Parameter	Monitoring Location	Units	Sample Type[1]	Minimum Sampling Frequency	Reporting Requirements[1]	Reporting Frequency	Reporting Level
Mercury, Total Recoverable	LB-200	µg/L	Grab	1/Quarter	Quarterly Maximum	Quarterly	0.005
Nickel, Total Recoverable	LB-200	µg/L	Grab	1/Quarter	Quarterly Maximum	Quarterly	2
Selenium, Total Recoverable	LB-200	µg/L	Grab	1/Quarter	Quarterly Maximum	Quarterly	1
Silver, Total Recoverable	LB-200	µg/L	Grab	1/Quarter	Quarterly Maximum	Quarterly	0.2
Thallium, Total Recoverable	LB-200	µg/L	Grab	1/Quarter	Quarterly Maximum	Quarterly	0.2
Zinc, Total Recoverable	LB-200	µg/L	Grab	1/Quarter	Quarterly Maximum	Quarterly	8

Footnotes:
1. See definitions in Part V of the permit.
2. The temperature difference (ΔT) is determined by subtracting the downstream average daily temperature from the upstream average daily temperature.
3. EPA method 1664 (hexane extraction method) or other 40 CFR Part 136 approved method.
4. Total Inorganic Nitrogen is the sum of the Nitrate + Nitrite and Total Ammonia parameters.
5. Total Nitrogen is the sum of the Nitrate + Nitrite and Total Kjeldahl Nitrogen parameters.

2. Supplemental Monitoring

The permittee is required to monitor and report precipitation for the facility's drainage basins using a precipitation gage that meets the standards in the National Weather Service's *Requirements and Standards for the Climate Observations* (Instructional Bulletin 10-1302, November 14, 2014). Precipitation monitoring is required to provide evidence for the alternative TBELs for Outfalls 001-003 as well as to determine permit compliance.

3. Best Management Practices

The NPDES regulations at 40 CFR 122.44(k) (incorporated by reference in ARM 17.30.1344(2)(b)) state that Best Management Practices (BMPs) may be included as permit conditions when authorized under section 304(e) of the CWA for the control of toxic pollutants and hazardous substances from ancillary industrial activities; authorized under section 402(p) of the CWA for the control of storm water discharges; numeric effluent limitations are infeasible; or when BMPs are necessary to achieve effluent limitations or carry out the purposes and intent of the CWA. A number of sites and activities found at metal mining facilities require the implementation of BMPs to prevent the contamination of storm water. Additionally, restabilization must occur with any disturbed areas. 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.

BMPs must be documented and kept up-to-date in the facility's Storm Water Pollution Protection Plan (SWPPP) as described in Part I.E.4 of this permit. BMPs from other programs or permitting authorities may be substituted, provided the source and justification for the BMP is included in the SWPPP.

4. Storm Water Management

The permittee must develop and maintain a Storm Water Pollution Protection Plan (SWPPP) that describes the facility, BMPs, control measures, and monitoring procedures that will ensure compliance with the terms and conditions of the permit. The BMPs implemented at the facility may be structural or non-structural in nature. The SWPPP must be submitted as described in Part I.F of this permit. SWPPPs must be maintained such that they are updated and adjusted to reflect current conditions, activities, and any storm water issues identified at the facility. Periodic evaluation of the SWPPP 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. Appropriate measures are highly site-specific, but may include, among others, vegetative swales, collection and reuse of storm water, inlet controls, snow management, infiltration devices, and wet retention measures. 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 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 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 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 provide justification 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 in must be maintained in effective operating condition. Non-structural control measures must also be diligently maintained (e.g., spill response supplies available, 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 document 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 for sediment in any snow plowed or otherwise 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 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.

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.

Corrective Actions
If any of the following conditions occur, then 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 Department 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

If an inspection or other observation identifies storm water pollution or control measures needing repair or replacement, them 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 action(s) taken or needed, any further investigation the deficiency, or the basis for determining that no further action is needed. Specific documentation required within 24 hours and 14 days is detailed. If it is determined that changes are necessary following the review, then 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. These time intervals are not grace periods, but are schedules considered reasonable for documenting findings and for making 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.

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.

The permittee is required to operate, build, and maintain the facility and storm water practices as identified in their SWPPP. The permittee is free to adjust or change the control measures used at any time. 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 initial submission of a SWPPP is addressed in the compliance schedule in Part I.F of the permit.

5. Facility Optimization Study

The permittee must complete a Facility Optimization Study and Nutrient Reduction Analysis. The Study must include an analysis of nutrient trading feasibility within the watershed. Written notification indicating completion and availability of the Study results must be submitted to DEQ as described in Part I.F. of this permit.

6. Toxicity Identification Evaluation / Toxicity Reduction Evaluation

If toxicity is detected, and it is determined by DEQ that a TIE/TRE is necessary, the permittee shall be so notified and shall initiate a TIE/TRE immediately thereafter. The purpose of the TIE/TRE will be to establish the cause of the toxicity, locate the source(s) of the toxicity, and control or provide treatment for the toxicity. Failure to initiate or conduct an adequate TIE/TRE, or delays in the conduct of such tests shall not be considered a justification for noncompliance with this permit. If the TIE/TRE establishes that the toxicity cannot be eliminated, the permittee shall submit a proposed compliance plan to DEQ. The plan shall include the proposed approach to control toxicity and a proposed compliance schedule for achieving control. If the approach and schedule are acceptable to DEQ, this permit may be reopened and modified.

If the TIE/TRE shows that the toxicity is caused by a toxicant(s) that may be controlled with specific numerical limitations, the permittee may:

a. Submit an alternative control program for compliance with the numerical requirements; and

b. If necessary, provide a modified whole effluent testing protocol which compensates for the pollutant(s) being controlled numerically.

If acceptable to DEQ, this permit may be reopened and modified to incorporate any additional numerical limitations, a modified compliance schedule if judged necessary by DEQ, and/or a modified whole effluent protocol.

F. Action & Reporting Schedule

The actions listed in Table 10 below must be completed on or before the respective scheduled completion dates. The completion of all actions or deliverables must be reported to DEQ at the address listed in Part II.D of the permit and in accordance with the signatory requirements of Part IV.G of the permit.

Table 10. Action & Report Schedule

Action	Frequency	Action Scheduled Completion Date[1]	Report Due Date[2]
Complete, submit, and implement a Storm Water Pollution Prevention Plan	Single Event	Sixty Days prior to the start of the first construction or surface disturbance activities	Sixty Days prior to the start of the first construction or surface disturbance activities
Submit a report documenting the planned startup date for any milling operations	Single Event	No later than Ninety Days prior to the commencement of any milling activities or completion of the tailings impoundment	The 28th of the Following Month Ninety Days from the commencement of milling activities or completion of the tailings impoundment
Submit a report documenting any action(s) taken towards meeting the final effluent limits of this MPDES permit[3]	Annually	By December 31st of the years 2017, 2018, and 2019	Due on or before January 28th of the years 2018, 2019, and 2020
Submit a report documenting any action(s) taken towards meeting the numeric Total Nitrogen standards as listed in Circular DEQ-12A[4]	Annually	By December 31st of the years 2017, 2018, and 2019	Due on or before January 28th of the years 2018, 2019, and 2020
Complete a Facility Optimization Study for the Total Nitrogen parameter	Single Event	No later than Two Years from the Effective Date of the Permit	The 28th of the Following Month Two Years from the Effective Date of the Permit
Comply with the numeric nutrient standards as listed in Circular DEQ-12A	Single Event	Beginning no later than August 7, 2034	NA

Footnotes:
NA = Not Applicable
1. The actions must be completed on or before the scheduled completion dates.
2. This notification must be postmarked or electronically submitted to DEQ on or before the scheduled due date.
3. This written report must address, at a minimum and on an individual parameter basis, any steps taken towards meeting the final limits for the following parameters: Antimony, Cadmium, Chromium, Copper, Iron, Lead, Manganese, Zinc, Total Ammonia, Total Inorganic Nitrogen, Total Nitrogen, and Total Dissolved Solids. This written report must document, at a minimum and on an individual parameter basis, the mitigation, elimination, and/or treatment options taken into consideration for any process installed or method employed to meet the final effluent limitations. This written report must include, as necessary and appropriate, the performance criteria, any engineering drawings, any line diagrams or process flow charts, and/or any other pertinent design and/or installation materials.
4. This written report must document any steps taken towards meeting the numeric nutrient standard for Total Nitrogen. This written report must document, at a minimum and on an individual parameter basis, the mitigation, elimination, and/or treatment options taken into consideration for any process installed or method employed to meet the final effluent limitations. This written report must include, as necessary and appropriate, the performance criteria, any engineering drawings, any line diagrams or process flow charts, and/or any other pertinent design and/or installation materials.
5. This report must include the anticipated start date for the commencement of any milling activities and will be used to determine the start of the zero discharge requirements of this MPDES permit.

II. MONITORING, RECORDING, AND REPORTING REQUIREMENTS

A. Representative Sampling

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

B. Monitoring Procedures

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

C. Penalties for Tampering

The Montana Water Quality Act 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 $10,000, or by imprisonment for not more than six months, or by both.

D. Reporting of Monitoring Results

Monitoring results must be reported within a Discharge Monitoring Report (DMR). Monitoring results must be submitted electronically (NetDMR web-based application) no later than the 28th day of the month following the end of the monitoring period. If no discharge occurs during the entire reporting period, "No Discharge" must be reported within the respective DMR. All other reports must be signed and certified in accordance with Part IV.G 'Signatory Requirements' of this permit and submitted to DEQ at the following address:

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

E. Compliance Schedules

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of the permit must be submitted to DEQ in either electronic or paper format and be postmarked no later than 14 days following each schedule date unless otherwise specified in the permit.

F. Additional Monitoring by the Permittee

If the permittee monitors any pollutant more frequently than required by this permit, using approved analytical methods as specified in this permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the Discharge Monitoring Report. Such increased frequency shall also be indicated.

G. Records Contents

Records of monitoring information shall include:

1. The date, exact place, and time of sampling or measurements;

2. The initials or name(s) of the individual(s) who performed the sampling or measurements;

3. The date(s) analyses were performed;

4. The time analyses were initiated;

5. The initials or name(s) of individual(s) who performed the analyses;

6. References and written procedures, when available, for the analytical techniques or methods used; and

7. The results of such analyses, including the bench sheets, instrument readouts, computer disks or tapes, etc., used to determine these results.

H. Retention of Records

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

I. Twenty-four Hour Notice of Noncompliance Reporting

1. The permittee shall report any serious incidents of noncompliance as soon as possible, but no later than twenty-four (24) hours from the time the permittee first became aware of the circumstances. The report shall be made to the Water Protection Bureau at (406) 444-3080 or the Office of Disaster and Emergency Services at (406) 324-4777. The following examples are considered serious incidents:

   a. Any noncompliance which may seriously endanger health or the environment;

   b. Any unanticipated bypass which exceeds any effluent limitation in the permit (See Part III.G of this permit, "Bypass of Treatment Facilities"); or

   c. Any upset which exceeds any effluent limitation in the permit (see Part III.H of this permit, "Upset Conditions").

2. A written submission shall also be provided within five days of the time that the permittee becomes aware of the circumstances. The written submission shall contain:

   a. A description of the noncompliance and its cause;

   b. The period of noncompliance, including exact dates and times;

   c. The estimated time noncompliance is expected to continue if it has not been corrected; and

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

3. 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) 444-3080.

4. Reports shall be submitted to the addresses in Part II.D of this permit, "Reporting of Monitoring Results".

J. Other Noncompliance Reporting

Instances of noncompliance not required to be reported within 24 hours shall be reported at the time that monitoring reports for Part II.D of this permit are submitted. The reports shall contain the information listed in Part II.I.2 of this permit.

K. Inspection and Entry

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

1. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;

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

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

3. Sample or monitor at reasonable times, for the purpose of assuring permit compliance, any substances or parameters at any location.

III. COMPLIANCE RESPONSIBILITIES

A. Duty to Comply

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

B. Penalties for Violations of Permit Conditions

The Montana Water Quality Act provides that any person who violates a permit condition of the Act is subject to civil or criminal penalties not to exceed $10,000 per day of such violation. Any person who willfully or negligently violates permit conditions of the Act is subject to a fine of not more than $50,000 per day of violation, or by imprisonment for not more than 2 years, or both, for subsequent convictions. MCA 75-5-611(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. Except as provided in permit conditions on Part III.G of this permit, "Bypass of Treatment Facilities" and Part III.H of this permit, "Upset Conditions", nothing in this permit shall be construed to relieve the permittee of the civil or criminal penalties for noncompliance.

C. Need to Halt or Reduce Activity not a Defense

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

D. Duty to Mitigate

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

E. Proper Operation and Maintenance

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

F. Removed Substances

Collected screenings, grit, solids, sludges, or other pollutants removed in the course of treatment shall be disposed of in such a manner so as to prevent any pollutant from entering any waters of the state or creating a health hazard.

G. Bypass of Treatment Facilities

1. Bypass not exceeding limitations. The permittee may allow any bypass to occur which 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 of Parts III.G.2 and III.G.3 of this permit.

2. Notice:

   a. Anticipated bypass. If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least 10 days before the date of the bypass.

   b. Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required under Part II.I of this permit, "Twenty-four Hour Reporting".

3. Prohibition of bypass:

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

      1) The bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;

      2) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgement to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and

      3) The permittee submitted notices as required under Part III.G.2 of this permit.

   b. DEQ may approve an anticipated bypass, after considering its adverse effects, if DEQ determines that it will meet the three conditions listed above in Part III.G.3.a of this permit.

H. Upset Conditions

1. 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 of Part III.H.2 of this permit are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review (i.e. permittees will have the opportunity for a judicial determination on any claim of upset only in an enforcement action brought for noncompliance with technology-based permit effluent limitations).

2. Conditions necessary for a demonstration of upset. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:

   a. An upset occurred and that the permittee can identify the cause(s) of the upset;

   b. The permitted facility was at the time being properly operated;

   c. The permittee submitted notice of the upset as required under Part II.I of this permit, "Twenty-four Hour Notice of Noncompliance Reporting"; and

   d. The permittee complied with any remedial measures required under Part III.D of this permit, "Duty to Mitigate."

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

I. Toxic Pollutants

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

J. Changes in Discharge of Toxic Substances

Notification shall be provided to DEQ as soon as the permittee knows of, or has reason to believe:

1. 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":

   a. One hundred micrograms per liter (100 μg/L);

   b. 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;

c. 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

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

2. 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":

a. Five hundred micrograms per liter (500 µg/L);

b. one milligram per liter (1 mg/L) for antimony;

c. 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

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

IV. GENERAL REQUIREMENTS

A. Planned Changes
The permittee shall give notice to DEQ as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when the alteration or addition could significantly change the nature or increase the quantity of pollutant discharged. This notification applies to pollutants which are not subject to effluent limitations in the permit.

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

C. 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.

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

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

F. Other Information
When the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or any report to DEQ, it shall promptly submit such facts or information with a narrative explanation of the circumstances of the omission or incorrect submittal and why they weren't supplied earlier.

G. Signatory Requirements
All applications, reports or information submitted to DEQ or the EPA shall be signed and certified.

1. All permit applications shall be signed as follows:

   a. For a corporation: by a responsible corporate officer:

b. For a partnership or sole proprietorship: by a general partner or the proprietor, respectively;

c. For a municipality, State, Federal, or other public agency: by either a principal executive officer or ranking elected official.

2. All reports required by the permit and other information requested by 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 and submitted to DEQ; and

b. The authorization specified 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 a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or an individual occupying a named position.)

3. Changes to authorization. If an authorization under Part IV.G.2 of this permit is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of Part IV.G.2 of this permit must be submitted to DEQ prior to or together with any reports, information, or applications to be signed by an authorized representative.

4. Certification. Any person signing a document under this section shall make the following certification:

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

H. Penalties for Falsification of Reports

The Montana Water Quality Act provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring

reports or reports of compliance or noncompliance shall, upon conviction be punished by a fine of not more than $25,000 per violation, or by imprisonment for not more than six months per violation, or by both.

I. Availability of Reports
Except for data determined to be confidential under 40 CFR Part 2, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of DEQ. As required by the Clean Water Act, permit applications, permits and effluent data shall not be considered confidential.

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

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

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

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

1. The current permittee notifies DEQ at least 30 days in advance of the proposed transfer date;

2. The notice includes a written agreement between the existing and new permittees containing a specific date for transfer of permit responsibility, coverage, and liability between them;

3. DEQ does not notify the existing permittee and the proposed new permittee of the intent to revoke or modify and reissue the permit. If this notice is not received, the transfer is effective on the date specified in the agreement mentioned in Part IV.M.2 of this permit; and

4. Required annual and application fees have been paid.

N. Fees
The permittee is required to submit payment of an annual fee as set forth in ARM 17.30.201. If the permittee fails to pay the annual fee within 90 days after the due date for the payment, DEQ may:

1. Impose an additional fee assessment computed at the rate established under ARM 17.30.201; and,

2. Suspend the processing of the application for a permit or authorization or, if the nonpayment involves an annual permit fee, suspend the permit, certificate or authorization for which the fee is required. DEQ may lift suspension at any time up to one year after the suspension occurs if the holder has paid all outstanding fees, including all penalties, assessments and interest imposed under this sub-section. Suspensions are limited to one year, after which the permit will be terminated.

O. Reopener Provisions

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

1. Water Quality Standards: The water quality standards of the receiving water(s) to which the permittee discharges are modified in such a manner as to require different effluent limits than contained in this permit.

2. Water Quality Standards are Exceeded: If it is found that water quality standards or trigger values in the receiving stream are exceeded either for parameters included in the permit or others, DEQ may modify the effluent limits or water management plan.

3. TMDL or Wasteload Allocation: TMDL requirements or a wasteload allocation is developed and approved by DEQ and/or EPA for incorporation in this permit.

4. Water Quality Management Plan: A revision to the current water quality management plan is approved and adopted which calls for different effluent limitations than contained in this permit.

5. Toxic Pollutants: A toxic standard or prohibition is established under Section 307(a) of the Clean Water Act for a toxic pollutant which is present in the discharge and such standard or prohibition is more stringent than any limitation for such pollutant in this permit.

6. Toxicity Limitation: Change in the whole effluent protocol, or any other conditions related to the control of toxicants have taken place, or if one or more of the following events have occurred:

    a. Toxicity was detected late in the life of the permit near or past the deadline for compliance.

b. The TIE/TRE results indicated that compliance with the toxic limits will require an implementation schedule past the date for compliance and the permit issuing authority agrees with the conclusion.

c. The TIE/TRE results indicated that the toxicant(s) represent pollutant(s) that may be controlled with specific numerical limits, and the permit issuing authority agrees that numerical controls are the most appropriate course of action.

d. Following the implementation of numerical controls on toxicants, the permit issuing authority agreed that a modified whole effluent protocol is needed to compensate for those toxicants that are controlled numerically.

e. The TIE/TRE revealed other unique conditions or characteristics which, in the opinion of the permit issuing authority, justify the incorporation of unanticipated special conditions in the permit.

V. DEFINITIONS

1. **"30-day (and monthly) average,"** other than for fecal coliform bacteria, means the arithmetic average of all samples collected during a consecutive 30-day period or calendar month, whichever is applicable. Geometric means shall be calculated for fecal coliform bacteria. The calendar month shall be used for purposes of reporting self-monitoring data on discharge monitoring report forms.

2. **"7-day (and weekly) average,"** other than for fecal coliform bacteria, means the arithmetic mean of all samples collected during a consecutive 7-day period or calendar week, whichever is applicable. Geometric means shall be calculated for fecal coliform bacteria. The 7-day averages are applicable only to those effluent characteristics for which there are 7-day average effluent limitations. The calendar week which begins on Sunday and ends on Saturday, shall be used for purposes of reporting self-monitoring data on discharge monitoring report forms. Weekly averages shall be calculated for all calendar weeks in the month that has at least four days. For example, if a calendar week overlaps two months, the weekly average is calculated only in the month that contains four or more days of that week.

3. **"Acute Toxicity"** means when 50 percent or more mortality is observed for either species (See Part I.C of this permit.) at any effluent concentration. Mortality in the control must simultaneously be 20 percent or less for the effluent results to be considered valid.

4. **"Annual Average Load"** means the arithmetic mean of all 30-day or monthly average loads reported during the calendar year for a monitored parameter.

4. **"Annual Maximum"** means the arithmetic sum of all discharges during the calendar year for a monitored parameter.

6. **"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.

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

8. **"Bypass"** means the intentional diversion of waste streams from any portion of a treatment facility.

9. **"CFR"** means the Code of Federal Regulations.

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

11. **"Chronic Toxicity"** means when the survival, growth, or reproduction, as applicable, for either test species, at the effluent dilution(s) designated in this

permit (see Part I.C), is significantly less (at the 95 percent confidence level) than that observed for the control specimens.

12. **"Composite Samples"** means a sample composed of two or more discrete aliquots (samples). The aggregate sample will reflect the average quality of the water or wastewater in the compositing or sample period. Composite sample may be composed of constant volume aliquots collected at regular intervals (simple composite) or flow proportioned.

13. **"Department"** means the Montana Department of Environmental Quality (DEQ).

14. **"Director"** means the Director of the United States Environmental Protection Agency's Water Management Division.

15. **"Discharge"** means the injection, deposit, dumping, spilling, leaking, placing, or failing to remove any pollutant so that it or any constituent thereof may enter into state waters, including ground water.

16. **"EPA"** means the United States Environmental Protection Agency.

17. **"Grab"** sample, for monitoring requirements, means a single "dip and take" sample collected at a representative point in the discharge stream.

18. **"Instantaneous"** measurement, for monitoring requirements, means a single reading, observation, or measurement.

19. **"Load Limits"** are mass-based discharge limits expressed in units such as lb/day.

20. **"Maximum Daily Limit"** means the maximum 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.

21. **"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, as determined by the procedure set forth at 40 CFR 136. In most cases the ML is equivalent to the Required Reporting Value (RRV) unless otherwise specified in the permit. (ARM 17.30.702(22))

22. **"Mixing Zone"** means a limited area of a surface water body or aquifer where initial dilution of a discharge takes place and where water quality changes may occur. Also recognized as an area where certain water quality standards may be exceeded.

23. **"Nondegradation"** means the prevention of a significant change in water quality that lowers the quality of high-quality water for one or more parameters. Also, the

prohibition of any increase in discharge that exceeds the limits established under or determined from a permit or approval issued by DEQ prior to April 29, 1993.

24. **"Regional Administrator"** means the administrator of the EPA Region with Jurisdiction over federal water pollution control activities in the State of Montana.

25. **"Severe property damage"** means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

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

27. **"TIE"** means a toxicity identification evaluation.

28. **"TRE"** means a toxicity reduction evaluation.

29. **"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.

30. **"TSS"** means the parameter total suspended solids.

31. **"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.

32. **"Whole Effluent Toxicity"** (WET) is the total toxic effect of an effluent measured directly with a toxicity test.