

Minor Industrial  
Permit No.: MT0030350

**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.*,

**REC Advanced Silicon Materials, LLC**

is authorized to discharge from its **industrial wastewater treatment facility and stormwater** located at **Township 3N, Range 9W, Section 35, Silver Bow County**

to receiving waters named **Sheep Gulch and Silver Bow 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 this permit.

This permit shall become effective on **August 1, 2021**.

This permit and the authorization to discharge shall expire at midnight, **July 31, 2026**.

FOR THE MONTANA DEPARTMENT OF  
ENVIRONMENTAL QUALITY

|S| Jon Kenning

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Jon Kenning, Chief  
Water Protection Bureau  
Water Quality Division

Modification Date: November 4, 2021

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**I. Effluent Limitations, Monitoring Requirements, and Other Conditions****A. Description of Discharge Points and Mixing Zone**

The authorization to discharge provided under this permit is limited to those outfalls specially 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.

<u>Outfall</u>	<u>Description</u>
001A	<p><b>Location:</b> At the end of the pipe, discharging into Sheep Gulch, located at 45.9726 N latitude, -112.6898 W longitude.</p> <p><b>Mixing Zone:</b> No mixing zone for any parameter.</p> <p><b>Treatment Works:</b> Equalization, flocculation, clarification and neutralization.</p>
001B	<p><b>Location:</b> Internal outfall before treated process water combines with cooling tower blowdown water.</p> <p><b>Mixing Zone:</b> No mixing zone for any parameter.</p> <p><b>Treatment Works:</b> Equalization, flocculation, clarification and neutralization.</p>
002	<p><b>Location:</b> Storm water discharge/overflow from retention ponds discharging to Sheep Gulch at approximately 45.9992 N latitude, -112.6842 W longitude.</p> <p><b>Mixing Zone:</b> No mixing zone for any parameter.</p> <p><b>Treatment Works:</b> Storm Water Retention Ponds</p>
003	<p><b>Location:</b> At the end of pipe discharging to Silver Bow Creek, located at approximately 46.0041 N latitude, 112.6934 W longitude.</p> <p><b>Mixing Zone:</b> No mixing zone for any parameter.</p> <p><b>Treatment Works:</b> Equalization, flocculation, clarification and neutralization.</p>

**B. Effluent Limitations – Outfalls 001A, 001B, and 003**

Upon the effective date of the permit and lasting through the permit term, the quality of effluent discharged through Outfall 001A, 001B and 003 shall, as a minimum, meet the limits set forth below and in **Table 1**:

There shall be no chronic toxicity in the effluent discharged by the facility.

There shall be no discharge of floating solids or visible foam other than in trace amounts.

There shall be no discharge which causes visible oil sheen in the receiving stream.

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

<b>Table 1. Effluent Limits for Outfalls 001A, 001B, and 003 <sup>(1)</sup></b>			
<b>Outfall 001-A to Sheep Gulch</b>	Units	Average Monthly Limit	Maximum Daily Limit
Oil and Grease	mg/L	-	10
pH	s.u.	Within the range of 6.0 to 9.0 (instantaneous)	
Total Residual Chlorine <sup>(2)</sup>	mg/L	0.011	0.019
Dissolved Oxygen <sup>(3)</sup>	mg/L	Minimum 6.5	Minimum 4.0 (instantaneous)
Total Nitrogen, Interim Summer <sup>(4)(5)</sup>	lb/day	4.04	-
Total Nitrogen, Final Summer <sup>(4)(6)</sup>	lb/day	2.15	-
Total Phosphorus, Summer <sup>(4)</sup>	lb/day	0.243	-
Total Dissolved Solids (TDS)	mg/L	1000	-
Dissolved Aluminum, Interim <sup>(5)</sup>	µg/L	140	317
Dissolved Aluminum, Final <sup>(6)</sup>	µg/L	68	153
Total Recoverable Arsenic	µg/L	10.0	10.0
Total Recoverable Copper	µg/L	9.8	22.5
Total Recoverable Mercury	µg/L	0.050	0.050
Total Recoverable Nickel	µg/L	100	100
Total Recoverable Zinc	µg/L	102	180
Whole Effluent Toxicity	pass/fail	No chronic toxicity	
<b>Outfall 001-B to Sheep Gulch</b>	Units	Average Monthly Limit	Maximum Daily Limit
Biochemical Oxygen Demand (BOD <sub>5</sub> )	mg/L	30	45
Chemical Oxygen Demand (COD)	mg/L	120	180
Total Suspended Solids (TSS)	mg/L	30	100
<b>Outfall 003 to Silver Bow Creek</b>	Units	Average Monthly Limit	Maximum Daily Limit
Oil and Grease	mg/L	-	10
pH	s.u.	Within the range of 6.0 to 9.0 (instantaneous)	
Total Residual Chlorine <sup>(2)</sup>	mg/L	0.011	0.019
Dissolved Oxygen <sup>(3)</sup>	mg/L	Weekly Minimum Mean 6.0	Daily Minimum 5.0
Total Nitrogen, Interim <sup>(4)(5)</sup>	lb/day	4.04	-
Total Nitrogen, Final <sup>(4)(6)</sup>	lb/day	2.15	-
Total Phosphorus, Summer <sup>(4)</sup>	lb/day	0.243	-
Total Dissolved Solids (TDS)	mg/L	1000	-
Dissolved Aluminum, Interim <sup>(5)</sup>	µg/L	140	317
Dissolved Aluminum, Final <sup>(6)</sup>	µg/L	68	153
Total Recoverable Arsenic	µg/L	10.0	10.0
Total Recoverable Copper	µg/L	9.8	22.5
Total Recoverable Mercury	µg/L	0.050	0.050
Total Recoverable Nickel	µg/L	75	93
Total Recoverable Zinc	µg/L	102	180
Whole Effluent Toxicity	pass/fail	No chronic toxicity	
<sup>(1)</sup> See Definitions section at the end of the permit for explanation of terms.			
<sup>(2)</sup> Analytical results less than 0.1 mg/L will be in compliance with the total residual chlorine limit.			
<sup>(3)</sup> Daily minimum is an instantaneous concentration to be achieved at all times.			
<sup>(4)</sup> Summer limits are effective June 1 – September 30.			
<sup>(5)</sup> Interim limits begin on the effective date of the permit and last through 58 months after the permit's effective date.			
<sup>(6)</sup> Final limits begin 58 months after the permit's effective date and last throughout the permit term.			

**C. Monitoring Requirements**

As a minimum, upon the effective date of this permit, the following constituents must be monitored at the frequency and with the type of measurement indicated below and in **Table 2**; samples or measurements shall be representative of the volume and nature of the facility's discharge. Reporting frequency shall be monthly, and each facility must submit the results on their NetDMR for each month by the 28<sup>th</sup> of the following month. If no discharge occurs during the entire monitoring period, it shall be stated on the Discharge Monitoring Report that no discharge or overflow occurred.

**1. Outfall 001A Monitoring**

Effluent monitoring must be conducted after treated process wastewater combines with cooling tower blowdown wastewater, at the composite sampler building or immediately following the sampler at the end of pipe discharging into Sheep Gulch. Effluent monitoring must be conducted after all treatment processes, unless another location is requested and approved by DEQ, in writing. This location is approximately latitude 45.9726, longitude -112.6898. Flow must be monitored continuously.

**2. Outfall 001 B Monitoring**

Monitoring must be conducted after final treatment in the treatment system and prior to the treated wastewater mixing with fire pond water. Wastewater flow from the treatment system must be monitored continuously. Should the continuous monitoring system temporarily fail, wastewater flow must be monitored a minimum of daily until continuous monitoring is restored.

**3. Outfall 002 Monitoring**

The monitoring location for Outfall 002 shall be at the constructed discharge point for each storm water detention pond. If more than one detention pond discharges during a storm event a separate grab sample shall be collected at each location. Sample results shall be summarized and reported annually on a DMR form.

As required by 40 CFR 122.21(g), the permittee shall collect a grab sample within the first thirty minutes of discharge from any permitted outfall for any discharges which result from precipitation related events, at minimum. As an alternative to a single grab sample, the permittee may take a flow-weighted composite of either the entire discharge or the first 3 hours of the discharge. For flow-weighted composite, only one analysis of the composited aliquots is required. Flow weighted composite samples are not allowed for pH, total phenols, and oil and grease.

**4. Outfall 003 Monitoring**

The monitoring location for Outfall 003 is at the end of pipe discharging to, and prior to mixing with Silver Bow Creek, unless another location is requested and approved by DEQ, in writing.

<b>Table 2. Self-Monitoring Requirements for Outfalls 001A, 001B, 002, and 003</b>					
<b>Outfalls 001A to Sheep Gulch and 003 to Silver Bow Creek</b>	<b>Unit <sup>(1)</sup></b>	<b>Sample Frequency</b>	<b>Sample Type <sup>(2)</sup></b>	<b>Reporting Requirement</b>	<b>Required Reporting Value <sup>(3)</sup></b>
Effluent Flow	Mgd	Continuous	Continuous	Monthly Average Daily Maximum	0.01
Oil and Grease <sup>(4)</sup>	mg/L	1/Month	Grab	Daily Maximum	1
	Presence	Daily	Observation	Present/Absent	NA
pH	s.u.	1/Week	Instantaneous	Inst. Minimum Inst. Maximum	0.1
Total Residual Chlorine	mg/L	1/Week	Grab	Monthly Average Daily Maximum	0.1
Kjeldahl Nitrogen, Summer <sup>(5)(6)</sup>	mg/L	1/Month	Composite	Monthly Average	0.225
Nitrate + Nitrite, Summer <sup>(5)(6)</sup>	mg/L	1/Month	Composite	Monthly Average	0.02
Total Nitrogen, Summer <sup>(5)(6)</sup>	mg/L	1/Week	Composite	Monthly Average	0.225
	lb/day	1/Month	Calculated		0.1
Total Phosphorus, Summer <sup>(5)</sup>	mg/L	1/Week	Composite	Monthly Average	0.003
	lb/day	1/Month	Calculated		0.1
Dissolved Oxygen	mg/L	1/Week	Grab	<sup>(7)</sup>	0.3
Total Dissolved Solids	mg/L	1/Week	Composite	Monthly Average	20
Dissolved Aluminum	µg/L	1/Week	Composite	Monthly Average Daily Maximum	9
Total Recoverable Arsenic	µg/L	1/Month	Composite	Monthly Average Daily Maximum	1
Total Recoverable Copper	µg/L	1/Week	Composite	Monthly Average Daily Maximum	2
Total Recoverable Mercury	µg/L	1/Month	Composite	Monthly Average Daily Maximum	0.005
Total Recoverable Nickel	µg/L	1/Week	Composite	Monthly Average Daily Maximum	2
Total Recoverable Zinc	µg/L	1/Month	Composite	Monthly Average Daily Maximum	8
Di(2-Ethylhexyl)Phthalate (DEHP):	µg/L	1/Month <sup>(8)</sup>	Grab	Monthly Average	2
Chronic WET	% Effluent	1/Quarter	Composite	Pass/Fail	NA
<b>Outfall 001B to Sheep Gulch</b>	<b>Unit <sup>(1)</sup></b>	<b>Sample Frequency</b>	<b>Sample Type <sup>(2)</sup></b>	<b>Reporting Requirement</b>	<b>Required Reporting</b>
Effluent Flow	mgd	Continuous	Continuous	Monthly Average Daily Maximum	0.01
Biochemical Oxygen Demand (BOD <sub>5</sub> )	mg/L	1/Week	Composite	Monthly Average Daily Maximum	5
Chemical Oxygen Demand (COD)	mg/L	1/Week	Composite	Monthly Average Daily Maximum	5
Total Suspended Solids (TSS)	mg/L	1/Week	Composite	Monthly Average Daily Maximum	5
<sup>(1)</sup> See narrative discussion in this section of permit for additional details on calculating load. <sup>(2)</sup> See Definition section at end of permit for explanation of terms. <sup>(3)</sup> See Circular DEQ-7 for minimum RRVs. If permittee is reporting non-detects, the analysis must meet these RRVs. <sup>(4)</sup> Oil and grease analysis must be conducted once per month, at a minimum. Additionally, if visual monitoring indicates the presence of oil and grease, an additional grab sample must be submitted for analysis. <sup>(5)</sup> Required June 1 - September 30. <sup>(6)</sup> Calculated as the sum of nitrate + nitrite (as N) and total Kjeldahl nitrogen concentrations. <sup>(7)</sup> Outfall 001A to Sheep Gulch: monthly mean and daily minimum; Outfall 003 to Silver Bow Creek: weekly mean and daily minimum. <sup>(8)</sup> If the results for 12 consecutive months of testing are below the RRV, the permittee may request a discontinuance of monitoring. DEQ may approve or deny the request based on the results and other available information without an additional public notice.					

<b>Table 2. Continued. Self-Monitoring Requirements for Outfalls 001A, 001B, 002, and 003</b>					
<b>Outfall 002 to Sheep Gulch</b>	<b>Unit <sup>(1)</sup></b>	<b>Sample Frequency</b>	<b>Sample Type <sup>(2)</sup></b>	<b>Reporting Requirement</b>	<b>Required Reporting</b>
Effluent Flow	mgd	1/Event	Estimate	Daily Maximum	0.01
Chemical Oxygen Demand	mg/L	1/Event	Grab	Daily Maximum	5
Total Suspended Solids (TSS)	mg/L	1/Event	Grab	Daily Maximum	5
Oil and Grease (visual)	Presence/ Absence	1/Event	Visual	Daily Maximum	1
Total Recoverable Arsenic	µg/L	1/Event	Grab	Daily Maximum	1
Total Recoverable Copper	µg/L	1/Event	Grab	Daily Maximum	2
Total Recoverable Lead	µg/L	1/Event	Grab	Daily Maximum	0.3
Total Recoverable Zinc	µg/L	1/Event	Grab	Daily Maximum	8
<sup>(1)</sup> See narrative discussion in this section of permit for additional details on calculating load. <sup>(2)</sup> See Definition section at end of permit for explanation of terms. <sup>(3)</sup> See Circular DEQ-7 for minimum RRVs. If permittee is reporting non-detects, the analysis must meet these RRVs. <sup>(4)</sup> Oil and grease analysis must be conducted once per quarter, at a minimum. Additionally, if visual monitoring indicates the presence of oil and grease, an additional grab sample must be submitted for analysis. <sup>(5)</sup> Required June 1 - September 30. <sup>(6)</sup> Calculated as the sum of nitrate + nitrite (as N) and total Kjeldahl nitrogen concentrations. <sup>(7)</sup> Outfall 001A to Sheep Gulch: monthly mean and daily minimum; Outfall 003 to Silver Bow Creek: weekly mean and daily minimum.					

**5. Reporting Requirements**

**Load Calculations**

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

$$Load = \text{effluent flow rate} \times \text{parameter concentration} \times \text{conversion factor}$$

$$\frac{lb}{day} = mgd \times \frac{mg}{L} \times 8.34 \frac{lb \cdot L}{Mgal \cdot mg}$$

**Average Monthly Limit (AML)**

The AML or monthly average is the arithmetic average or mean (except *E. coli*) of all the daily discharge samples collected during a calendar month, as defined in Part V of the permit. If only one sample is collected, then it is considered the monthly average and reported on the Discharge Monitoring Report.

**Average Weekly Limit (AWL)**

The AWL or weekly average is the arithmetic average or mean (except *E. coli*) of all the daily discharge samples collected during a calendar week, as defined in Part V of the permit. If only one sample is collected during the calendar week, it is considered the weekly average. The highest weekly average of the monitoring period shall be reported on the weekly average blank on the Discharge Monitoring Report. In cases where only one sample is collected during the entire monitoring period, that sample shall be reported as both the monthly and weekly average.

**6. Whole Effluent Toxicity Testing – Chronic Toxicity**

Starting in the first calendar quarter following the effective date of the permit, the permittee shall, at least once each quarter conduct a chronic static replacement toxicity test on a composite/grab sample of the effluent. Testing will employ two species per quarter and will consist of, at a minimum, a four-replicate effluent screen utilizing 100% effluent and a control. The control shall consist of moderately hard laboratory reconstituted water. Samples shall be collected on a two day progression; i.e., if the first quarterly sample is on a Monday, the second quarter sample shall be on a Wednesday, etc. Saturdays, Sundays and Holidays will be skipped in the progression.

The static 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 Effluents and Receiving Waters to Freshwater Organisms*, EPA-821-R-02-013 and the “*Region VIII EPA NPDES Acute Test Conditions-Static Renewal Whole Effluent Toxicity*”. The permittee shall conduct a chronic 3-brood static renewal toxicity test using one crustacean (*Ceriodaphnia sp.*) and a chronic 7-day static renewal toxicity test using fathead minnows (*Pimephales promelas*).

Chronic toxicity occurs when a statistically significant difference in either lethal or sub-lethal effects is observed between the effluent and the control for either species. For tests to be acceptable, control survival must be 80% or greater. At the end of the test, the average dry weight of surviving seven-day old fathead minnows in the controls must equal or exceed 0.25 mg. In *Ceriodaphnia dubia* controls, 60% or more of the surviving females must have produced their third brood in  $7 \pm 1$  days, and the number of young per surviving female must be 15 or greater. If these acceptability criteria are not met, the test is considered invalid and shall be repeated until satisfactory results are achieved.

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

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

If the results for four consecutive quarters of testing indicate no chronic toxicity, the permittee may request a reduction to semi-annual chronic toxicity testing. The Department may approve or deny the request based on the results and other available information without an additional public notice. If the request is approved, the test procedures are to be the same as specified above for the test species.

**7. Toxicity Identification Evaluation (TIE) / Toxicity Reduction Evaluation (TRE):**

If toxicity is detected in two consecutive discharges, 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(s) of the toxicity, locate the source(s) of the toxicity, and control or provide treatment for the toxicity.

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 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;
- 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 whole effluent protocol.



**D. Special Conditions****1. Stormwater Pollution Prevention**

Industrial storm water discharges are permitted from the facility under Outfall 002. To prevent pollution in these permitting discharges, the facility must implement best management practices (BMPs), a Stormwater Pollution Prevention Program (SWPPP), and site inspections. These requirements are referenced in the *Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activity (MSGP)*, Permit Number MTR000000:

- a. Implement control measures to meet the non-numeric technology-based effluent limits (best management practices) described in the effective MSGP. Any BMPs not applicable to the facility should be noted as such in the SWPPP.
- b. Develop and implement an Inspection Program that complies with the effective MSGP to ensure that all controls are functional and in place to prevent or reduce pollutant runoff from the facility.
- c. Develop, implement, and maintain a Stormwater Pollution Prevention Plan (SWPPP) that complies with the SWPPP General Requirements of the effective MSGP. The SWPPP and site map must be kept up to date to reflect current facility operations.

**2. Compliance Schedule**

Final effluent limits for total nitrogen and dissolved aluminum will be **effective starting 58 months after the effective date of the permit** in accordance with the following schedule:

- a. By **24 months after the effective date of this permit**, REC shall submit the proposed actions the facility commits to take to ensure compliance with final effluent limits.
- b. By **58 months after the effective date of the permit**, REC shall comply with the final effluent limits.

REC must submit **annual reports** to DEQ outlining progress toward compliance with final effluent limits. Annual reports must be submitted by January 28<sup>th</sup> of each year until REC complies with the final limits.

## 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. Sludge samples shall be collected at a location representative of the quality of sludge immediately prior to use-disposal practice.

### 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. See Part I.C of this permit for any applicable sludge monitoring procedures. All flow-measuring and flow-recording devices used in obtaining data submitted in self-monitoring reports must indicate values within 10 percent of the actual flow being measured.

### 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 \$25,000, 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 this permit must be submitted 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 the Department 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 incident of noncompliance affecting the environment as soon as possible, but no later than twenty-four (24) hours from the time the permittee first became aware of the circumstances. The report shall be made to the Water Protection Bureau at (406) 444-5546 or the Office of Disaster and Emergency Services at (406) 841-3911. 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. The Department may waive the written report on a case-by-case basis if the oral report has been received within 24 hours by the Water Protection Bureau, by phone, (406) 444-5546.
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 the Department or the Regional Administrator, or an authorized representative upon the presentation of credentials and other documents as may be required by law, to:

1. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;
2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
3. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
4. Sample or monitor at reasonable times, for the purpose of assuring permit compliance, 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 the Department and the Director 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 \$25,000 per day or one year in prison, or both, for the first conviction, and \$50,000 per day of violation or by imprisonment for not more than two years, or both, for subsequent convictions. MCA 75-5-611(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. Sludge shall not be directly blended with or enter either the final plant discharge and/or waters of the United States.

#### 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 ten (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 the Department 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 judgment 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. The Department may approve an anticipated bypass, after considering its adverse effects, if the Department 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 must be provided to the Department 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 the Department 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 the Department in accordance with 40 CFR 122.44(f).

## **IV. General Requirements**

### **A. Planned Changes**

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

1. 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; or
2. There are any planned substantial changes to the existing sewage sludge management practices of storage and disposal. The permittee shall give the Department notice of any planned changes at least 180 days prior to their implementation.

### **B. Anticipated Noncompliance**

The permittee shall give advance notice to the Department 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 the Department, within a reasonable time, any information which the Department may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The permittee shall also furnish to the Department, 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 the Department, 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 the Department shall be signed and certified.

1. All permit applications shall be signed by either a principal executive officer or ranking elected official.
2. All reports required by the permit and other information requested by the Department 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 the Department; and
  - b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility, such as the position of plant manager, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters. (A duly authorized representative may thus be either a named individual or 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 the Department 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 the Department and the Director. 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 the Department 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. The Department does not notify the existing permittee and the proposed new permittee of an 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, the Department may:

1. Impose an additional assessment computed at the rates established under 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. The Department 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, the Department 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 the Department 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. **Sewage Sludge:** There have been substantial changes (or such changes are planned) in sludge use or disposal practices; applicable management practices or numerical limitations for pollutants in sludge have been promulgated which are more stringent than the requirements in this permit; and/or it has been determined that the permittee's sludge use or disposal practices do not comply with existing applicable state or federal regulations.
6. **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.
7. **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 TRE/TIE results indicated that compliance with the toxic limits will require an implementation schedule past the date for compliance.
  - c. The TRE/TIE results indicated that the toxicant(s) represent pollutant(s) that may be controlled with specific numerical limits.
  - d. Following the implementation of numerical controls on toxicants, a modified whole effluent protocol is needed to compensate for those toxicants that are controlled numerically.
  - e. The TRE/TIE revealed other unique conditions or characteristics which, in the opinion of the Department, justify the incorporation of unanticipated special conditions in the permit.



**V. DEFINITIONS**

1. **“Act”** means the Montana Water Quality Act, Title 75, chapter 5, MCA.
2. **“Administrator”** means the administrator of the United States Environmental Protection Agency.
3. **“Acute Toxicity”** occurs 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 10 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.
5. **“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.
6. **“Average monthly limitation”** means the highest allowable average of daily discharges over a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during that month.
7. **“Average weekly limitation”** means the highest allowable average of daily discharges over a calendar week, calculated as the sum of all daily discharges measured during a calendar week divided by the number of daily discharges measured during that week.
8. **“BOD<sub>5</sub>”** means the five-day measure of pollutant parameter biochemical oxygen demand.
9. **“Bypass”** means the intentional diversion of waste streams from any portion of a treatment facility.
10. **“CBOD<sub>5</sub>”** 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 control specimens.
12. **“Composite samples”** shall be flow proportioned. The composite sample shall, as a minimum, contain at least four (4) samples collected over the compositing period. Unless otherwise specified, the time between the collection of the first sample and the last sample shall not be less than six (6) hours nor more than 24 hours. Acceptable methods for preparation of composite samples are as follows:
  - a. Constant time interval between samples, sample volume proportional to flow rate at time of sampling;
  - b. Constant time interval between samples, sample volume proportional to total flow (volume) since last sample. For the first sample, the flow rate at the time the sample was collected may be used;
  - c. Constant sample volume, time interval between samples proportional to flow (i.e. sample taken every “X” gallons of flow); and,
  - d. Continuous collection of sample, with sample collection rate proportional to flow rate.
13. **“Daily Discharge”** means the discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. For pollutants with limitations expressed in units of mass, the daily discharge is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurement, the daily discharge is calculated as the average measurement of the pollutant over the day.
14. **“Daily Maximum 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.
15. **“Department”** means the Montana Department of Environmental Quality (MDEQ). Established by 2-15-3501, MCA.
16. **“Director”** means the Director of the Montana Department of Environmental Quality.
17. **“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.
18. **“EPA”** means the United States Environmental Protection Agency.
19. **“Federal Clean Water Act”** means the federal legislation at 33 USC 1251, *et seq.*
20. **“Geometric Mean”** means the value obtained by taking the Nth root of the product of the measured values.
21. **“Grab Sample”** means a sample which is taken from a waste stream on a one-time basis without consideration of flow rate of the effluent or without consideration for time.
22. **“Indirect discharge”** means the introduction of pollutants into a POTW from any non-domestic source regulated under Section 307(b), (c) or (d) of the Federal Clean Water Act.

23. **"Industrial User"** means a source of Indirect Discharge.
24. **"Instantaneous Maximum Limit"** means the maximum allowable concentration of a pollutant determined from the analysis of any discrete or composite sample collected, independent of the flow rate and the duration of the sampling event.
25. **"Instantaneous Measurement"**, for monitoring requirements, means a single reading, observation, or measurement.
26. **"Interference"** means a discharge which, alone or in conjunction with other contributing discharges
  - a. Inhibits or disrupts the POTW, its treatment processes or operations, or its sludge processes, use or disposal; and
  - b. Therefore causes a violation of any requirement of the POTW's MPDES permit (including an increase in the magnitude or duration of a violation) or causes the prevention of sewage sludge use or disposal in compliance with the following statutes and regulations: Section 405 of the Clean Water Act; 40 CFR Part 503 - Standards for the Use and Disposal of Sewage Sludge; Resource Conservation and Recovery Act (RCRA); 40 CFR Part 258 - Criteria for Municipal Solid Waste Landfills; and/or any State regulations regarding the disposal of sewage sludge.
27. **"Maximum daily discharge limitation"** means the highest allowable daily discharge.
28. **"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))
29. **"Mixing zone"** means a limited area of a surface water body or aquifer where initial dilution of a discharge takes place and where certain water quality standards may be exceeded.
30. **"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 the Department prior to April 29, 1993.
31. **"Pass through"** means a discharge which exits the POTW into waters of the State of Montana in quantities or concentrations which, alone or in conjunction with other discharges, is a cause of a violation of any requirement of the POTW's MPDES permit (including an increase in the magnitude or duration of a violation).
32. **"POTW"** means a publicly owned treatment works.
33. **"Regional Administrator"** means the administrator of Region VIII of EPA, which has jurisdiction over federal water pollution control activities in the state of Montana.
34. **"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.
35. **"Sewage Sludge"** means any solid, semi-solid or liquid residue generated during the treatment of domestic sewage and/or a combination of domestic sewage and industrial waste of a liquid nature in a treatment works. Sewage sludge includes, but is not limited to, domestic septage; scum or solids removed in primary, secondary, or advanced wastewater treatment processes; and a material derived from sewage sludge. Sewage sludge does not include ash generated during the incineration of sewage sludge or grit and screenings generated during preliminary treatment of domestic sewage in a treatment works.
36. **"TIE"** means a toxicity identification evaluation.
37. **"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.
38. **"TRE"** means a toxicity reduction evaluation.
39. **"TSS"** means the pollutant parameter total suspended solids.
40. **"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.