STATE OF COLORADO

Lennberg - DNR, Patrick <patrick.lennberg@state.co.us>

Grand Island Resources Permit Information

1 message

Jacob Dyste - CDPHE <jacob.dyste@state.co.us> Wed, Feb 22, 2023 at 2:25 PM
To: "Lennberg - DNR, Patrick" <patrick.lennberg@state.co.us>

Hi Patrick,

A water quality permit is composed of two pieces - the permit itself and a fact sheet. There is information pertaining to changes in facility operations in both.

Permit see Part II.A.2 (Page 19). A switch to an active mining operation is considered by the Division to be a significant alteration that could change the nature of pollutants discharge.

Fact Sheet see IV.A (Page 2).

The December DMR is attached. There were no violations.

Jacob

--
Jacob Dyste
Enforcement Specialist

COLORADO
Water Quality Control Division
Department of Public Health & Environment

Phone: 720.583.4562
4300 Cherry Creek Drive South, Denver, CO 80246
jacob.dyste@state.co.us | www.colorado.gov/cdphe/wqcd

24-hr Environmental Release/Incident Report Line: 1.877.518.5608

3 attachments

Cross and Caribou December 2022 DMR.pdf
84K

CO0032751 - CDPHERM WTR Permit _ Certification.PDF
798K

CO0032751 - CDPHERM WTR Fact Sheet.PDF
3644K

COLORADO DISCHARGE PERMIT SYSTEM (CDPS)
FACT SHEET TO PERMIT NUMBER CO0032751
CALAIS RESOURCES INC., CROSS AND CARIBOU MINES
BOULDER COUNTY

TABLE OF CONTENTS

I. TYPE OF PERMIT

A. Permit Type: Industrial Minor, Fifth Renewal

B. Discharge To: Surface Water

II. FACILITY INFORMATION

A. SIC Code: 1041 (Gold Ores)

B. Facility Classification: Class D per Section 100.6.2 of the Water and Wastewater Facility Operator Certification Requirements

C. Facility Location: 4415 Caribou Road, Nederland, CO
Latitude: 39.978056° N, Longitude: 105.572194° W

D. Permitted Feature: 001A, prior to mixing with the receiving stream.
39° 58' 41" N, 105° 34' 19.9" W

The location(s) provided above will serve as the point(s) of compliance for this permit and are appropriate as they are located after all treatment and prior to discharge to the receiving water.

E. Facility Flows: variable by month

F. Major Changes From Last Renewal:

- Reporting requirements are included for several metals.
- A new compliance schedule is included for cadmium as limitations are more stringent from the previous permit.
- Temperature monitoring and the installation of temperature monitoring equipment is included.
- A requirement to perform a mixing zone study.

III. RECEIVING STREAM

A. Waterbody Identification: COSPBO03, Coon Track Creek

B. Water Quality Assessment:

An assessment of the stream standards, low flow data, and ambient stream data has been performed to determine the assimilative capacities for **Coon Track Creek** for potential pollutants of concern. This information, which is contained in the Water Quality Assessment (WQA) for this receiving stream(s), also includes an antidegradation review, where appropriate. The Division's Permits Section has reviewed the assimilative capacities to determine the appropriate water quality-based effluent limitations as well as potential limits based on the antidegradation evaluation, where applicable. The limitations based on the assessment and other evaluations conducted as part of this fact sheet can be found in Part I.A of the permit.

Permitted Feature **001A** will be the authorized discharge point to the receiving stream.

IV. FACILITY DESCRIPTION

A. Industry Description

This facility historically operated as a small gold mine; however, currently the facility is inactive. The current activities which take place on site are the year-round operation of a wastewater treatment plant.

No products are currently produced at the facility.

The permit **does not** cover this facility for active mining. If active mining is to begin at either of these mines, the permit will need to be amended.

B. Sources to the Treatment Plant

Water from both the Caribou and Cross Mines is piped to two, rubber-lined sedimentation ponds. The current design capacity of the facility ranges from 0.103 to 0.458 MGD.

Federal effluent limitations at 40 CFR Part 440, Subpart J for ore mining only applies to this discharge.

C. Chemical Usage

The permittee stated in the application that they utilize one chemical in their treatment process. The MSDS sheets have been reviewed and the following chemicals have been approved for use and are summarized in the following table.

Table IV-1 – Chemical Additives

Chemical Name	Purpose	Constituents of Concern
Type S hydrated lime	**Elevate pH, precipitate metals**	pH

Chemicals deemed acceptable for use in waters that will or may be discharged to waters of the State are acceptable only when used in accordance with all state and federal regulations, and in strict accordance with the manufacturer's site-specific instructions.

D. Wastewater Treatment Description

Wastewater treatment is accomplished using a non-aerated lagoon treatment process, with the addition of lime.

Pursuant to Section 100.6.2 of the Water and Wastewater Facility Operator Certification Requirements, this facility will require a Class D certified operator.

V. PERFORMANCE HISTORY

A. Monitoring Data

1. Discharge Monitoring Reports – The following tables summarize the effluent data reported on the Discharge Monitoring Reports (DMRs) for the previous permit term, from January 2007 through April 2012. Note that monitoring was required quarterly for all parameters except flow.

Table V-1a – Summary of DMR Data for Permitted Feature 001A – January-March

Parameter	*# Samples or Reporting Periods*	*Reported Average Concentrations Avg/Min/Max*	*Reported Maximum Concentrations Avg/Min/Max*	*Previous Avg/Max/AD Permit Limit*	*Number of Limit Excursions*
Effluent Flow (MGD)	*5*	*0.066/0.062/0.07*	*0.069/0.064/0.081*	*0.103/Report*	
pH (su)	*5*	*8.1/8/8.2*	*8.3/8/8.5*	*NA - 6.5-9.0*	
TSS, effluent (mg/l)	*5*	*0/<5/0*	*0/<5/0*	*20/30/*	
Oil and Grease (mg/l)	*5*	*NA/NA/NA*	*0/0/0*	*NA/10/*	
Cd, Dis (µg/l)	*5*	*0.032/<0.062/0.16*	*0.032/<0.062/0.16*	*1.7/Report*	
Cu, Dis (µg/l)	*5*	*2.4/0/8.4*	*2.4/0/8.4*	*9.7/15*	
Pb, Dis (µg/l)	*5*	*1.7/1.2/2*	*NA/NA/NA*	*2.8/NA*	
Hg, Tot (µg/l)	*3*	*0/<0.05/0*	*0/<0.05/0*	*1/2*	
Ag, Dis (µg/l)	*5*	*0.023/<0.028/0.12*	*0.023/<0.028/0.12*	*0.09/2.4*	*1/*
Zn, Dis (µg/l)	*5*	*15/7.9/32*	*15/7.9/32*	*127/127*	
WET, chronic					
pimephales lethality, Stat Diff	*3*	*//*	*100/100/100*	*NA*	
pimephales lethality, IC25	*3*	*//*	*100/100/100*		
ceriodaphnia lethality, Stat Diff	*3*	*//*	*100/100/100*	*NA*	
ceriodaphnia lethality, IC25	*3*	*//*	*100/100/100*		
pimephales toxicity, Stat Diff	*3*	*//*	*100/100/100*	*Report*	
pimephales toxicity, IC25	*3*	*//*	*100/100/100*		
ceriodaphnia toxicity, Stat Diff	*3*	*//*	*100/100/100*	*Report*	
ceriodaphnia toxicity, IC25	*3*	*//*	*100/100/100*		

**The pH data shows the minimum reported values in the "average" column, and the maximum reported values in the "maximum column*

Table V-1b – Summary of DMR Data for Permitted Feature 001A - April

Parameter	# Samples or Reporting Periods	Reported Average Concentrations Avg/Min/Max	Reported Maximum Concentrations Avg/Min/Max	Previous Avg/Max/AD Permit Limit	Number of Limit Excursions
Effluent Flow (MGD)	5	0.082/0.068/0.1	0.088/0.072/0.11	0.148/Report	
pH (su)	5	7.9/7.7/8	8.2/7.8/8.5	NA - 6.5-9.0	
TSS, effluent (mg/l)	5	0/<5/0	0/<5/0	200/30/	
Oil and Grease (mg/l)	5	NA/NA/NA	0/0/0	NA/10/	
Cd, Dis (µg/l)	5	0/<0.062/0	0/<0.062/0	1.6/Report	
Cu, Dis (µg/l)	5	6.6/0/21	6.6/0/21	12.5/19.6	1/1
Pb, Dis (µg/l)	5	4.9/2.2/14	NA/NA/NA	3.6/NA	1/
Hg, Tot (µg/l)	4	0/<0.05/0	0/<0.05/0	1/2	
Ag, Dis (µg/l)	5	0.042/<0.028/0.11	0.042/<0.028/0.11	0.09/2.4	
Zn, Dis (µg/l)	5	12/5.7/17	12/5.7/17	147/171	
WET, chronic					
pimephales lethality, Stat Diff	3	//	100/100/100	NA	
pimephales lethality, IC25	3	//	100/100/100		
ceriodaphnia lethality, Stat Diff	3	//	100/100/100	NA	
ceriodaphnia lethality, IC25	3	//	100/100/100		
pimephales toxicity, Stat Diff	3	//	100/100/100	Report	
pimephales toxicity, IC25	3	//	100/100/100		
ceriodaphnia toxicity, Stat Diff	3	//	100/100/100	Report	
ceriodaphnia toxicity, IC25	3	//	100/100/100		

**The pH data shows the minimum reported values in the "average" column, and the maximum reported values in the "maximum column*

Table V-1c – Summary of DMR Data for Permitted Feature 001A - May

Parameter	*# Samples or Reporting Periods*	*Reported Average Concentrations Avg/Min/Max*	*Reported Maximum Concentrations Avg/Min/Max*	*Previous Avg/Max/AD Permit Limit*	*Number of Limit Excursions*
Effluent Flow (MGD)	*5*	*0.23/0.18/0.28*	*0.3/0.21/0.36*	*0.374/Report*	
pH (su)	*5*	*7.7/7.1/8*	*8.2/7.8/8.3*	*NA - 6.5-9.0*	
TSS, effluent (mg/l)	*5*	*0/<5/0*	*0/<5/0*	*200/30/*	
Oil and Grease (mg/l)	*5*	*NA/NA/NA*	*0/0/0*	*NA/10/*	
Cd, Dis (µg/l)	*5*	*0/<0.062/0*	*0/<0.062/0*	*1.6/Report*	
Cu, Dis (µg/l)	*5*	*6.6/0/21*	*6.6/0/21*	*12.5/19.6*	*1/1*
Pb, Dis (µg/l)	*5*	*4.9/2.2/14*	*NA/NA/NA*	*3.6/NA*	*1/*
Hg, Tot (µg/l)	*4*	*0/<0.05/0*	*0/<0.05/0*	*1/2*	
Ag, Dis (µg/l)	*5*	*0.042/<0.028/0.11*	*0.042/<0.028/0.11*	*0.09/2.4*	
Zn, Dis (µg/l)	*5*	*12/5.7/17*	*12/5.7/17*	*147/171*	
WET, chronic					
pimephales lethality, Stat Diff	*3*	*//*	*100/100/100*	*NA*	
pimephales lethality, IC25	*3*	*//*	*100/100/100*		
ceriodaphnia lethality, Stat Diff	*3*	*//*	*100/100/100*	*NA*	
ceriodaphnia lethality, IC25	*3*	*//*	*100/100/100*		
pimephales toxicity, Stat Diff	*3*	*//*	*100/100/100*	*Report*	
pimephales toxicity, IC25	*3*	*//*	*100/100/100*		
ceriodaphnia toxicity, Stat Diff	*3*	*//*	*100/100/100*	*Report*	
ceriodaphnia toxicity, IC25	*3*	*//*	*100/100/100*		

**The pH data shows the minimum reported values in the "average" column, and the maximum reported values in the "maximum column*

Table V-1d – Summary of DMR Data for Permitted Feature 001A - June

Parameter	*# Samples or Reporting Periods*	*Reported Average Concentrations Avg/Min/Max*	*Reported Maximum Concentrations Avg/Min/Max*	*Previous Avg/Max/AD Permit Limit*	*Number of Limit Excursions*
Effluent Flow (MGD)	*5*	*0.32/0.22/0.44*	*0.41/0.3/0.59*	*0.458/Report*	
pH (su)	*5*	*7.7/7.1/8.1*	*8.1/7.7/8.2*	*NA - 6.5-9.0*	
TSS, effluent (mg/l)	*5*	*0/<5/0*	*0/<5/0*	*200/30/*	
Oil and Grease (mg/l)	*5*	*NA/NA/NA*	*0/0/0*	*NA/10/*	
Cd, Dis (µg/l)	*5*	*0/<0.062/0*	*0/<0.062/0*	*1.6/Report*	
Cu, Dis (µg/l)	*5*	*6.6/0/21*	*6.6/0/21*	*12.5/19.6*	*1/1*
Pb, Dis (µg/l)	*5*	*4.9/2.2/14*	*NA/NA/NA*	*3.6/NA*	*1/*
Hg, Tot (µg/l)	*4*	*0/<0.05/0*	*0/<0.05/0*	*1/2*	
Ag, Dis (µg/l)	*5*	*0.042/<0.028/0.11*	*0.042/<0.028/0.11*	*0.09/2.4*	
Zn, Dis (µg/l)	*5*	*12/5.7/17*	*12/5.7/17*	*147/171*	
WET, chronic					
pimephales lethality, Stat Diff	*3*	*//*	*100/100/100*	*NA*	
pimephales lethality, IC25	*3*	*//*	*100/100/100*		
ceriodaphnia lethality, Stat Diff	*3*	*//*	*100/100/100*	*NA*	
ceriodaphnia lethality, IC25	*3*	*//*	*100/100/100*		
pimephales toxicity, Stat Diff	*3*	*//*	*100/100/100*	*Report*	
pimephales toxicity, IC25	*3*	*//*	*100/100/100*		
ceriodaphnia toxicity, Stat Diff	*3*	*//*	*100/100/100*	*Report*	
ceriodaphnia toxicity, IC25	*3*	*//*	*100/100/100*		

**The pH data shows the minimum reported values in the "average" column, and the maximum reported values in the "maximum column*

Table V-1e – Summary of DMR Data for Permitted Feature 001A - July

Parameter	*# Samples or Reporting Periods*	*Reported Average Concentrations Avg/Min/Max*	*Reported Maximum Concentrations Avg/Min/Max*	*Previous Avg/Max/AD Permit Limit*	*Number of Limit Excursions*
Effluent Flow (MGD)	*5*	*0.22/0.15/0.29*	*0.26/0.17/0.36*	*0.265/Report*	*1 (0.285)/*
pH (su)	*5*	*8/7.8/8.2*	*8.3/8.2/8.7*	*NA - 6.5-9.0*	
TSS, effluent (mg/l)	*5*	*0/<5/0*	*0/<5/0*	*20/30/*	
Oil and Grease (mg/l)	*5*	*NA/NA/NA*	*0/0/0*	*NA/10/*	
Cd, Dis (µg/l)	*4*	*0/<0.062/0*	*0/<0.062/0*	*2.1/Report*	
Cu, Dis (µg/l)	*5*	*1.8/0.85/2.5*	*1.8/0.85/2.5*	*13.3/20.9*	
Pb, Dis (µg/l)	*5*	*2.4/1.4/3.8*	*NA/NA/NA*	*3.8/NA*	
Hg, Tot (µg/l)	*3*	*0/<0.05/0*	*0/<0.05/0*	*1/2*	
Ag, Dis (µg/l)	*5*	*0/<0.028/0*	*0/<0.028/0*	*0.13/3.4*	
Zn, Dis (µg/l)	*5*	*15/12/20*	*15/12/20*	*182/182*	
WET, chronic					
pimephales lethality, Stat Diff	*3*	*//*	*100/100/100*	*NA*	
pimephales lethality, IC25	*3*	*//*	*100/100/100*		
ceriodaphnia lethality, Stat Diff	*3*	*//*	*100/100/100*	*NA*	
ceriodaphnia lethality, IC25	*3*	*//*	*100/100/100*		
pimephales toxicity, Stat Diff	*3*	*//*	*100/100/100*	*Report*	
pimephales toxicity, IC25	*3*	*//*	*100/100/100*		
ceriodaphnia toxicity, Stat Diff	*3*	*//*	*100/100/100*	*Report*	
ceriodaphnia toxicity, IC25	*3*	*//*	*100/100/100*		

**The pH data shows the minimum reported values in the "average" column, and the maximum reported values in the "maximum column*

Table V-1f – Summary of DMR Data for Permitted Feature 001A - August

Parameter	*# Samples or Reporting Periods*	*Reported Average Concentrations Avg/Min/Max*	*Reported Maximum Concentrations Avg/Min/Max*	*Previous Avg/Max/AD Permit Limit*	*Number of Limit Excursions*
Effluent Flow (MGD)	*5*	*0.13/0.062/0.18*	*0.17/0.11/0.21*	*0.148/Report*	*2(0.178)/*
pH (su)	*5*	*8.2/7.7/8.6*	*8.4/8.2/8.9*	*NA - 6.5-9.0*	
TSS, effluent (mg/l)	*5*	*0/<5/0*	*0/<5/0*	*20/30/*	
Oil and Grease (mg/l)	*5*	*NA/NA/NA*	*0/0/0*	*NA/10/*	
Cd, Dis (µg/l)	*4*	*0/<0.062/0*	*0/<0.062/0*	*2.1/Report*	
Cu, Dis (µg/l)	5	1.8/0.85/2.5	1.8/0.85/2.5	*13.3/20.9*	
Pb, Dis (µg/l)	*5*	*2.4/1.4/3.8*	*NA/NA/NA*	*3.8/NA*	
Hg, Tot (µg/l)	*3*	*0/<0.05/0*	*0/<0.05/0*	*1/2*	
Ag, Dis (µg/l)	*5*	*0/<0.028/0*	*0/<0.028/0*	*0.13/3.4*	
Zn, Dis (µg/l)	*5*	*15/12/20*	*15/12/20*	*182/182*	
WET, chronic					
pimephales lethality, Stat Diff	*3*	*//*	*100/100/100*	*NA*	
pimephales lethality, IC25	*3*	*//*	*100/100/100*		
ceriodaphnia lethality, Stat Diff	*3*	*//*	*100/100/100*	*NA*	
ceriodaphnia lethality, IC25	*3*	*//*	*100/100/100*		
pimephales toxicity, Stat Diff	*3*	*//*	*100/100/100*	*Report*	
pimephales toxicity, IC25	*3*	*//*	*100/100/100*		
ceriodaphnia toxicity, Stat Diff	*3*	*//*	*100/100/100*	*Report*	
ceriodaphnia toxicity, IC25	*3*	*//*	*100/100/100*		

**The pH data shows the minimum reported values in the "average" column, and the maximum reported values in the "maximum column*

Table V-1g – Summary of DMR Data for Permitted Feature 001A - September

Parameter	*# Samples or Reporting Periods*	*Reported Average Concentrations Avg/Min/Max*	*Reported Maximum Concentrations Avg/Min/Max*	*Previous Avg/Max/AD Permit Limit*	*Number of Limit Excursions*
Effluent Flow (MGD)	*5*	*0.095/0.03/0.14*	*0.12/0.08/0.18*	*0.129/Report*	*1(0.137)/*
pH (su)	*5*	*8.1/8/8.2*	*8.5/8.2/9*	*NA - 6.5-9.0*	
TSS, effluent (mg/l)	*5*	*0/<5/0*	*0/<5/0*	*20/30/*	
Oil and Grease (mg/l)	*5*	*NA/NA/NA*	*0/0/0*	*NA/10/*	
Cd, Dis (µg/l)	*4*	*0/<0.062/0*	*0/<0.062/0*	*2.1/Report*	
Cu, Dis (µg/l)	*5*	*1.8/0.85/2.5*	*1.8/0.85/2.5*	*13.3/20.9*	
Pb, Dis (µg/l)	*5*	*2.4/1.4/3.8*	*NA/NA/NA*	*3.8/NA*	
Hg, Tot (µg/l)	*3*	*0/<0.05/0*	*0/<0.05/0*	*1/2*	
Ag, Dis (µg/l)	*5*	*0/<0.028/0*	*0/<0.028/0*	*0.13/3.4*	
Zn, Dis (µg/l)	*5*	*15/12/20*	*15/12/20*	*182/182*	
WET, chronic					
pimephales lethality, Stat Diff	*3*	*//*	*100/100/100*	*NA*	
pimephales lethality, IC25	*3*	*//*	*100/100/100*		
ceriodaphnia lethality, Stat Diff	*3*	*//*	*100/100/100*	*NA*	
ceriodaphnia lethality, IC25	*3*	*//*	*100/100/100*		
pimephales toxicity, Stat Diff	*3*	*//*	*100/100/100*	*Report*	
pimephales toxicity, IC25	*3*	*//*	*100/100/100*		
ceriodaphnia toxicity, Stat Diff	*3*	*//*	*100/100/100*	*Report*	
ceriodaphnia toxicity, IC25	*3*	*//*	*100/100/100*		

**The pH data shows the minimum reported values in the "average" column, and the maximum reported values in the "maximum column*

Table V-1h – Summary of DMR Data for Permitted Feature 001A – October-December

Parameter	*# Samples or Reporting Periods*	*Reported Average Concentrations Avg/Min/Max*	*Reported Maximum Concentrations Avg/Min/Max*	*Previous Avg/Max/AD Permit Limit*	*Number of Limit Excursions*
Effluent Flow (MGD)	*5*	*0.11/0.061/0.26*	*0.13/0.063/0.37*	*0.103/Report*	*1(0.261)/*
pH (su)	*5*	*8.1/7.9/8.4*	*8.4/8.2/8.5*	*NA - 6.5-9.0*	
TSS (mg/l)	*5*	*0/<5/0*	*0/<5/0*	*20/30/*	
Oil and Grease (mg/l)	*5*	*NA/NA/NA*	*0/0/0*	*NA/10/*	
Cd, Dis (µg/l)	*4*	*0.78/<0.062/3.1*	*0.78/<0.062/3.1*	*1.7/Report*	*1/*
Cu, Dis (µg/l)	*5*	*3.3/1.3/8.2*	*3.3/1.3/8.2*	*9.7/15*	
Pb, Dis (µg/l)	*5*	*2/1.6/2.3*	*NA/NA/NA*	*2.8/NA*	
Hg, Tot (µg/l)	*4*	*0/<0.05/0*	*0/<0.05/0*	*1/2*	
Ag, Dis (µg/l)	*5*	*0/0/0*	*0/0/0*	*0.09/2.4*	
Zn, Dis (µg/l)	*5*	*12/0.35/21*	*12/0.35/21*	*127/127*	
WET, chronic					
pimephales lethality, Stat Diff	*3*	*//*	*100/100/100*	*NA*	*1*
pimephales lethality, IC25	*3*	*//*	*100/100/100*		
ceriodaphnia lethality, Stat Diff	*3*	*//*	*100/100/100*	*NA*	
ceriodaphnia lethality, IC25	*3*	*//*	*100/100/100*		
pimephales toxicity, Stat Diff	*3*	*//*	*100/100/100*	*Report*	
pimephales toxicity, IC25	*3*	*//*	*100/100/100*		
ceriodaphnia toxicity, Stat Diff	*3*	*//*	*100/100/100*	*Report*	
ceriodaphnia toxicity, IC25	*3*	*//*	*100/100/100*		

**The pH data shows the minimum reported values in the "average" column, and the maximum reported values in the "maximum column*

B. Compliance With Terms and Conditions of Previous Permit

1. Effluent Limitations –The data shown in the preceding table(s) indicate apparent violations of the permit.
    - **WET Testing (December 2008)**
    - **Cadmium (December 2008)**
    - **Copper (June 2011)**
    - **Flow (August 2008, July 2011, August 2011, September 2011, October 2011, November 2011)**
    - **Lead (June 2011)**
    - **Silver (March 2011)**

A review by the permittee has indicated that some of the apparent violations were in error or lab results that were in error. The permittee has reviewed its reporting practices and has developed an internal QC/QA program that should help in the future with these reporting errors. Some of the flow issues were related to very high seasonal run off situations that were outside the normal for the operation. In turn, this created a greater than expected discharge from the mine. The permittee has also made operational changes in the Cross Mine internal water pool that will allow a more steady state discharge that would handle any of the unexpected seasonal flows in the future.

In accordance with 40 CFR Part 122.41(a), any permit noncompliance constitutes a violation of the Clean Water Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application.

2. Other Permit Requirements – The permittee has been in compliance with all other aspects of the previous permit.

VI. DISCUSSION OF EFFLUENT LIMITATIONS

A. Regulatory Basis for Limitations

1. Technology Based Limitations

    a. Federal Effluent Limitation Guidelines – The federal guidelines that apply to this type of facility are found under 40 CFR 440, titled *Ore Mining and Dressing Point Source Category*. The applicable ELGs are found in Section VIII of the WQA. These limitations will typically apply, unless a more stringent limitation, or an alternate limitation that would be protective of the limits shown below is applied.

    b. Regulation 62: Regulations for Effluent Limitations – These Regulations include effluent limitations that apply to all discharges of wastewater to State waters and are shown in Section VIII of the WQA. These regulations are applicable to the discharge from the Calais Resources Inc. WWTF.

2. Numeric Water Quality Standards - The WQA contains the evaluation of pollutants limited by water quality standards. The mass balance equation shown in Section VI of the WQA was used for most

pollutants to calculate the potential water quality based effluent limitations (WQBELs), M_2, that could be discharged without causing the water quality standard to be violated. A detailed discussion of the calculations for the maximum allowable concentrations for the relevant parameters of concern is provided in Section VI of the Water Quality Assessment developed for this permitting action.

The maximum allowable pollutant concentrations determined as part of these calculations represent the calculated effluent limits that would be protective of water quality. These are also known as the water quality-based effluent limits (WQBELs). Both acute and chronic WQBELs may be calculated based on acute and chronic standards, and these may be applied as daily maximum (acute) or 30-day average (chronic) limits.

3. Narrative Water Quality Standards - Section 31.11(1)(a)(iv) of The Basic Standards and Methodologies for Surface Waters (Regulation No. 31) includes the narrative standard that State surface waters shall be free of substances that are harmful to the beneficial uses or toxic to humans, animals, plants, or aquatic life.

   a. Agricultural Use Protection –The Division's Implementing Narrative Standards in Discharge Permits for the Protection of Irrigated Crops policy does not apply because there are no irrigation intakes that may be affected by the discharge.

   b. Whole Effluent Toxicity - The Water Quality Control Division has established the use of WET testing as a method for identifying and controlling toxic discharges from wastewater treatment facilities. WET testing is being utilized as a means to ensure that there are no discharges of pollutants "in amounts, concentrations or combinations which are harmful to the beneficial uses or toxic to humans, animals, plants, or aquatic life" as required by Section 31.11 (1) of the Basic Standards and Methodologies for Surface Waters. The requirements for WET testing are being implemented in accordance with Division policy, Implementation of the Narrative Standard for Toxicity in Discharge Permits Using Whole Effluent Toxicity (Sept 30, 2010). Note that this policy has recently been updated and the permittee should refer to this document for additional information regarding WET.

4. Water Quality Regulations, Policies, and Guidance Documents

   a. Antidegradation - Since the receiving water is Undesignated, an antidegradation review is required pursuant to Section 31.8 of The Basic Standards and Methodologies for Surface Water. As set forth in Section VII of the WQA, an antidegradation evaluation was conducted for pollutants when water quality impacts occurred and when the impacts were significant. Based on the antidegradation requirements and the reasonable potential analysis discussed below, antidegradation-based average concentrations (ADBACs) may be applied.

   According to Division procedures, the facility has three options related to antidegradation-based effluent limits: (1) the facility may accept ADBACs as permit limits (see Section VII of the WQA); (2) the facility may select permit limits based on their non-impact limit (NIL), which would result in the facility not being subject to an antidegradation review and thus the antidegradation-based average concentrations would not apply (the NILs are also contained in Section VII of the WQA); or (3) the facility may complete an alternatives analysis as set forth in Section 31.8(3)(d) of the regulations which would result in alternative antidegradation-based effluent limitations.

The effluent must not cause or contribute to an exceedance of a water quality standard and therefore the WQBEL must be selected if it is lower than the NIL. Where the WQBEL is not the most restrictive, the discharger may choose between the NIL or the ADBAC: the NIL results in no increased water quality impact; the ADBAC results in an "insignificant" increase in water quality impact. The ADBAC limits are imposed as two-year average limits.

b. Antibacksliding – As the receiving water is designated Reviewable or Outstanding, and the Division has performed an antidegradation evaluation, in accordance with the Antidegradation Guidance, the antibacksliding requirements in Regulation 61.10 have been met.

c. Determination of Total Maximum Daily Loads (TMDLs) – This stream segment is not on the State's 303(d) list, and therefore TMDLs do not apply.

d. Colorado Mixing Zone Regulations – Pursuant to section 31.10 of The Basic Standards and Methodologies for Surface Water, a mixing zone determination is required for this permitting action. The Colorado Mixing Zone Implementation Guidance, dated April 2002, identifies the process for determining the meaningful limit on the area impacted by a discharge to surface water where standards may be exceeded (i.e., regulatory mixing zone). This guidance document provides for certain exclusions from further analysis under the regulation, based on site-specific conditions.

The guidance document provides a mandatory, stepwise decision-making process for determining if the permit limits will not be affected by this regulation. Exclusion, based on Extreme Mixing Ratios, may be granted if the ratio of the facility design flow to the chronic low flow (30E3) is greater than 2:1 or if the ratio of the chronic low flow to the design flow is greater than 20:1. For January, February, March, April, May, November, and December, since the ratio of the design flows to the chronic low flow are more than 2:1, the permittee is eligible for an exclusion from further analysis under the regulation. **For June, July, August, September, and October, since the ratio of the design flows to the chronic low flow are less than 2:1, the permittee must perform additional studies to determine if further requirements apply.** The remaining threshold tests require site-specific information that is currently not available and thus a determination cannot be made about how the regulation may affect the setting of effluent limits in this permit. Therefore, a compliance schedule is necessary for acquisition of this information, which will be used to complete the testing of exclusion thresholds before the next permit renewal.

e. Reasonable Potential Analysis – Using the assimilative capacities contained in the WQA, an analysis must be performed to determine whether to include the calculated assimilative capacities as WQBELs in the permit. This reasonable potential (RP) analysis is based on the Determination of the Requirement to Include Water Quality Standards-Based Limits in CDPS Permits Based on Reasonable Potential, dated December, 2002. This guidance document utilizes both quantitative and qualitative approaches to establish RP depending on the amount of available data.

A qualitative determination of RP may be made where ancillary and/or additional treatment technologies are employed to reduce the concentrations of certain pollutants. Because it may be anticipated that the limits for a parameter could not be met without treatment, and the treatment is not coincidental to the movement of water through the facility, limits may be included to assure that treatment is maintained.

A qualitative RP determination may also be made where a federal ELG exists for a parameter, and where the results of a quantitative analysis results in no RP. As the federal ELG is typically less stringent than a limitation based on the WQBELs, if the discharge was to contain concentrations at the ELG (above the WQBEL), the discharge may cause or contribute to an exceedance of a water quality standard.

To conduct a quantitative RP analysis, a minimum of 10 effluent data points from the previous 5 years, should be used. **All data were used in the RP analysis.** The equations set out in the guidance for normal and lognormal distribution, where applicable, are used to calculate the maximum estimated pollutant concentration (MEPC). For data sets with non-detect values, and where at least 30% of the data set was greater than the detection level, MDLWIN software is used consistent with Division guidance to generate the mean and standard deviation, which are then used to establish the multipliers used to calculate the MEPC. If the MDLWIN program cannot be used the Division's guidance prescribes the use of best professional judgment.

For some parameters, recent effluent data or an appropriate number of data points may not be available, or collected data may be in the wrong form (dissolved vs total) and therefore may not be available for use in conducting an RP analysis. Thus, consistent with Division procedures, monitoring will be required to collect samples to support a RP analysis and subsequent decisions for a numeric limit. A compliance schedule may be added to the permit to require the request of an RP analysis once the appropriate data have been collected.

For other parameters, effluent data may be available to conduct a quantitative analysis, and therefore an RP analysis will be conducted to determine if there is RP for the effluent discharge to cause or contribute to exceedances of ambient water quality standards. The guidance specifies that if the MEPC exceeds the maximum allowable pollutant concentration (MAPC), limits must be established and where the MEPC is greater than half the MAPC (but less than the MAPC), monitoring must be established. Table VI-1a-j contains the calculated MEPC compared to the corresponding MAPC, and the results of the reasonable potential evaluation, for those parameters that met the data requirements. The RP determination is discussed for each parameter in the text below.

Table VI-1a – Reasonable Potential Analysis - January through March

Parameter	30-Day Average			7-Day Ave or Daily Max		
	MEPC	WQBEL (MAPC)	Reasonable Potential	MEPC	WQBEL (MAPC)	Reasonable Potential
Temp Daily Max (°C) April-Oct				NA	24	Monitor
Temp Daily Max (°C) Nov-March				NA	13	Monitor
Temp MWAT (°C) April-Oct	NA	18	Monitor			
Temp MWAT (°C) Nov-March	NA	9	Monitor			
As, TR (µg/l)	NA	0.028	Monitor	NA	NA	NA
As, Dis (µg/l)	NA	404	Monitor	NA	404	Monitor
Cd, Dis (µg/l)	10	0.63	Yes	8.8	2.3	Yes
Cr+3, TR (µg/l)	NA	59	Monitor	NA	59	Monitor
Cr+6, Dis (µg/l)	NA	15	Monitor	NA	19	Monitor
Cu, Dis (µg/l)	106	13	Yes	106	18	Yes
CN, Free (µg/l)				NA	5.9	Monitor
Fe, TR (µg/l)	NA	1306	Monitor			
Pb, Dis (µg/l)	19	3.7	Yes	NA	85	Monitor
Mn, Dis (µg/l)	NA	63	Monitor	NA	3657	Monitor
Hg, Tot (µg/l)	0	0.014	Yes (Qual)	0	NA	NA
Ni, Dis (µg/l)	NA	77	Monitor	NA	603	Monitor
Se, Dis (µg/l)	NA	6.3	Monitor	NA	22	Monitor
Ag, Dis (µg/l)	0.25	0.12	Yes	0.25	2.9	No
Zn, Dis (µg/l)	37	186	No	37	184	No
Chloride (mg/l)	NA	344	Monitor	NA	NA	NA
Sulfide as H2S (mg/l)	NA	0.0028	Monitor	NA	NA	NA

Table VI-1b – Reasonable Potential Analysis - April

Parameter	30-Day Average			7-Day Ave or Daily Max		
	MEPC	WQBEL (MAPC)	Reasonable Potential	MEPC	WQBEL (MAPC)	Reasonable Potential
Temp Daily Max (°C) April-Oct				NA	24	Monitor
Temp Daily Max (°C) Nov-March				NA	13	Monitor
Temp MWAT (°C) April-Oct	NA	18	Monitor			
Temp MWAT (°C) Nov-March	NA	9	Monitor			
As, TR (µg/l)	NA	0.026	Monitor	NA	NA	NA
As, Dis (µg/l)	NA	443	Monitor	NA	443	Monitor
Cd, Dis (µg/l)	10	0.6	Yes	8.8	2.5	Yes
Cr+3, TR (µg/l)	NA	65	Monitor	NA	65	Monitor
Cr+6, Dis (µg/l)	NA	14	Monitor	NA	21	Monitor
Cu, Dis (µg/l)	106	12	Yes	106	19	Yes
CN, Free (µg/l)				NA	6.5	Monitor
Fe, TR (µg/l)	NA	1248	Monitor			
Pb, Dis (µg/l)	19	3.5	Yes	NA	94	Monitor
Mn, Dis (µg/l)	NA	60	Monitor	NA	4015	Monitor
Hg, Tot (µg/l)	0	0.013	Yes (Qual)	0	NA	NA
Ni, Dis (µg/l)	NA	73	Monitor	NA	663	Monitor
Se, Dis (µg/l)	NA	6	Monitor	NA	24	Monitor
Ag, Dis (µg/l)	0.25	0.11	Yes	0.25	3.1	No
Zn, Dis (µg/l)	37	176	No	37	202	No
Chloride (mg/l)	NA	326	Monitor	NA	NA	NA
Sulfide as H2S (mg/l)	NA	0.0026	Monitor	NA	NA	NA

Table VI-1c – Reasonable Potential Analysis - May

Parameter	30-Day Average			7-Day Ave or Daily Max		
	MEPC	WQBEL (MAPC)	Reasonable Potential	MEPC	WQBEL (MAPC)	Reasonable Potential
Temp Daily Max (°C) April-Oct				NA	24	Monitor
Temp Daily Max (°C) Nov-March				NA	13	Monitor
Temp MWAT (°C) April-Oct	NA	18	Monitor			
Temp MWAT (°C) Nov-March	NA	9	Monitor			
As, TR (µg/l)	NA	0.027	Monitor	NA	NA	NA
As, Dis (µg/l)	NA	457	Monitor	NA	457	Monitor
Cd, Dis (µg/l)	10	0.62	Yes	8.8	2.6	Yes
Cr+3, TR (µg/l)	NA	67	Monitor	NA	67	Monitor
Cr+6, Dis (µg/l)	NA	15	Monitor	NA	22	Monitor
Cu, Dis (µg/l)	106	13	Yes	106	20	Yes
CN, Free (µg/l)				NA	6.7	Monitor
Fe, TR (µg/l)	NA	1281	Monitor			
Pb, Dis (µg/l)	19	3.6	Yes	NA	97	Monitor
Mn, Dis (µg/l)	NA	62	Monitor	NA	4139	Monitor
Hg, Tot (µg/l)	0	0.013	Yes (Qual)	0	NA	NA
Ni, Dis (µg/l)	NA	75	Monitor	NA	683	Monitor
Se, Dis (µg/l)	NA	6.2	Monitor	NA	25	Monitor
Ag, Dis (µg/l)	0.25	0.12	Yes	0.25	3.2	No
Zn, Dis (µg/l)	37	182	No	37	208	No
Chloride (mg/l)	NA	336	Monitor	NA	NA	NA
Sulfide as H2S (mg/l)	NA	0.0027	Monitor	NA	NA	NA

Table VI-1d – Reasonable Potential Analysis - June

Parameter	30-Day Average			7-Day Ave or Daily Max		
	MEPC	WQBEL (MAPC)	Reasonable Potential	MEPC	WQBEL (MAPC)	Reasonable Potential
Temp Daily Max (°C) April-Oct				NA	24	Monitor
Temp Daily Max (°C) Nov-March				NA	13	Monitor
Temp MWAT (°C) April-Oct	NA	18	Monitor			
Temp MWAT (°C) Nov-March	NA	9	Monitor			
As, TR (µg/l)	NA	0.039	Monitor	NA	NA	NA
As, Dis (µg/l)	NA	661	Monitor	NA	661	Monitor
Cd, Dis (µg/l)	10	0.89	Yes	8.8	3.7	Yes
Cr+3, TR (µg/l)	NA	97	Monitor	NA	97	Monitor
Cr+6, Dis (µg/l)	NA	21	Monitor	NA	31	Monitor
Cu, Dis (µg/l)	106	17	Yes	106	28	Yes
CN, Free (µg/l)				NA	9.7	Monitor
Fe, TR (µg/l)	NA	1769	Monitor			
Pb, Dis (µg/l)	19	5	Yes	NA	139	Monitor
Mn, Dis (µg/l)	NA	82	Monitor	NA	5975	Monitor
Hg, Tot (µg/l)	0	0.019	Yes (Qual)	0	NA	NA
Ni, Dis (µg/l)	NA	109	Monitor	NA	987	Monitor
Se, Dis (µg/l)	NA	8.9	Monitor	NA	36	Monitor
Ag, Dis (µg/l)	0.25	0.17	Yes	0.25	4.7	No
Zn, Dis (µg/l)	37	262	No	37	301	No
Chloride (mg/l)	NA	486	Monitor	NA	NA	NA
Sulfide as H2S (mg/l)	NA	0.0039	Monitor	NA	NA	NA

Table VI-1e – Reasonable Potential Analysis - July

Parameter	30-Day Average			7-Day Ave or Daily Max		
	MEPC	WQBEL (MAPC)	Reasonable Potential	MEPC	WQBEL (MAPC)	Reasonable Potential
Temp Daily Max (°C) April-Oct				NA	24	Monitor
Temp Daily Max (°C) Nov-March				NA	13	Monitor
Temp MWAT (°C) April-Oct	NA	18	Monitor			
Temp MWAT (°C) Nov-March	NA	9	Monitor			
As, TR (µg/l)	NA	0.033	Monitor	NA	NA	NA
As, Dis (µg/l)	NA	556	Monitor	NA	556	Monitor
Cd, Dis (µg/l)	10	0.75	Yes	8.8	3.1	Yes
Cr+3, TR (µg/l)	NA	82	Monitor	NA	82	Monitor
Cr+6, Dis (µg/l)	NA	18	Monitor	NA	26	Monitor
Cu, Dis (µg/l)	106	15	Yes	106	24	Yes
CN, Free (µg/l)				NA	8.2	Monitor
Fe, TR (µg/l)	NA	1517	Monitor			
Pb, Dis (µg/l)	19	4.3	Yes	NA	117	Monitor
Mn, Dis (µg/l)	NA	72	Monitor	NA	5026	Monitor
Hg, Tot (µg/l)	0	0.016	Yes (Qual)	0	NA	NA
Ni, Dis (µg/l)	NA	92	Monitor	NA	830	Monitor
Se, Dis (µg/l)	NA	7.5	Monitor	NA	30	Monitor
Ag, Dis (µg/l)	0.25	0.14	Yes	0.25	3.9	No
Zn, Dis (µg/l)	37	221	No	37	253	No
Chloride (mg/l)	NA	409	Monitor	NA	NA	NA
Sulfide as H2S (mg/l)	NA	0.0033	Monitor	NA	NA	NA

Table VI-1f – Reasonable Potential Analysis - August

Parameter	30-Day Average			7-Day Ave or Daily Max		
	MEPC	WQBEL (MAPC)	Reasonable Potential	MEPC	WQBEL (MAPC)	Reasonable Potential
Temp Daily Max (°C) April-Oct				NA	24	Monitor
Temp Daily Max (°C) Nov-March				NA	13	Monitor
Temp MWAT (°C) April-Oct	NA	18	Monitor			
Temp MWAT (°C) Nov-March	NA	9	Monitor			
As, TR (µg/l)	NA	0.036	Monitor	NA	NA	NA
As, Dis (µg/l)	NA	577	Monitor	NA	577	Monitor
Cd, Dis (µg/l)	10	0.82	Yes	8.8	3.2	Yes
Cr+3, TR (µg/l)	NA	85	Monitor	NA	85	Monitor
Cr+6, Dis (µg/l)	NA	20	Monitor	NA	27	Monitor
Cu, Dis (µg/l)	106	16	Yes	106	24	Yes
CN, Free (µg/l)				NA	8.5	Monitor
Fe, TR (µg/l)	NA	1638	Monitor			
Pb, Dis (µg/l)	19	4.6	Yes	NA	122	Monitor
Mn, Dis (µg/l)	NA	77	Monitor	NA	5215	Monitor
Hg, Tot (µg/l)	0	0.018	Yes (Qual)	0	NA	NA
Ni, Dis (µg/l)	NA	100	Monitor	NA	861	Monitor
Se, Dis (µg/l)	NA	8.2	Monitor	NA	31	Monitor
Ag, Dis (µg/l)	0.25	0.16	Yes	0.25	4.1	No
Zn, Dis (µg/l)	37	241	No	37	263	No
Chloride (mg/l)	NA	446	Monitor	NA	NA	NA
Sulfide as H2S (mg/l)	NA	0.0036	Monitor	NA	NA	NA

Table VI-1g – Reasonable Potential Analysis - September

Parameter	30-Day Average			7-Day Ave or Daily Max		
	MEPC	WQBEL (MAPC)	Reasonable Potential	MEPC	WQBEL (MAPC)	Reasonable Potential
Temp Daily Max (°C) April-Oct				NA	24	Monitor
Temp Daily Max (°C) Nov-March				NA	13	Monitor
Temp MWAT (°C) April-Oct	NA	18	Monitor			
Temp MWAT (°C) Nov-March	NA	9	Monitor			
As, TR (µg/l)	NA	0.038	Monitor	NA	NA	NA
As, Dis (µg/l)	NA	544	Monitor	NA	544	Monitor
Cd, Dis (µg/l)	10	0.87	Yes	8.8	3	Yes
Cr+3, TR (µg/l)	NA	80	Monitor	NA	80	Monitor
Cr+6, Dis (µg/l)	NA	21	Monitor	NA	26	Monitor
Cu, Dis (µg/l)	106	17	Yes	106	23	Yes
CN, Free (µg/l)				NA	8	Monitor
Fe, TR (µg/l)	NA	1734	Monitor			
Pb, Dis (µg/l)	19	4.9	Yes	NA	115	Monitor
Mn, Dis (µg/l)	NA	81	Monitor	NA	4922	Monitor
Hg, Tot (µg/l)	0	0.019	Yes (Qual)	0	NA	NA
Ni, Dis (µg/l)	NA	106	Monitor	NA	813	Monitor
Se, Dis (µg/l)	NA	8.7	Monitor	NA	29	Monitor
Ag, Dis (µg/l)	0.25	0.17	Yes	0.25	3.8	No
Zn, Dis (µg/l)	37	257	No	37	248	No
Chloride (mg/l)	NA	475	Monitor	NA	NA	NA
Sulfide as H2S (mg/l)	NA	0.0038	Monitor	NA	NA	NA

Table VI-1h – Reasonable Potential Analysis - October

Parameter	30-Day Average			7-Day Ave or Daily Max		
	MEPC	WQBEL (MAPC)	Reasonable Potential	MEPC	WQBEL (MAPC)	Reasonable Potential
Temp Daily Max (°C) April-Oct				NA	24	Monitor
Temp Daily Max (°C) Nov-March				NA	13	Monitor
Temp MWAT (°C) April-Oct	NA	18	Monitor			
Temp MWAT (°C) Nov-March	NA	9	Monitor			
As, TR (µg/l)	NA	0.039	Monitor	NA	NA	NA
As, Dis (µg/l)	NA	638	Monitor	NA	638	Monitor
Cd, Dis (µg/l)	10	0.89	Yes	8.8	3.6	Yes
Cr+3, TR (µg/l)	NA	94	Monitor	NA	94	Monitor
Cr+6, Dis (µg/l)	NA	21	Monitor	NA	30	Monitor
Cu, Dis (µg/l)	106	17	Yes	106	27	Yes
CN, Free (µg/l)				NA	9.4	Monitor
Fe, TR (µg/l)	NA	1764	Monitor			
Pb, Dis (µg/l)	19	5	Yes	NA	135	Monitor
Mn, Dis (µg/l)	NA	82	Monitor	NA	5765	Monitor
Hg, Tot (µg/l)	0	0.019	Yes (Qual)	0	NA	NA
Ni, Dis (µg/l)	NA	109	Monitor	NA	953	Monitor
Se, Dis (µg/l)	NA	8.9	Monitor	NA	35	Monitor
Ag, Dis (µg/l)	0.25	0.17	Yes	0.25	4.5	No
Zn, Dis (µg/l)	37	262	No	37	291	No
Chloride (mg/l)	NA	484	Monitor	NA	NA	NA
Sulfide as H2S (mg/l)	NA	0.0039	Monitor	NA	NA	NA

Table VI-1i – Reasonable Potential Analysis - November

Parameter	30-Day Average			7-Day Ave or Daily Max		
	MEPC	WQBEL (MAPC)	Reasonable Potential	MEPC	WQBEL (MAPC)	Reasonable Potential
Temp Daily Max (°C) April-Oct				NA	24	Monitor
Temp Daily Max (°C) Nov-March				NA	13	Monitor
Temp MWAT (°C) April-Oct	NA	18	Monitor			
Temp MWAT (°C) Nov-March	NA	9	Monitor			
As, TR (µg/l)	NA	0.03	Monitor	NA	NA	NA
As, Dis (µg/l)	NA	510	Monitor	NA	510	Monitor
Cd, Dis (µg/l)	10	0.69	Yes	8.8	2.9	Yes
Cr+3, TR (µg/l)	NA	75	Monitor	NA	75	Monitor
Cr+6, Dis (µg/l)	NA	17	Monitor	NA	24	Monitor
Cu, Dis (µg/l)	106	14	Yes	106	22	Yes
CN, Free (µg/l)				NA	7.5	Monitor
Fe, TR (µg/l)	NA	1408	Monitor			
Pb, Dis (µg/l)	19	4	Yes	NA	108	Monitor
Mn, Dis (µg/l)	NA	67	Monitor	NA	4615	Monitor
Hg, Tot (µg/l)	0	0.015	Yes (Qual)	0	NA	NA
Ni, Dis (µg/l)	NA	84	Monitor	NA	762	Monitor
Se, Dis (µg/l)	NA	6.9	Monitor	NA	28	Monitor
Ag, Dis (µg/l)	0.25	0.13	Yes	0.25	3.6	No
Zn, Dis (µg/l)	37	203	No	37	233	No
Chloride (mg/l)	NA	375	Monitor	NA	NA	NA
Sulfide as H2S (mg/l)	NA	0.003	Monitor	NA	NA	NA

Table VI-1j – Reasonable Potential Analysis - December

Parameter	30-Day Average			7-Day Ave or Daily Max		
	MEPC	WQBEL (MAPC)	Reasonable Potential	MEPC	WQBEL (MAPC)	Reasonable Potential
Temp Daily Max (°C) April-Oct				NA	24	Monitor
Temp Daily Max (°C) Nov-March				NA	13	Monitor
Temp MWAT (°C) April-Oct	NA	18	Monitor			
Temp MWAT (°C) Nov-March	NA	9	Monitor			
As, TR (µg/l)	NA	0.027	Monitor	NA	NA	NA
As, Dis (µg/l)	NA	400	Monitor	NA	400	Monitor
Cd, Dis (µg/l)	10	0.63	Yes	8.8	2.2	Yes
Cr+3, TR (µg/l)	NA	59	Monitor	NA	59	Monitor
Cr+6, Dis (µg/l)	NA	15	Monitor	NA	19	Monitor
Cu, Dis (µg/l)	106	13	Yes	106	17	Yes
CN, Free (µg/l)				NA	5.9	Monitor
Fe, TR (µg/l)	NA	1295	Monitor			
Pb, Dis (µg/l)	19	3.6	Yes	NA	85	Monitor
Mn, Dis (µg/l)	NA	62	Monitor	NA	3619	Monitor
Hg, Tot (µg/l)	0	0.014	Yes (Qual)	0	NA	NA
Ni, Dis (µg/l)	NA	76	Monitor	NA	597	Monitor
Se, Dis (µg/l)	NA	6.3	Monitor	NA	22	Monitor
Ag, Dis (µg/l)	0.25	0.12	Yes	0.25	2.8	No
Zn, Dis (µg/l)	37	184	No	37	182	No
Chloride (mg/l)	NA	341	Monitor	NA	NA	NA
Sulfide as H2S (mg/l)	NA	0.0027	Monitor	NA	NA	NA

B. Parameter Evaluation

Total Suspended Solids - The federal ELG is the limitation that is applied to this discharge. According to Part 62.2(3) of the Regulations for Effluent Limitations "If the Commission has not so promulgated effluent limitation guidelines for any particular industry, but that industry is subject to effluent limitation guidelines promulgated by the United States Environmental Protection Agency pursuant to the Federal Water Pollution Control Act of 1972, the effluent from these industries shall be subject to the applicable EPA guidelines and shall not be subject to the effluent limitations of Regulation 62.4."

These limitations are the same as those contained in the previous permit and are imposed upon the effective date of this permit.

Oil and Grease –The oil and grease limitations from the Regulations for Effluent Limitations are applied as they are the most stringent limitations.

This limitation is the same as those contained in the previous permit and is imposed upon the effective date of this permit.

pH - This parameter is limited by the water quality standards of 6.5-9.0 s.u., as this range is more stringent than other applicable standards.

This limitation is the same as that contained in the previous permit and is imposed upon the effective date of this permit.

For all months:
Total Recoverable Arsenic, Potentially Dissolved Arsenic, Total Recoverable Trivalent Chromium, Potentially Dissolved Trivalent Chromium, Dissolved Hexavalent Chromium, Cyanide, Total Recoverable Iron, Potentially Dissolved Manganese, Potentially Dissolved Nickel, Potentially Dissolved Selenium, Chloride and Sulfide – There are no data available regarding the presence/absence or quantification of these parameters in the discharge. Since the potential exists for these parameters to be present, monitoring has been added to the permit.

Potentially Dissolved Cadmium
Considering that the data for cadmium are highly variable, that some data points are high, that there is a federal ELG for cadmium, the facility had a violation of the permit limitation (December 2008) and the downstream segment is on the monitoring and evaluation list for cadmium. Thus a qualitative determination of reasonable potential has been made. The permittee may not be able to consistently meet the new, more stringent limitations and a compliance schedule has been added to the permit to give the permittee time to meet the limitations.

Potentially Dissolved Copper
Considering that the data for copper are highly variable, that some data points are high, and that there is a federal ELG for copper, a qualitative determination for copper of reasonable potential has been made. Therefore, a qualitative determination of RP has been made and limitations will be added and imposed upon the effective date of the permit. Previous monitoring as shown in Table V-1 indicates that these limitations can be met and are therefore imposed upon the effective date of the permit.

Potentially Dissolved Lead
The RP analysis for potentially dissolved lead was based upon the WQBEL as described in the WQA. With the available data the log-normal program was used to determine the appropriate statistics to determine the MEPC. The MEPC was greater than the MAPC and therefore limitations are required. Therefore a 30-day average and daily maximum requirement has been added to the permit. These limitations are the same, or less stringent, than previous limitations, and previous monitoring as shown in Table V-1 indicates that these limitations can be met the majority of the time. Therefore, the limits are imposed upon the effective date of the permit. Note that there is a Federal ELG for lead.

Total Mercury
Although there were effluent data available for total mercury, the detection level achieved of 0.05 ug/l were greater than the calculated WQBEL for this pollutant and were also greater than the achievable detection levels. Thus, quarterly low level monitoring will be specified for this parameter. The Federal ELGs are imposed upon the effective date of the permit.

Potentially Dissolved Silver
Considering that the data for silver are highly variable and that some effluent data points are as high as the WQBEL, a qualitative determination for silver of reasonable potential has been made. Therefore, a qualitative determination of RP has been made and limitations will be added and imposed upon the

effective date of the permit. Based on effluent data from the previous permit, it appears that the facility is able to meet these limitations and they are imposed upon the effective date of the renewal permit.

Potentially Dissolved Zinc

January through December: A Federal ELG applies for this facility. Even though the effluent concentrations are currently relatively stable and are significantly below the WQBELS (highest 40 ug/l) compared with the applicable WQBELs, this facility is moving into active mining and so limitations for potentially dissolved zinc remain warranted. Based on effluent data from the previous permits (which include active mining periods), it is reasonably expected that concentrations of zinc will increase in the effluent. Since it appears that the facility is able to meet these limitations and they are slightly less stringent than the limitations in the previous permit, they are imposed upon the effective date of the renewal permit.

Temperature- The MWAT is the maximum weekly average temperature, as determined by a seven day rolling average, using at least 3 equally spaced temperature readings in a 24-hour day (at least every 8 hours for a total of at least 21 data points).

The daily maximum is defined as the maximum 2 hour average, with a minimum of 12 equally spaced measurements throughout the day. As both of these temperature requirements will likely require the use of automated temperature measurements and recordings, the permittee is given until April 1, 2014 to have the proper equipment in place to take the required readings.

As it is unknown whether the facility can meet the new temperature limitation, or whether there is reasonable potential for the facility to cause or contribute to an exceedance of the water quality standard for temperature, report only conditions will be required for the duration of this permit. Upon the next permit renewal, the collected temperature data will be used to determine if there is reasonable potential, and/or if the permittee can meet the limitation.

As continuous ambient water quality data, in accordance with the definition of the standard, is not available, the permittee is encouraged to collect instream data on a continuous basis. This data may be used during the next permit renewal, so that the assimilative capacity of the receiving water (if applicable) can be calculated and used to determine a limitation based on the streams dilution potential. If such data is not available, the Division will likely set the limitation at the water quality standard (i.e. end of pipe limit, no dilution).

Organics – The effluent is not expected or known to contain organic chemicals, and therefore, limitations for organic chemicals are not needed in this permit.

Whole Effluent Toxicity (WET) Testing – For this facility, chronic WET testing has been determined to be applicable based on the instream waste concentrations calculated in the WQA.

Due to facility type, expected pollutants, variability of the discharge, and previous WET test results, a determination of reasonable potential has been made.

The permittee should read the WET testing section of Part I of the permit carefully, as this information has been updated in accordance with the Division's updated policy, Implementation of the Narrative Standard for Toxicity in Discharge Permits Using Whole Effluent Toxicity (Sept 30, 2010) . The permit outlines the test requirements and the required follow-up actions the permittee must take to resolve a toxicity incident. The permittee should also read the above mentioned policy which is available on the

Permit Section website. The permittee should be aware that some of the conditions outlined above may be subject to change if the facility experiences a change in discharge, as outlined in Part II.A.2. of the permit. Such changes shall be reported to the Division immediately.

C. Parameter Speciation

For standards based upon the total and total recoverable methods of analysis, the limitations are based upon the same method as the standard.

For total recoverable arsenic, the analysis may be performed using a graphite furnace, however, this method may produce erroneous results and may not be available to the permittee. Therefore, the total method of analysis will be specified instead of the total recoverable method.

Until recently there has not been an effective method for monitoring low-level total mercury concentrations in either the receiving stream or the facility effluent. Monitoring for total mercury has been accomplished as part of past permit conditions and analytical results have all been found at less than detectable levels. However, detection levels only as low as 0.05 ug/l have been achieved, versus potential WQBEL total mercury limits of less than 0.02 ug/l.

To ensure that adequate data are gathered to determine reasonable potential, and consistent with Division initiatives for mercury, quarterly effluent monitoring for total mercury at low-level detection methods will be required by the permit.

For metals with aquatic life-based dissolved standards, effluent limits and monitoring requirements are typically based upon the potentially dissolved method of analysis, as required under Regulation 31, Basic Standards and Methodologies for Surface Water. Thus, effluent limits and/or monitoring requirements for these metals will be prescribed as the "potentially dissolved" form.

For cyanide, the acute standard is in the form of "free" cyanide concentrations. However, there is no analytical procedure for measuring the concentration of free cyanide in a complex effluent. Therefore, ASTM (American Society for Testing and Materials) analytical procedure D2036-81, Method C, will be used to measure weak acid dissociable cyanide in the effluent. This analytical procedure will detect free cyanide plus those forms of complex cyanide that are most readily converted to free cyanide.

For total recoverable trivalent chromium, the regulations indicate that standard applies to the total of both the trivalent and hexavalent forms. Therefore, monitoring for total recoverable chromium will be required.

For hexavalent chromium, samples must be unacidified. Accordingly, dissolved concentrations will be measured rather than potentially dissolved concentrations.

VII. ADDITIONAL TERMS AND CONDITIONS

A. Monitoring

Effluent Monitoring – Effluent monitoring will be required as shown in the permit document. Refer to the permit for locations of monitoring points. Monitoring requirements have been established in accordance with the frequencies and sample types set forth in the Baseline Monitoring Frequency, Sample Type, and Reduced Monitoring Frequency Policy for Industrial and Domestic Wastewater

Treatment Facilities. This policy includes the methods for reduced monitoring frequencies based upon facility compliance as well as for considerations given in exchange for instream monitoring programs initiated by the permittee. Table VI-2 shows the results of the reduced monitoring frequency analysis for Permitted Feature 001A, based upon compliance with the previous permit. Note that the most reduction available to this facility is monthly monitoring due to the variability of the discharge, and due to the application of monthly limitations requested by the permittee.

The permittee is not eligible for reduced monitoring for cadmium, copper, lead, and silver due to the history of non-compliance for these parameters. Considering the permittee is moving into active mining from inactive mining, a reduction in monitoring based on an inactive mining status is not applicable.

For mercury, no low-level effluent data is available to evaluate a reduction in monitoring against the WQBEL. Thus, no reduction in mercury monitoring is warranted at this time.

Table VI-2 – Monitoring Reduction Evaluation

Parameter	*Proposed Permit Limit*	*Average of 30-Day (or Daily Max) Average Conc.*	*Standard Deviation*	*Long Term Characterization (LTC)*	*Reduction Potential*
pH (su) Minimum	*min 6.5*	*8*	*0.28*	*7.44*	*None*
pH (su) Maximum	*max 9.0*	*8.4*	*0.28*	*8.96*	
TSS, effluent (mg/l)	*30*	*0*	*0*	*0*	*3 Levels*

B. Reporting

1. Discharge Monitoring Report – The Calais Resources Inc. facility must submit Discharge Monitoring Reports (DMRs) on a monthly basis to the Division. These reports should contain the required summarization of the test results for all parameters and monitoring frequencies shown in Part I.A.2 of the permit. See the permit, Part I.D for details on such submission.
2. Additional Reporting –
    a. **Installation of temperature monitoring equipment**
    b. **Mixing Zone Study**
3. Special Reports – Special reports are required in the event of an upset, bypass, or other noncompliance. Please refer to Part II.A. of the permit for reporting requirements. As above, submittal of these reports to the US Environmental Protection Agency Region VIII is no longer required.

C. Signatory and Certification Requirements

Signatory and certification requirements for reports and submittals are discussed in Part I.D.6. of the permit.

D. Compliance Schedules

The following compliance schedules are included in the permit. See Part I.B of the permit for more information.

- Cadmium: Time has been given for the evaluation and/or additional treatment needed to meet the new limits. Compliance with the new limits is expected by January 1, 2017.

All information and written reports required by the following compliance schedules should be directed to the Permits Section for final review unless otherwise stated.

E. Stormwater

Pursuant to 5 CCR 1002-61.3(2), facilities classified as Standard Industrial Classifications 10-14 (mineral industry) including active or inactive metal mining operations, are required to obtain permit coverage for discharges of stormwater associated with industrial activities from the facility to state waters. The stormwater discharge permit applicable to active and inactive metal mining operations is the CDPS General Permit for Stormwater Discharges Associated with Metal Mining Operations and Mine Waste Remediation.

Division records indicate that Calais Resources Inc. applied for and obtained coverage under this permit for the Cross and Caribou Mines. The CDPS certification number is COR040242.

F. Economic Reasonableness Evaluation

Section 25-8-503(8) of the revised (June 1985) Colorado Water Quality Control Act required the Division to "determine whether or not any or all of the water quality standard based effluent limitations are reasonably related to the economic, environmental, public health and energy impacts to the public and affected persons, and are in furtherance of the policies set forth in sections 25-8-192 and 25-8-104."

The Colorado Discharge Permit System Regulations, Regulation No. 61, further define this requirement under 61.11 and state: "Where economic, environmental, public health and energy impacts to the public and affected persons have been considered in the classifications and standards setting process, permits written to meet the standards may be presumed to have taken into consideration economic factors unless:

a. A new permit is issued where the discharge was not in existence at the time of the classification and standards rulemaking, or

b. In the case of a continuing discharge, additional information or factors have emerged that were not anticipated or considered at the time of the classification and standards rulemaking."

The evaluation for this permit shows that the Water Quality Control Commission, during their proceedings to adopt the Classifications and Numeric Standards for South Platte River Basin, Laramie River Basin, Republican River Basin, Smoky Hill River Basin, considered economic reasonableness.

Furthermore, this is not a new discharger and no new information has been presented regarding the classifications and standards. Therefore, the water quality standard-based effluent limitations of this permit are determined to be reasonably related to the economic, environmental, public health and energy impacts to the public and affected persons and are in furtherance of the policies set forth in Sections 25-8-102 and 104. If the permittee disagrees with this finding, pursuant to 61.11(b)(ii) of the Colorado Discharge Permit System Regulations, the permittee should submit all pertinent information to the Division during the public notice period.

Lori Mulsoff
September 11, 2013

VIII. REFERENCES

A. Colorado Department of Public Health and Environment, Water Quality Control Division Files, for Permit Number CO0032751.

B. Basic Standards and Methodologies for Surface Water, Regulation No. 31, Colorado Department of Public Health and Environment, Water Quality Control Commission, effective January 31, 2013.

C. Classifications and Numeric Standards for South Platte River Basin, Laramie River Basin, Republican River Basin, Smoky Hill River Basin, Regulation No. 38, Colorado Department of Public Health and Environment, Water Quality Control Commission, effective June 30, 2013.

D. Colorado Discharge Permit System Regulations, Regulation No. 61, Colorado Department of Public Health and Environment, Water Quality Control Commission, effective January 30, 2012.

E. Regulations for Effluent Limitations, Regulation No. 62, Colorado Department of Public Health and Environment, Water Quality Control Commission, effective July 30, 2012.

F. Colorado River Salinity Standards, Regulation No. 39, Colorado Department of Public Health and Environment, Water Quality Control Commission, effective August 30, 1997.

G. Colorado's Section 303(d) List of Impaired Waters and Monitoring and Evaluation List, Regulation No 93, Colorado Department of Public Health and Environment, Water Quality Control Commission, effective March 30, 2012.

H. Antidegradation Significance Determination for New or Increased Water Quality Impacts, Procedural Guidance, Colorado Department of Public Health and Environment, Water Quality Control Division, effective December 2001.

I. Memorandum Re: First Update to (Antidegradation) Guidance Version 1.0, Colorado Department of Public Health and Environment, Water Quality Control Division, effective April 23, 2002.

J. Determination of the Requirement to Include Water Quality Standards-Based Limits in CDPS Permits Based on Reasonable Potential Procedural Guidance, Colorado Department of Public Health and Environment, Water Quality Control Division, effective December 2002.

K. The Colorado Mixing Zone Implementation Guidance, Colorado Department of Public Health and Environment, Water Quality Control Division, effective April 2002.

L. Baseline Monitoring Frequency, Sample Type, and Reduced Monitoring Frequency Policy for Domestic and Industrial Wastewater Treatment Facilities, Water Quality Control Division Policy WQP-20, May 1, 2007.

M. Implementing Narrative Standards in Discharge Permits for the Protection of Irrigated Crops, Water Quality Control Division Policy WQP-24, March 10, 2008.

N. Implementing Narrative Standard for Toxicity in Discharge Permits Using Whole Effluent Toxicity (WET) Testing. Colorado Department of Public Health and Environment, Water Quality Control Division Policy Permits-1, September 30, 2010.

O. Water and Wastewater Facility Operators Certification Requirements, Regulation No. 100, Colorado Department of Public Health and Environment, Water Quality Control Division, effective April 30, 2006.

P. Policy for Conducting Assessments for Implementation of Temperature Standards in Discharge Permits, Colorado Department Public Health and Environment, Water Quality Control Division Policy Number WQP-23, effective July 3, 2008.

Q. Policy for Permit Compliance Schedules, Colorado Department Public Health and Environment, Water Quality Control Division Policy Number WQP-30, effective December 2, 2010.

IX. PUBLIC NOTICE COMMENTS

The public notice period was from October 18, 2013 to December 16, 2013. Comments were received from the permittee (Calais Resources Inc). Topical summaries of the comments and the response of the Division are given below.

General Comments
Comment 1: General comments regarding punctuation and spelling.
Response 1: The Division has made corrections to punctuations and spelling as requested.

Water Quality Assessment Comments
Comment 2: The flow used as the basis of the permit is based on Middle Boulder Creek and not actual data from Coon Track Creek. Actual flow data from Calais on Coon Track Creek should be considered in the development of the WQA and permit limitations.

Response 2: The calculations used as the basis of the WQA are based on a watershed ratio, commensurate with the previous permit, as no actual flow data on Coon Track Creek was available. Flows in the renewal permit do not differ greatly from the previous permit. Subsequent to these comments, the Division verified with the permittee that no numeric data for Coon Track Creek has been submitted (or is currently available). The reference in the comment is to visual estimates of the Coon Track Creek flows that the permittee has made periodically. To determine accurate flows, numeric flow measurements are needed to determine the appropriate statistics for the DFLOW software and associated 30E3, 7E3, and 1E3 low flow conditions of the receiving water. The Division welcomes any additional numeric data that the permittee can provide. Note that daily flow measurements are used when calculating low flow conditions. Please submit this data

along with the permit renewal application for the data to be considered during the next renewal process. The permittee noted that a weir will be installed upstream of the discharge point sometime during the summer of 2014.

Comment 3: The permittee requests that hardness data collected at the discharge point to be considered for the TVS calculations for the metals, not that which was collected two miles downstream.

Response 3: Standard procedure for calculating the TVS values for dissolved metals includes utilizing data that is collected downstream from the discharge point. No additional data were supplied by the permittee from the outfall, or the downstream waters to be considered in the calculations. Thus, no changes to the calculations are warranted at this time. If, however, the permittee begins sampling downstream of the discharge location, this hardness data will be considered by the Division and a revision to the hardness number used to in the WQBEL calculations may be revised. This additional hardness information and data should be submitted to the Division along with a permit modification request. Note that the Division bases permit limitations on low flow conditions, and thus, instream hardness data at times of low flow are advantageous to collect and analyze. Obtaining paired hardness and flow data yield the greatest validity for permit development.

Comment 4: The permittee requests that the sampling for molybdenum be removed. Determinations for cyanide should also be removed.

Response 4: The purpose of the Water Quality Assessment (WQA) is to provide a description of how the water quality based effluent limits (WQBELs) are developed. These parameters may or may not appear in the permit with limitations or monitoring requirements, subject to other determinations as described in the WQA itself. This is standard procedure for the WQA and the calculations concerning molybdenum and cyanide will not be removed. The values contained in the WQA are simply potential limitations and/or monitoring requirements. Sampling requirements are only listed in the permit. Note that no limitations for molybdenum were included in the draft permit.

Comment 5: The permittee would like to use the no increased impact (NIL's) as discussed.
Response 5: The Division will continue to use the NIL's as indicted in the WQA, and no ADBACs will be calculated.

<u>Permit Comments</u>

Comment 6: Cyanide should be removed. The facility does not use cyanide and the use of cyanide is not allowed at any of its mining or processing.

Response 6: The Division notes that cyanide is not used at the Cross and Caribou mining operation and has removed cyanide as a pollutant of concern. Cyanide has been removed from the permit tables.

Comment 7: The permittee requests an extension to the special monitoring for a mixing zone study to be conducted and completed by August 31, 2014.

Response 7: A timeframe for completion was inadvertently omitted in the draft permit, and the Division typically assigns a timeframe of 1 year to complete tests for exclusion from further analysis under Mixing Zone Regulations, and the associated report documenting the results of that analysis. Thus, a deadline of April 1, 2015 has been added in the permit. This should allow sufficient time to complete this analysis.

Comment 8: The permittee requests an extension to the special monitoring for temperature equipment to be installed to be completed by August 31, 2014.

Response 8: The Division has updated the permit to reflect the new completion date.

Comment 9: The permittee is unclear as to why a compliance schedule for potentially dissolved cadmium was included in the permit.

Response 9: According to submitted discharge monitoring reports associated with this facility, some of the reported values for potentially dissolved cadmium would not meet the new limitations. The Division includes a compliance schedule for those parameters that the facility may not be able to meet. The purpose of a compliance schedule is to give enough time for the facility to examine options in order to consistently meet the new limitations.

Comment 10: The permittee requests that chronic WET testing be conducted annually as per the previous permit.

Response 10: The Division acknowledges that this facility has had only 1 violation of WET testing during the previous permit term (Dec 2008). However, the WET testing policy has been updated to include dual endpoints during this timeframe, and this has been added to this permitting action as described in the permit documents. Please see the Implementation of the Narrative Standard for Toxicity in Discharge Permits Using Whole Effluent Toxicity (Sept 30, 2010) for more information on the new WET testing requirements. The Division notes that the facility is currently exploring additional ore bodies, and may begin mining during this permit term. Thus, at this time, quarterly monitoring for WET remains valid. Note that a reduction of sampling frequency can be requested during the permit term if analyses indicate a reduction is warranted.

Fact Sheet Comments

Comment 11: The permittee would like to have language added that supplies a more thorough explanation for why the facility had apparent violations.

Response 11: The Division has added requested language to the Performance History portion of the Fact Sheet.

Comment 12: The statement on a history of non-compliance for some of the parameters seems unreasonable. The quarterly sampling has worked well in our opinion and has shown total compliance in most if not all parameters.

Response 12: The Division's baseline monitoring policy (WQP-20) outlines not only baseline monitoring frequencies, but also the conditions where a facility can be eligible for decreased monitoring frequencies. A basic eligibility requirement for decreased monitoring to quarterly sampling is that the facility must not have had any violations for a particular parameter. Note that violations of lead, copper, silver, and cadmium occurred during the last permit term, during an inactive mining stage. Further, current exploratory activities and planned active mining have the potential to degrade the effluent quality, and thus, decreased monitoring is not warranted at this time. The eligibility of the facility for a reduction in monitoring will be revisited during the next permit renewal, or upon a future permit modification request submitted with a robust set of effluent data. Please see refer to the Policy above for further guidance regarding sampling frequency reductions

Lori Mulsoff
February 25, 2014

AUTHORIZATION TO DISCHARGE UNDER THE

COLORADO DISCHARGE PERMIT SYSTEM

In compliance with the provisions of the Colorado Water Quality Control Act, (25-8-101 et seq., CRS, 1973 as amended), for both discharges to surface and ground waters, and the Federal Water Pollution Control Act, as amended (33 U.S.C. 1251 et seq.; the "Act"), for discharges to surface waters only, the

Calais Resources Inc.

is authorized to discharge from the Cross and Caribou Mines wastewater treatment facility located **in the SE 1/4 of the NW 1/4 of S9, T1S, R73W; 4415 Caribou Road, Nederland, CO; at 39.978056° latitude North and 105.572194° longitude West**

to **Coon Track Creek**

in accordance with effluent limitations, monitoring requirements and other conditions set forth in Parts I and II hereof. All discharges authorized herein shall be consistent with the terms and conditions of this permit.

The applicant may demand an adjudicatory hearing within thirty (30) calendar days of the date of issuance of the final permit determination, per the Colorado Discharge Permit System Regulations, 61.7(1). Should the applicant choose to contest any of the effluent limitations, monitoring requirements or other conditions contained herein, the applicant must comply with Section 24-4-104 CRS and the Colorado Discharge Permit System Regulations. Failure to contest any such effluent limitation, monitoring requirement, or other condition, constitutes consent to the condition by the Applicant.

This permit and the authorization to discharge shall expire at midnight, March 31, 2019

Issued and Signed this 28th day of February, 2014

COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT

Janet Kieler, Permits Section Manager
Water Quality Control Division

ISSUED AND SIGNED: FEBRUARY 28, 2014

EFFECTIVE: APRIL 1, 2014

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PART I

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. Permitted Feature(s)

Beginning no later than the effective date of this permit and lasting through the expiration date, the permittee is authorized to discharge from, and self monitoring samples taken in accordance with the monitoring requirements shall be obtained from permitted feature(s):

001A, prior to mixing with Coon Track Creek, upon exit from the settling pond. 39° 58' 41" N, 105° 34' 19.9" W

The location(s) provided above will serve as the point(s) of compliance for this permit and are appropriate as they are located after all treatment and prior to discharge to the receiving water. Any discharge to the waters of the State from a point source other than specifically authorized by this permit is prohibited.

In accordance with the Water Quality Control Commission Regulations for Effluent Limitations, Section 62.4, and the Colorado Discharge Permit System Regulations, Section 61.8(2), 5 C.C.R. 1002-61, the permitted discharge shall not contain effluent parameter concentrations which exceed the limitations specified below or exceed the specified flow limitation.

2. Limitations, Monitoring Frequencies and Sample Types

In order to obtain an indication of the probable compliance or noncompliance with the effluent limitations specified in Part I.A, the permittee shall monitor all effluent parameters at the frequencies and sample types specified below. Such monitoring will begin immediately and last for the life of the permit unless otherwise noted. The results of such monitoring shall be reported on the Discharge Monitoring Report form (See Part I.D.)

Self-monitoring sampling by the permittee for compliance with the effluent monitoring requirements specified in this permit, shall be performed at the location(s) noted in Part I.A.1 above. If the permittee, using an approved analytical method, monitors any parameter more frequently than required by this permit, then the results of such monitoring shall be included in the calculation and reporting of the values required in the Discharge Monitoring Report Form (DMRs) or other forms as required by the Division. Such increased frequency shall also be indicated.

Oil and Grease Monitoring: For every permitted feature with oil and grease monitoring, in the event an oil sheen or floating oil is observed, a grab sample shall be collected, analyzed, and reported on the appropriate DMR. In addition, corrective action shall be taken immediately to mitigate the discharge of oil and grease. A description of the corrective action taken should be included with the DMR.

Outfall 001A

ICIS Code	Effluent Parameter	Effluent Limitations Maximum Concentrations			Monitoring Requirements	
		30-Day Average	7-Day Average	Daily Maximum	Frequency	Sample Type
50050	Effluent Flow (MGD)					
	January	0.103		Report	Continuous	Recorder
	February	0.103		Report	Continuous	Recorder
	March	0.129		Report	Continuous	Recorder
	April	0.148		Report	Continuous	Recorder
	May	0.374		Report	Continuous	Recorder
	June	0.458		Report	Continuous	Recorder
	July	0.265		Report	Continuous	Recorder
	August	0.148		Report	Continuous	Recorder
	September	0.129		Report	Continuous	Recorder
	October	0.103		Report	Continuous	Recorder
	November	0.103		Report	Continuous	Recorder
	December	0.103		Report	Continuous	Recorder
00010	Temp Daily Max (°C) April-Oct, beginning September 1, 2014			Report	Continuous	Recorder
00010	Temp Daily Max (°C) Nov-March, beginning September 1, 2014			Report	Continuous	Recorder
00010	Temp MWAT (°C) April-Oct, beginning September 1, 2014		Report		Continuous	Recorder
00010	Temp MWAT (°C) Nov-March, beginning September 1, 2014		Report		Continuous	Recorder
00400	pH (su)			6.5-9	2 Days/Month	Grab
00530	TSS, effluent (mg/l)	30	45		Monthly	Grab
84066	Oil and Grease (visual)			Report	2 Days/Month	Visual
03582	Oil and Grease (mg/l)			10	Contingent	Grab
00978	As, TR (µg/l)	Report			Monthly	Grab
01309	As, PD (µg/l)			Report	Monthly	Grab
01113	Cd, TR (µg/l)	50		300	Monthly	Grab
01313	Cd, PD (µg/l), until December 31, 2016					
	October through March	1.7		Report	2 Days/Month	Grab
	April through June	1.6		Report	2 Days/Month	Grab
	July through September	2.1		Report	2 Days/Month	Grab

01313	Cd, PD (µg/l), beginning January 1, 2017					
	January	0.63		2.3	2 Days/Month	Grab
	February	0.63		2.5	2 Days/Month	Grab
	March	0.60		2.4	2 Days/Month	Grab
	April	0.60		2.5	2 Days/Month	Grab
	May	0.62		2.6	2 Days/Month	Grab
	June	0.89		3.7	2 Days/Month	Grab
	July	0.75		3.1	2 Days/Month	Grab
	August	0.82		3.2	2 Days/Month	Grab
	September	0.87		3.0	2 Days/Month	Grab
	October	0.89		3.6	2 Days/Month	Grab
	November	0.69		2.8	2 Days/Month	Grab
	December	0.63		2.2	2 Days/Month	Grab
04262	Cr+3, TR (µg/l)			Report	Monthly	Grab
01314	Cr+3, PD (µg/l)	Report			Monthly	Grab
01220	Cr+6, Dis (µg/l)	Report		Report	Monthly	Grab
01119	Cu, TR (µg/l)	150		300	2 Days/Month	Grab
01306	Cu, PD (µg/l)					
	January	13		18	2 Days/Month	Grab
	February	13		20	2 Days/Month	Grab
	March	13		19	2 Days/Month	Grab
	April	13		20	2 Days/Month	Grab
	May	13		20	2 Days/Month	Grab
	June	13		20	2 Days/Month	Grab
	July	16		25	2 Days/Month	Grab
	August	17		25	2 Days/Month	Grab
	September	19		28	2 Days/Month	Grab
	October	19		28	2 Days/Month	Grab
	November	14		22	2 Days/Month	Grab
	December	13		18	2 Days/Month	Grab
00980	Fe, TR (µg/l)	Report		NA	Monthly	Grab
01114	Pb, TR (µg/l)	300		600	2 Days/Month	Grab
01318	Pb, PD (µg/l)					
	January	3.8		85	2 Days/Month	Grab
	February	3.8		94	2 Days/Month	Grab
	March	3.6		90	2 Days/Month	Grab
	April	3.6		94	2 Days/Month	Grab
	May	3.8		97	2 Days/Month	Grab
	June	5.4		140	2 Days/Month	Grab
	July	4.6		118	2 Days/Month	Grab
	August	5		122	2 Days/Month	Grab
	September	5.3		115	2 Days/Month	Grab
	October	5.4		135	2 Days/Month	Grab
	November	4.2		108	2 Days/Month	Grab
	December	3.8		85	2 Days/Month	Grab
01319	Mn, PD (µg/l)	Report		Report	Monthly	Grab

71900	Hg, Tot (µg/l)	1		2	Monthly	Grab
50286	Hg, Tot (µg/l) (low level)	Report		Report	Quarterly	Grab
01322	Ni, PD (µg/l)	Report		Report	Monthly	Grab
01323	Se, PD (µg/l)	Report		Report	Monthly	Grab
01304	Ag, PD (µg/l)					
	January	0.12		2.9	2 Days/Month	Grab
	February	0.12		3.2	2 Days/Month	Grab
	March	0.11		3	2 Days/Month	Grab
	April	0.11		3.1	2 Days/Month	Grab
	May	0.12		3.2	2 Days/Month	Grab
	June	0.17		4.7	2 Days/Month	Grab
	July	0.14		3.9	2 Days/Month	Grab
	August	0.16		4.1	2 Days/Month	Grab
	September	0.17		3.8	2 Days/Month	Grab
	October	0.17		4.5	2 Days/Month	Grab
	November	0.13		3.6	2 Days/Month	Grab
	December	0.12		2.8	2 Days/Month	Grab
01094	Zn, TR (µg/l)	750		1500	Monthly	Grab
01303	Zn, PD (ug/l)					
	January	186		184	2 Days/Month	Grab
	February	186		203	2 Days/Month	Grab
	March	176		194	2 Days/Month	Grab
	April	176		202	2 Days/Month	Grab
	May	182		208	2 Days/Month	Grab
	June	262		301	2 Days/Month	Grab
	July	221		253	2 Days/Month	Grab
	August	241		263	2 Days/Month	Grab
	September	257		248	2 Days/Month	Grab
	October	262		291	2 Days/Month	Grab
	November	202		232	2 Days/Month	Grab
	December	186		182	2 Days/Month	Grab
51202	Sulfide as H2S (mg/l)	Report		NA	Monthly	Grab
	WET, chronic					
TKP6C	Static Renewal 7 Day Chronic *Pimephales promelas*			NOEC or IC25 $\geq$ IWC	Quarterly	3 Grabs / Test
TKP3B	Static Renewal 7 Day Chronic *Ceriodaphnia dubia*			NOEC or IC25 $\geq$ IWC	Quarterly	3 Grabs / Test

The above monitoring frequencies for parameters at all outfalls may be exempted during the winter months of each year specifically for times when there are problems with site inaccessibility and due to dangerous travel conditions. The permittee will need to demonstrate and indicate in the DMR that conditions are inaccessible for sampling during these periods.

3. Special Monitoring

Mixing Zone Analyses – Conduct remaining threshold tests for exclusion from further analysis under Mixing Zone Regulations. The second threshold test is the Application of the Mixing Zone Exclusion Tables (p. 20, Colorado Mixing Zone Implementation Guidance, February 2002). Under this action, the permittee will collect the necessary site-specific data, perform the required analysis, and provide a report to the Division by **April 1, 2015.** The report will indicate the findings of this threshold test and, if not excluded, provide the workplan for the next threshold test (i.e., determining of the size of the physical and regulatory mixing zones).

Installation of Temperature Monitoring Equipment - The permittee is to submit a document certifying that continuous temperature and flow monitoring equipment has been installed and is operational by **August 31, 2014.**

B. TERMS AND CONDITIONS

1. Facilities Operation and Maintenance

The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control including all portions of the collection system and lift stations owned by the permittee (and related appurtenances) which are installed or used by the permittee as necessary to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes effective performance, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems when installed by the permittee only when necessary to achieve compliance with the conditions of the permit.

Any sludge produced at the wastewater treatment facility shall be disposed of in accordance with State and Federal guidelines and regulations. The permittee shall take all reasonable steps to minimize or prevent any discharge of sludge use or disposal in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment. As necessary, accelerated or additional monitoring to determine the nature and impact of the noncomplying discharge is required.

2. Compliance Schedule

Activities to Meet Dissolved Cadmium Final Limits – In order to meet Dissolved Cadmium limitations, the following schedule are included in the permit.

Code	Event	Description	Due Date
43699	Facility Evaluation Plan	Submit a report that identifies sources of cadmium to the wastewater treatment facility and identifies strategies to control these sources or treatment alternatives such that compliance with the final limitations may be attained.	December 31, 2014
00899	Implementation Schedule	Submit a progress report summarizing the progress in implementing the strategies to control sources such that compliance with the final Dissolved Cadmium limitations may be attained.	December 31, 2015
CS017	Achieve Final Compliance with Discharge Limits	Submit study results that show compliance has been attained with the final Dissolved Cadmium limitations.	December 31, 2016

Regulation 61.8(3)(n)(i) states that a report should be submitted to the Division no later than 14 calendar days following each date identified in the schedule of compliance. The 14 days have already been incorporated into the above dates and therefore all reports are due on or before the date listed in the table.

3. Chronic WET Testing -Outfall(s): 001A

a. General Chronic WET Testing and Reporting Requirements

The permittee shall conduct the chronic WET test using *Ceriodaphnia dubia and Pimephales promelas*, as a static renewal 7-day test using three separate composite samples. The permittee shall conduct each chronic WET test in accordance with the 40 CFR Part 136 methods described in Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Water to Freshwater Organisms, Fourth Edition, October 2002 (EPA-821-R-02-013) or the most current edition.

January through March
The following minimum dilution series should be used: 0% effluent (control), 18%, 37%, 73%, 87%, and 100% effluent. If the permittee uses more dilutions than prescribed, and accelerated testing is to be performed, the same dilution series shall be used in the accelerated testing (if applicable) as was initially used in the failed test.

April through June
The following minimum dilution series should be used: 0% effluent (control), 13%, 26%, 52%, 76%, and 100% effluent. If the permittee uses more dilutions than prescribed, and accelerated testing is to be performed, the same dilution series shall be used in the accelerated testing (if applicable) as was initially used in the failed test.

July through September
The following minimum dilution series should be used: 0% effluent (control), 13%, 27%, 53%, 77%, and 100% effluent. If the permittee uses more dilutions than prescribed, and accelerated testing is to be performed, the same dilution series shall be used in the accelerated testing (if applicable) as was initially used in the failed test.

October through December
The following minimum dilution series should be used: 0% effluent (control), 13%, 26%, 52%, 76%, and 100% effluent. If the permittee uses more dilutions than prescribed, and accelerated testing is to be performed, the same dilution series shall be used in the accelerated testing (if applicable) as was initially used in the failed test.

Tests shall be done at the frequency listed in Part I.A.2. Test results shall be reported along with the Discharge Monitoring Report (DMR) submitted for the end of the reporting period when the sample was taken. (i.e., WET testing results for the calendar quarter ending March 31 shall be reported with the DMR due April 28, etc.) The permittee shall submit all laboratory statistical summary sheets, summaries of the determination of a valid, invalid or inconclusive test, and copies of the chain of custody forms, along with the DMR for the reporting period.

If a test is considered invalid, the permittee is required to perform additional testing during the monitoring period to obtain a valid test result. Failure to obtain a valid test result during the monitoring period shall result in a violation of the permit for failure to monitor.

b. Violations of the Permit Limit, Failure of One Test Statistical Endpoint and Division Notification

A chronic WET test is considered a violation of a permit limitation when both the NOEC and the IC25 are at any effluent concentration less than the IWC. The IWC are as follows:
Jan-March: 73%
Apr-Jun: 52%
Jul-Sep: 53%
Oct-Dec: 52%

A chronic WET test is considered to have failed one of the two statistical endpoints when either the NOEC or the IC_{25} are at any effluent concentration less than the IWC. The IWC are as follows:
Jan-March: 73%
Apr-Jun: 52%
Jul-Sep: 53%
Oct-Dec: 52%

In the event of a permit violation, or when two consecutive reporting periods have resulted in failure of one of the two statistical endpoints (regardless of which statistical endpoints are failed), the permittee must provide written notification to the Division. Such notification should explain whether it was a violation or two consecutive failures of a single

endpoint, and must indicate whether accelerated testing or a Toxicity Identification Evaluation or Toxicity Reduction Evaluation (TIE or TRE) is being performed, unless otherwise exempted, in writing, by the Division. **Notification must be received by the Division within 14 calendar days of the permittee receiving notice of the WET testing results.**

c. Automatic Compliance Response

The permittee is responsible for implementing the automatic compliance response provisions of this permit when one of the following occurs:

- there is a violation of the permit limit (both the NOEC and the IC25 endpoints are less than the applicable IWC)
- two consecutive monitoring periods have resulted in failure of one of the two statistical endpoints (either the IC25 or the NOEC)
- the permittee is otherwise informed by the Division that a compliance response is necessary

When one of the above listed events occurs, the following automatic compliance response shall apply. The permittee shall either:

- conduct accelerated testing using the single species found to be more sensitive
- conduct a Toxicity Identification Evaluation (TIE) or a Toxicity Reduction Evaluation (TRE) investigation as described below.

i. Accelerated Testing

If accelerated testing is being performed, testing will be at least once every two weeks for up to five tests, running only one test at a time, using only the IC25 statistical endpoint to determine if the test passed or failed at the appropriate IWC. Accelerated testing shall continue until; 1) two consecutive tests fail or three of five tests fail, in which case a pattern of toxicity has been demonstrated or 2) two consecutive tests pass or three of five tests pass, in which case no pattern of toxicity has been found. Note that the same dilution series should be used in the accelerated testing as was used in the initial test(s) that result in the accelerated testing requirement.

If accelerated testing is required due to failure of one statistical endpoint in two consecutive monitoring periods, and in both of those failures it was the NOEC endpoint that was failed, then the NOEC shall be the only statistical endpoint used to determined whether the accelerated testing passed or failed at the appropriate IWC. Note that the same dilution series should be used in the accelerated testing as was used in the initial test(s) that result in the accelerated testing requirement.

If no pattern of toxicity is found the toxicity episode is considered to be ended and routine testing is to resume. If a pattern of toxicity is found, a TIE/TRE investigation is to be performed. If a pattern of toxicity is not demonstrated but a significant level of erratic toxicity is found, the Division may require an increased frequency of routine monitoring or some other modified approach. The permittee shall provide written notification of the results within 14 calendar days of completion of the Pattern of Toxicity/No Toxicity demonstration.

ii. Toxicity Identification Evaluation (TIE) or Toxicity Reduction Evaluation (TRE)

If a TIE or a TRE is being performed, the results of the investigation are to be received by the Division within 180 calendar days of the demonstration chronic WET in the routine test, as defined above, or if accelerated testing was performed, the date the pattern of toxicity is demonstrated. A status report is to be provided to the Division at the 60 and 120 calendar day points of the TIE or TRE investigation. The Division may extend the time frame for investigation where reasonable justification exists. A request for an extension must be made in writing and received prior to the 180 calendar day deadline. Such request must include a justification and supporting data for such an extension.

Under a TIE, the permittee may use the time for investigation to conduct a preliminary TIE (PTIE) or move directly into the TIE. A PTIE consists of a brief search for possible sources of WET, where a specific parameter(s) is reasonably suspected to have caused such toxicity, and could be identified more simply and cost effectively than a formal TIE. If the PTIE allows resolution of the WET incident, the TIE need not necessarily be conducted in its entirety. If, however, WET is not identified or resolved during the PTIE, the TIE must be conducted within the allowed 180 calendar day time frame.

The Division recommends that the EPA guidance documents regarding TIEs be followed. If another method is to be used, this procedure should be submitted to the Division prior to initiating the TIE.

If the pollutant(s) causing toxicity is/are identified, and is/are controlled by a permit effluent limitation(s), this permit may be modified upon request to adjust permit requirements regarding the automatic compliance response.

If the pollutant(s) causing toxicity is/are identified, and is/are not controlled by a permit effluent limitation(s), the Division may develop limitations the parameter(s), and the permit may be reopened to include these limitations.

If the pollutant causing toxicity is not able to be identified, or is unable to be specifically identified, or is not able to be controlled by an effluent limit, the permittee will be required to perform either item 1 or item 2 below.

l) Conduct an investigation which demonstrates actual instream aquatic life conditions upstream and downstream of the discharge, or identify, for Division approval, and conduct an alternative investigation which demonstrates the actual instream impact. This should include WET testing and chemical analyses of the ambient water. Depending on the results of the study, the permittee may also be required to identify the control program necessary to eliminate the toxicity and its cost. Data collected may be presented to the WQCC for consideration at the next appropriate triennial review of the stream standards;

2) Move to a TRE by identifying the necessary control program or activity and proceed with elimination of the toxicity so as to meet the WET effluent limit.

If toxicity spontaneously disappears in the midst of a TIE, the permittee shall notify the Division within 10 calendar days of such disappearance. The Division may require the permittee to conduct accelerated testing to demonstrate that no pattern of toxicity exists, or may amend the permit to require an increased frequency of WET testing for some period of time. If no pattern of toxicity is demonstrated through the accelerated testing or the increased monitoring frequency, the toxicity incident response will be closed and normal WET testing shall resume.

The control program developed during a TRE consists of the measures determined to be the most feasible to eliminate WET. This may happen through the identification of the toxicant(s) and then a control program aimed specifically at that toxicant(s) or through the identification of more general toxicant treatability processes. A control program is to be developed and submitted to the Division within 180 calendar days of beginning a TRE. Status reports on the TRE are to be provided to the Division at the 60 and 120 calendar day points of the TRE investigation.

If toxicity spontaneously disappears in the midst of a TRE, the permittee shall notify the Division within 10 calendar days of such disappearance. The Division may require the permittee to conduct accelerated testing to demonstrate that no pattern of toxicity exists, or may amend the permit to require an increased frequency for some period of time. If no pattern of toxicity is demonstrated through the accelerated testing or the increased monitoring frequency, the toxicity incident response will be closed and normal WET testing shall resume.

d. Toxicity Reopener

This permit may be reopened and modified to include additional or modified numerical permit limitations, new or modified compliance response requirements, changes in the WET testing protocol, the addition of both acute and chronic WET requirements, or any other conditions related to the control of toxicants.

4. Stormwater Requirements

Pursuant to 5 CCR 1002-61.3(2), facilities classified as Standard Industrial Classifications 10 through 14 (mineral industry) including active or inactive metal mining operations are required to obtain permit coverage for discharges of stormwater associated with industrial activities from the facilities to state waters. The stormwater discharge permit applicable to active and inactive metal mining facilities is the CDPS General Permit for Stormwater Discharges Associated with Metal Mining Operations and Mine-Waste Remediation, which is currently administratively continued.

Division records indicate that Calais Resources Inc applied for and obtained coverage under the CDPS General Permit for Stormwater Discharges Associated with Metal Mining Operations and Mine-Waste Remediation for the Cross and Caribou Mines. The CDPS certification number is COR040242.

C. DEFINITIONS OF TERMS

1. "Acute Toxicity" - The acute toxicity limitation is exceeded if the LC50 is at any effluent concentration less than or equal to the IWC indicated in this permit.

2. "Chronic toxicity", which includes lethality and growth or reproduction, occurs when the NOEC and IC25 are at an effluent concentration less than the IWC indicated in this permit.

3. "Composite" sample is a minimum of four (4) grab samples collected at equally spaced two (2) hour intervals and proportioned according to flow. For a SBR type treatment system, a composite sample is defined as sampling equal aliquots during the beginning, middle and end of a decant period, for two consecutive periods during a day (if possible).

4. "Continuous" measurement, is a measurement obtained from an automatic recording device which continually measures the effluent for the parameter in question, or that provides measurements at specified intervals.

5. "Daily Maximum limitation" for all parameters (except temperature, pH and dissolved oxygen) means the limitation for this parameter shall be applied as an average of all samples collected in one calendar day. For these parameters the DMR shall include the highest of the daily averages. For pH and dissolved oxygen, this means an instantaneous maximum (and/or instantaneous minimum) value. The instantaneous value is defined as the analytical result of any individual sample. For pH and dissolved oxygen, DMRs shall include the maximum (and/or minimum) of all instantaneous values within the calendar month. Any value beyond the noted daily maximum limitation for the indicated parameter shall be considered a violation of this permit. For temperature, see Daily Maximum Temperature.

6. “Daily Maximum Temperature (DM)” is defined in the Basic Standards and Methodologies for Surface Water 1002-31, as the highest two-hour average water temperature recorded during a given 24-hour period. This will be determined using a rolling 2-hour maximum temperature. If data is collected every 15 minutes, a 2 hour maximum can be determined on every data point after the initial 2 hours of collection. Note that the time periods that overlap days (Wednesday night to Thursday morning) do not matter as the reported value on the DMR is the greatest of all the 2-hour averages.

   For example data points collected at:
   08:15, 08:30, 08:45, 09:00, 09:15, 09:30, 09:45, 10:00, would be averaged for a single 2 hour average data point
   08:30, 08:45, 09:00, 09:15, 09:30, 09:45, 10:00, 10:15, would be averaged for a single 2 hour average data point
   08:45, 09:00, 09:15, 09:30, 09:45, 10:00, 10:15, 10:30, would be averaged for a single 2 hour average data point

   This would continue throughout the course of a calendar day. The highest of these 2 hour averages over a month would be reported on the DMR as the daily maximum temperature. At the end/beginning of a month, the collected data should be used for the month that contains the greatest number of minutes in the 2-hour maximum. Data from 11 pm to 12:59 am, would fall in the previous month. Data collected from 11:01 pm to 1:00 am would fall in the new month.

7. "Dissolved (D) metals fraction" is defined in the Basic Standards and Methodologies for Surface Water 1002-31, as that portion of a water and suspended sediment sample which passed through a 0.40 or 0.45 UM (micron) membrane filter. Determinations of "dissolved" constituents are made using the filtrate. This may include some very small (colloidal) suspended particles which passed through the membrane filter as well as the amount of substance present in true chemical solution.

8. “Geometric mean” for *E. coli* bacteria concentrations, the thirty (30) day and seven (7) day averages shall be determined as the geometric mean of all samples collected in a thirty (30) day period and the geometric mean of all samples taken in a seven (7) consecutive day period respectively. The geometric mean may be calculated using two different methods. For the methods shown, a, b, c, d, etc. are individual sample results, and n is the total number of samples.

   Method 1:

   Geometric Mean = $(a*b*c*d*...)^{(1/n)}$ "*" - means multiply

   Method 2:

   Geometric Mean = antilog ([log(a)+log(b)+log(c)+log(d)+...]/n)

   Graphical methods, even though they may also employ the use of logarithms, may introduce significant error and may not be used.

In calculating the geometric mean, for those individual sample results that are reported by the analytical laboratory to be "less than" a numeric value, a value of 1 should be used in the calculations. If all individual analytical results for the month are reported to be less than numeric values, then report "less than" the largest of those numeric values on the monthly DMR. Otherwise, report the calculated value.

For any individual analytical result of "too numerous to count" (TNTC), that analysis shall be considered to be invalid and another sample shall be promptly collected for analysis. If another sample cannot be collected within the same sampling period for which the invalid sample was collected (during the same month if monthly sampling is required, during the same week if weekly sampling is required, etc.), then the following procedures apply:

i. A minimum of two samples shall be collected for coliform analysis within the next sampling period.

ii. <u>If the sampling frequency is monthly or less frequent:</u> For the period with the invalid sample results, leave the spaces on the corresponding DMR for reporting coliform results empty and attach to the DMR a letter noting that a result of TNTC was obtained for that period, and explain why another sample for that period had not been collected.

<u>If the sampling frequency is more frequent than monthly:</u> Eliminate the result of TNTC from any further calculations, and use all the other results obtained within that month for reporting purposes. Attach a letter noting that a result of TNTC was obtained, and list all individual analytical results and corresponding sampling dates for that month.

9. "Grab" sample, is a single "dip and take" sample so as to be representative of the parameter being monitored.

10. “IC25” or “Inhibition Concentration” is a point estimate of the toxicant concentration that would cause a given percent reduction in a non-lethal biological measurement (e.g. growth or reproduction) calculated from a continuous model (i.e. interpolation method). IC25 is a point estimate of the toxic concentration that would cause a 25-percent reduction in a non-lethal biological measurement.

11. "In-situ" measurement is defined as a single reading, observation or measurement taken in the field at the point of discharge.

12. "Instantaneous" measurement is a single reading, observation, or measurement performed on site using existing monitoring facilities.

13. “LC50” or “Lethal Concentration” is the toxic or effluent concentration that would cause death in 50 percent of the test organisms over a specified period of time.

14. “Maximum Weekly Average Temperature (MWAT)” is defined in the Basic Standards and Methodologies for Surface Water 1002-31, as an implementation statistic that is calculated from field monitoring data. The MWAT is calculated as the largest mathematical mean of multiple, equally spaced, daily temperatures over a seven-day consecutive period, with a minimum of three data points spaced equally through the day. For lakes and reservoirs, the MWAT is assumed to be equivalent to the maximum WAT from at least three profiles distributed throughout the growing season (generally July-September).

    The MWAT is calculated by averaging all temperature data points collected during a calendar day, and then averaging the daily average temperatures for 7 consecutive days. This 7 day averaging period is a rolling average, i.e. on the 8th day, the MWAT will be the averages of the daily averages of days 2-8. The value to be reported on the DMR is the highest of all the rolling 7-day averages throughout the month. For those days that are at the end/beginning of the month, the data shall be reported for the month that contains 4 of the 7 days.

    Day 1: Average of all temperature data collected during the calendar day.
    Day 2: Average of all temperature data collected during the calendar day.
    Day 3: Average of all temperature data collected during the calendar day.
    Day 4: Average of all temperature data collected during the calendar day.
    Day 5: Average of all temperature data collected during the calendar day.
    Day 6: Average of all temperature data collected during the calendar day.
    Day 7: Average of all temperature data collected during the calendar day.
    1st MWAT Calculation as average of previous 7 days
    Day 8: Average of all temperature data collected during the calendar day.
    2nd MWAT Calculation as average of previous 7 days
    Day 9: Average of all temperature data collected during the calendar day.
    3rd MWAT Calculation as average of previous 7 days

15. "NOEC" or "No-Observed-Effect-Concentration" is the highest concentration of toxicant to which organisms are exposed in a full life cycle or partial life cycle (short term) test, that causes no observable adverse effects on the test organisms (i.e. the highest concentration of toxicant in which the values for the observed responses are not statistically different from the controls). This value is used, along with other factors, to determine toxicity limits in permits.

16. "Potentially dissolved (PD) metals fraction" is defined in the Basic Standards and Methodologies for Surface Water 1002-31, as that portion of a constituent measured from the filtrate of a water and suspended sediment sample that was first treated with nitric acid to a pH of 2 or less and let stand for 8 to 96 hours prior to sample filtration using a 0.40 or 0.45-UM (micron) membrane filter. Note the "potentially dissolved" method cannot be used where nitric acid will interfere with the analytical procedure used for the constituent measured.

17. "Practical Quantitation Limit (PQL)" means the minimum concentration of an analyte (substance) that can be measured with a high degree of confidence that the analyte is present at or above that concentration. The use of PQL in this document may refer to those PQLs shown in Part I.D of this permit or the PQLs of an individual laboratory.

18. "Quarterly measurement frequency" means samples may be collected at any time during the calendar quarter if a continual discharge occurs. If the discharge is intermittent, then samples shall be collected during the period that discharge occurs.

19. "Recorder" requires the continuous operation of a chart and/or totalizer (or drinking water rotor meters or pump hour meters where previously approved.)

20. "Seven (7) day average" means, with the exception of fecal coliform or *E. coli* bacteria (see geometric mean), the arithmetic mean of all samples collected in a seven (7) consecutive day period. Such seven (7) day averages shall be calculated for all calendar weeks, which are defined as beginning on Sunday and ending on Saturday. If the calendar week overlaps two months (i.e. the Sunday is in one month and the Saturday in the following month), the seven (7) day average calculated for that calendar week shall be associated with the month that contains the Saturday. Samples may not be used for more than one (1) reporting period. **(See the "Analytical and Sampling Methods for Monitoring and Reporting Section in Part I.D.3 for guidance on calculating averages and reporting analytical results that are less than the PQL).**

21. "Thirty (30) day average" means, except for fecal coliform or *E. coli* bacteria (see geometric mean), the arithmetic mean of all samples collected during a thirty (30) consecutive-day period. The permittee shall report the appropriate mean of all self-monitoring sample data collected during the calendar month on the Discharge Monitoring Reports. Samples shall not be used for more than one (1) reporting period. **(See the "Analytical and Sampling Methods for Monitoring and Reporting Section in Part I.D.3 for guidance on calculating averages and reporting analytical results that are less than the PQL).**

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

23. "Total Metals" means the concentration of metals determined on an unfiltered sample following vigorous digestion (Section 4.1.3), or the sum of the concentrations of metals in both the dissolved and suspended fractions, as described in Manual of Methods for Chemical Analysis of Water and Wastes, U.S. Environmental Protection Agency, March 1979, or its equivalent.

24. "Total Recoverable Metals" means that portion of a water and suspended sediment sample measured by the total recoverable analytical procedure described in Methods for Chemical Analysis of Water and Wastes, U.S. Environmental Protection Agency, March 1979 or its equivalent.

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

26. "Twenty four (24) hour composite" sample is a combination of at least eight (8) sample aliquots of at least 100 milliliters, collected at equally spaced intervals during the operating hours of a facility over a twenty-four (24) hour period. For volatile pollutants, aliquots must be combined in the laboratory immediately before analysis. The composite must be flow proportional; either the time interval between each aliquot or the volume of each aliquot must be proportional to either the wastewater or effluent flow at the time of sampling or the total wastewater or effluent flow since the collection of the previous aliquot. Aliquots may be collected manually or automatically.

27. "Twice Monthly" monitoring frequency means that two samples shall be collected each calendar month on separate weeks with at least one full week between the two sample dates. Also, there shall be at least one full week between the second sample of a month and the first sample of the following month.

28. "Two (2) -Year Rolling Average" - Antidegradation limits apply as the average of all data collected in a two (2) year (24-month) period. These limits become effective upon the effective date of the permit, but are not reportable on a DMR until two years (typically 24 months) of data have been collected. After data has been collected for 24 months, the 30-day averages for each month are then averaged together to determine the two-year rolling average (using data from month 1 to month 24, then month 2 to month 25, month 3 to month 26, etc).

    For ammonia, two-year rolling averages may be set up for individual months, or may be grouped together for several months. For individual months (every month has a different two-year rolling average limit) the two-year average is reportable after two months of data are collected.

    Example: Permit is effective Jan 2010 and there is a two-year rolling average limit specific to the month of January.

    Jan 2010 DMR – Nothing to Report
    Jan 2011 DMR – 2-Year Average of Jan 2010 and Jan 2011
    Jan 2012 DMR – 2-Year Average of Jan 2011 and Jan 2012, etc.

    Where several months have the same two-year average limit, it is reportable on the DMR after two months of data have been collected for every month in the group.

    Example: Permit is effective Jan 2010 and there is a two-year rolling average limit specific to the months of Jan, Feb, June.

    1st Reportable DMR – June 2011 - 2-Year Average Jan 2010 Feb 2010 June 2010 Jan 2011 Feb 2011 June 2011
    2nd Reportable DMR – Jan 2012 - 2-Year Average Feb 2010 June 2010 Jan 2011 Feb 2011 June 2011 Jan 2012
3rd Reportable DMR – Feb 2012 - 2-Year Average June 2010 Jan 2011 Feb 2011 June 2011 Jan 2012 Feb 2012, etc.

    (See the "Analytical and Sampling Methods for Monitoring and Reporting Section in Part I.D.3 for guidance on calculating averages and reporting analytical results that are less than the PQL).

29. "Visual" observation is observing the discharge to check for the presence of a visible sheen or floating oil.

30. "Water Quality Control Division" or "Division" means the state Water Quality Control Division as established in 25-8-101 et al.)

    Additional relevant definitions are found in the Colorado Water Quality Control Act, CRS §§ 25-8-101 et seq., the Colorado Discharge Permit System Regulations, Regulation 61 (5 CCR 1002-61) and other applicable regulations.

D. GENERAL MONITORING, SAMPLING AND REPORTING REQUIREMENTS

5. Routine Reporting of Data

Reporting of the data gathered in compliance with Part I.A or Part I.B shall be on a **monthly** basis. Reporting of all data gathered shall comply with the requirements of Part I.D. (General Requirements). Monitoring results shall be summarized for each calendar month and reported on Division approved discharge monitoring report (DMR) forms (EPA form 3320-1).

The permittee must submit these forms either by mail, or by using the Division's Net-DMR service (when available). If mailed, one form shall be mailed to the Division, as indicated below, so that the DMR is received no later than the 28th day of the following month (for example, the DMR for the first calendar quarter must be received by the Division by April 28th). If no discharge occurs during the reporting period, "No Discharge" shall be reported.

The original signed copy of each discharge monitoring report (DMR) shall be submitted to the Division at the following address:

Colorado Department of Public Health and Environment
Water Quality Control Division
WQCD-P-B2
4300 Cherry Creek Drive South
Denver, Colorado 80246-1530

The Discharge Monitoring Report forms shall be filled out accurately and completely in accordance with requirements of this permit and the instructions on the forms. They shall be signed by an authorized person as identified in Part I.D.8.

6. Representative Sampling

Samples and measurements taken for the respective identified monitoring points as required herein shall be representative of the volume and nature of the monitored discharge. All samples shall be taken at the monitoring points specified in this permit and, unless otherwise specified, before the effluent joins or is diluted by any other wastestream, body of water, or substance. Monitoring points shall not be changed without notification to and approval by the Division.

7. Influent and Effluent Sampling Points

Influent (if required) and effluent sampling points shall be so designed or modified so that: 1) a sample of the influent can be obtained after preliminary treatment and prior to primary or biological treatment and 2) a sample of the effluent can be obtained at a point after the final treatment process and prior to discharge to state waters. The permittee shall provide access to the Division to sample at these points.

8. Analytical and Sampling Methods for Monitoring and Reporting

The permittee shall install, calibrate, use and maintain monitoring methods and equipment, including biological and indicated pollutant monitoring methods. All sampling shall be performed by the permittee according to specified methods in 40 C.F.R. Part 136; methods approved by EPA pursuant to 40 C.F.R. Part 136; or methods approved by the Division, in the absence of a method specified in or approved pursuant to 40 C.F.R. Part 136.

Numeric Limits

If the permit contains a numeric effluent limit for a parameter, the analytical method and PQL selected for all monitoring conducted in accordance with this permit for that parameter shall be the one that can measure at or below the numeric effluent limit. If all specified analytical methods and corresponding PQLs are greater than the numeric effluent limit, then the analytical method with the lowest PQL shall be used.

When the analytical method which complies with the above requirements has a PQL greater than the permit limit, and the permittee's analytical result is less than the PQL (the PQL achieved by the lab), the permittee shall report "BDL" on the DMR. Such reports will not be considered as violations of the permit limit, as long as the PQL obtained is lower or equal to the PQL in the table below.

When the analytical method which complies with the above requirements has a PQL that is equal to or less than the permit limitation, and the permittee's analytical result is less than the PQL, "< X" (where X = the actual PQL achieved by the laboratory) shall be reported on the DMR. For parameters that have a report only limitation, and the permittee's analytical result is less than the PQL, "< X" (where X = the actual PQL achieved by the laboratory) shall be reported on the DMR.

Report Only Limits

If the permit contains a report only requirement for a parameter, the analytical method and PQL chosen shall be one that can measure at or below the potential numeric effluent limit(s) (maximum allowable pollutant concentration as shown in the WQA or fact sheet). If all analytical methods and corresponding PQLs are greater than the potential numeric effluent limit(s), then the analytical method with the lowest PQL shall be used.

When the analytical method which complies with the above requirements has a PQL that is equal to or less than the permit limitation, and the permittee's analytical result is less than the PQL, "< X" (where X = the actual PQL achieved by the laboratory) shall be reported on the DMR. For parameters that have a report only limitation, and the

permittee's analytical result is less than the PQL, "< X" (where X = the actual PQL achieved by the laboratory) shall be reported on the DMR.

Interim Report Only Followed By a Numeric Limit

If the permit contains an interim effluent limitation (a limit is report until such time as a numeric effluent limit becomes effective) for a parameter, the analytical method and PQL chosen for all monitoring conducted in accordance with this permit for the parameter shall be one that can measure to the final numeric effluent limit. If all analytical methods and corresponding PQLs are greater than the final numeric effluent limit (s), then the analytical method with the lowest PQL shall be used.

While the report only limit is effective, the reporting requirements shall follow those under the Report Only Limits section. Once the numeric limit is effective, the reporting requirements shall follow the numeric limits reporting requirements.

T.I.N.

For parameters such as TIN, the analytical methods chosen shall be those that can measure to the potential or final numeric effluent limit, based on the sum of the PQLs for nitrate, nitrite and ammonia.

Calculating Averages

In the calculation of average concentrations (i.e. daily average, 7- day average, 30-day average, 2-year rolling average) any individual analytical result that is less than the PQL shall be considered to be zero for the calculation purposes. When reporting:

If all individual analytical results are less than the PQL, the permittee shall report either "BDL" or "<X" (where X = the actual PQL achieved by the laboratory), following the guidance above.

If one or more individual results is greater than the PQL, an average shall be calculated and reported. Note that it does not matter if the final calculated average is greater or less than the PQL, **it must be reported as a value**.

Note that when calculating T.I.N. for a single sampling event, any value less than the PQL (for total ammonia, total nitrite, or total nitrate) shall be treated as zero. The T.I.N. concentration for a single sampling event shall then be determined as the sum of the analytical results (zeros if applicable) of same day sampling for total ammonia and total nitrite and total nitrate. From these calculated T.I.N. concentrations, the daily maximum and thirty day average concentrations shall be calculated and must be reported as a value.

PQLs

The present lowest PQLs for specific parameters, as determined by the State Laboratory (November 2008) are provided below. If the analytical method cannot achieve a PQL that is less than or equal to the permit limit, then the method, or a more precise method, must achieve a PQL that is less than or equal to the PQL in the table below. A listing of the PQLs for organic parameters that must meet the above requirement can be found in the Division's Practical Quantitation Limitation Guidance Document, July 2008. This document is available on the Division's website at www.coloradowaterpermits.com.

These limits apply to the total recoverable or the potentially dissolved fraction of metals.

For hexavalent chromium, samples must be unacidified so dissolved concentrations will be measured rather than potentially dissolved concentrations.

Parameter	Practical Quantitation Limits,	Parameter	Practical Quantitation Limits, µg/l
Aluminum	50 µg/l	Mercury	0.1 µg/l
Ammonia	1 mg/l	Mercury (low-level)	0.003 µg/l
Arsenic	1 µg/l	Nickel	50 µg/l
Barium	5 µg/l	N-Ammonia	50 µg/l
Beryllium	1 µg/l	N Nitrate/Nitrite	0.5 mg/l
BOD / CBOD	1 mg/l	N-Nitrate	50 µg/l
Boron	50 µg/l	N-Nitrite	10 µg/l
Cadmium	1 µg/l	Total Nitrogen	0.5 mg/l
Calcium	20 µg/l	Phenols	100 µg/l
Chloride	2 mg/l	Phosphorus	10 µg/l
Chlorine	0.1 mg/l	Radium 226	1 pCi/l
Total Residual Chlorine		Radium 228	1 pCi/l
DPD colorimetric	0.10 mg/l	Selenium	1 µg/l
Amperometric titration	0.05 mg/l	Silver	0.5 µg/l
Chromium	20 µg/l	Sodium	0.2 mg/l
Chromium, Hexavalent	20 µg/l	Sulfate	5 mg/l
Copper	5 µg/l	Sulfide	0.2 mg/l
Cyanide (Direct / Distilled)	10 µg/l	Total Dissolved Solids	10 mg/l
Cyanide, WAD+A47	10 µg/l	Total Suspended Solids	10 mg/l
Fluoride	0.1 mg/l	Thallium	1 µg/l
Iron	10 µg/l	Uranium	1 µg/l
Lead	1 µg/l	Zinc	10 µg/l
Magnesium	20 µg/l	Nonylphenol D7065	10 µg/l
Manganese	2 µg/l	Nonylphenol D7485	0.33 µg/l

9. Records

a. The permittee shall establish and maintain records. Those records shall include, but not be limited to, the following:

i. The date, type, exact place, and time of sampling or measurements;
ii. The individual(s) who performed the sampling or measurements;
iii. The date(s) the analyses were performed;
iv. The individual(s) who performed the analyses;
v. The analytical techniques or methods used; and
vi. The results of such analyses.
vii. Any other observations which may result in an impact on the quality or quantity of the discharge as indicated in 40 CFR 122.44 (i)(1)(iii).

b. The permittee shall retain for a minimum of three (3) years records of all monitoring information, including all original strip chart recordings for continuous monitoring instrumentation, all calibration and maintenance records, copies of all reports required by this permit and records of all data used to complete the application for this permit. This period of retention shall be extended during the course of any unresolved litigation regarding the discharge of pollutants by the permittee or when requested by the Division or Regional Administrator.

10. Flow Measuring Device

If not already a part of the permitted facility, within ninety (90) days after the effective date of the permit, a flow measuring device shall be installed to give representative values of effluent quantities at the respective discharge points. Unless specifically exempted, or modified in Part I.A of this permit, a flow measuring device will be applicable at all designated discharge points.

At the request of the Division, the permittee shall show proof of the accuracy of any flow-measuring device used in obtaining data submitted in the monitoring report. The flow-measuring device must indicate values within ten (10) percent of the actual flow being measured.

11. Signatory and Certification Requirements

a. All reports and other information required by the Division, shall be signed and certified for accuracy by the permittee in accord with the following criteria:

i) In the case of corporations, by a responsible corporate officer. For purposes of this section, the responsible corporate officer is responsible for the overall operation of the facility from which the discharge described in the form originates;

ii) In the case of a partnership, by a general partner;

iii) In the case of a sole proprietorship, by the proprietor;

iv) In the case of a municipal, state, or other public facility, by either a principal executive officer, or ranking elected official. For purposes of this section, a principal executive officer has responsibility for the overall operation of the facility from which the discharge originates;

v) By a duly authorized representative of a person described above, only if:

1) The authorization is made in writing by a person described in i, ii, iii, or iv above;

2) The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or 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 any individual occupying a named position); and,

3) The written authorization is submitted to the Division.

b. If an authorization as described in this section 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 this section must be submitted to the Division prior to or together with any reports, information, or applications to be signed by an authorized representative.

The permittee, or the duly authorized representative shall make and sign the following certification on all such documents:

"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."

PART II

A. NOTIFICATION REQUIREMENTS

1. Notification to Parties

All notification requirements under this section shall be directed as follows:

a. Oral Notifications**,** during normal business hours shall be to:

Water Quality Protection Section - Domestic Compliance Program
Water Quality Control Division
Telephone: (303) 692-3500

b. Written notification shall be to:

Water Quality Protection Section - Domestic Compliance Program
Water Quality Control Division
Colorado Department of Public Health and Environment
WQCD-WQP-B2
4300 Cherry Creek Drive South
Denver, CO 80246-1530

2. Change in Discharge

The permittee shall give advance notice to the Division, in writing, of any planned physical alterations or additions to the permitted facility. Notice is required only when:

a. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged, or;

b. The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported pursuant to an approved land application plan.

Whenever notification of any planned physical alterations or additions to the permitted facility is required pursuant to this section, the permittee shall furnish the Division such plans and specifications which the Division deems reasonably necessary to evaluate the effect on the discharge, the stream, or ground water. If the Division finds that such new or altered discharge might be inconsistent with the conditions of the permit, the Division shall require a new or revised permit application and shall follow the procedures specified in Sections 61.5 through 61.6, and 61.15 of the Colorado Discharge Permit System Regulations.

3. Noncompliance Notification

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

a. If, for any reason, the permittee does not comply with or will be unable to comply with any discharge limitations or standards specified in this permit, the permittee shall, at a minimum, provide the Division and EPA with the following information:

i) A description of the noncompliance and its cause;

ii) The period of noncompliance, including exact dates and times and/or the anticipated time when the discharge will return to compliance; and

iii) Steps being taken to reduce, eliminate, and prevent recurrence of the noncomplying discharge.

b. The permittee shall report the following circumstances **orally within twenty-four (24) hours** from the time the permittee becomes aware of the circumstances, and shall mail to the Division a written report containing the information requested in Part II.A.4 (a) **within five (5) working days** after becoming aware of the following circumstances:

i) Circumstances leading to any noncompliance which may endanger health or the environment regardless of the cause of the incident;

ii) Circumstances leading to any unanticipated bypass which exceeds any effluent limitations in the permit;

iii) Circumstances leading to any upset which causes an exceedance of any effluent limitation in the permit;

iv) Daily maximum violations for any of the pollutants limited by Part I.A of this permit as specified in Part III of this permit. This includes any toxic pollutant or hazardous substance or any pollutant specifically identified as the method to control any toxic pollutant or hazardous substance.

c. Unless otherwise indicated in this permit, the permittee shall report instances of non-compliance which are not required to be reported within 24-hours at the time Discharge Monitoring Reports are submitted. The reports shall contain the information listed in sub-paragraph (a) of this section.

4. Transfer of Ownership or Control

The permittee shall notify the Division, in writing, thirty (30) calendar days in advance of a proposed transfer of the permit.

a. Except as provided in paragraph b. of this section, a permit may be transferred by a permittee only if the permit has been modified or revoked and reissued as provided in Section 61.8(8) of the Colorado Discharge Permit System Regulations, to identify the new permittee and to incorporate such other requirements as may be necessary under the Federal Act.

b. A permit may be automatically transferred to a new permittee if:

i) The current permittee notifies the Division in writing 30 calendar days in advance of the proposed transfer date; and

ii) The notice includes a written agreement between the existing and new permittee(s) containing a specific date for transfer of permit responsibility, coverage and liability between them; and

iii) The Division does not notify the existing permittee and the proposed new permittee of its intent to modify, or revoke and reissue the permit.

iv) Fee requirements of the Colorado Discharge Permit System Regulations, Section 61.15, have been met.

5. Other Notification Requirements

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule in the permit, shall be submitted on the date listed in the compliance schedule section. The fourteen (14) calendar day provision in Regulation 61.8(4)(n)(i) has been incorporated into the due date.

The permittee's notification of all anticipated noncompliance does not stay any permit condition.

All existing manufacturing, commercial, mining, and silvicultural dischargers must notify the Division as soon as they know or have reason to believe:

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

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

ii) 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 2-methyl-4.6-dinitrophenol; and one milligram per liter (1.0 mg/l) for antimony;

iii) Five (5) times the maximum concentration value reported for that pollutant in the permit application in accordance with Section 61.4(2)(g).

iv) The level established by the Division in accordance with 40 C.F.R. § 122.44(f).

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

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

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

iii) Ten (10) times the maximum concentration value reported for that pollutant in the permit application.

iv) The level established by the Division in accordance with 40 C.F.R. § 122.44(f).

6. Bypass Notification

If the permittee knows in advance of the need for a bypass, a notice shall be submitted, at least ten (10) calendar days before the date of the bypass, to the Division. The bypass shall be subject to Division approval and limitations imposed by the Division. Violations of requirements imposed by the Division will constitute a violation of this permit.

7. Bypass

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

b. Bypasses are prohibited and the Division may take enforcement action against the permittee for bypass, unless:

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

ii) There were no feasible alternatives to 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

iii) Proper notices were submitted in compliance with Part II.A.5.

c. "Severe property damage" as used in this Subsection means substantial physical 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.

d. The permittee may allow a bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance or to assure optimal operation. These bypasses are not subject to the provisions of paragraph (a) above.

e. The Division may approve an anticipated bypass, after considering adverse effects, if the Division determines that the bypass will meet the conditions specified in paragraph (a) above.

8. Upsets

a. "Upset" means an exceptional incident in which there is unintentional and temporary noncompliance with 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 preventative maintenance, or careless or improper operation.

b. Effect of an Upset

An upset constitutes an affirmative defense to an action brought for noncompliance with permit effluent limitations if the requirements of paragraph (b) of this section are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.

c. 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:

i) An upset occurred and that the permittee can identify the specific cause(s) of the upset; and

ii) The permitted facility was at the time being properly operated and maintained; and

iii) The permittee submitted proper notice of the upset as required in Part II.A.4. of this permit (24-hour notice); and
iv) The permittee complied with any remedial measure necessary to minimize or prevent any discharge or sludge use or disposal in violation of this permit which has a reason able likelihood of adversely affecting human health or the environment.

In addition to the demonstration required above, a permittee who wishes to establish the affirmative defense of upset for a violation of effluent limitations based upon water quality standards shall also demonstrate through monitoring, modeling or other methods that the relevant standards were achieved in the receiving water.

d. Burden of Proof

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

9. Submission of Incorrect or Incomplete Information

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

B. RESPONSIBILITIES

1. Reduction, Loss, or Failure of Treatment Facility

The permittee has the duty to halt or reduce any activity if necessary to maintain compliance with the effluent limitations of the permit. Upon reduction, loss, or failure of the treatment facility, the permittee shall, to the extent necessary to maintain compliance with its permit, control production, control sources of wastewater, or all discharges, until the facility is restored or an alternative method of treatment is provided. This provision also applies to power failures, unless an alternative power source sufficient to operate the wastewater control facilities is provided.

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

2. Inspections and Right to Entry

The permittee shall allow the Division and/or the authorized representative, upon the presentation of credentials:

a. To enter upon the permittee's premises where a regulated facility or activity is located or in which any records are required to be kept under the terms and conditions of this permit;

b. At reasonable times to have access to and copy any records required to be kept under the terms and conditions of this permit and to inspect any monitoring equipment or monitoring method required in the permit; and

c. To enter upon the permittee's premises in a reasonable manner and at a reasonable time to inspect and/or investigate, any actual, suspected, or potential source of water pollution, or to ascertain compliance or non compliance with the Colorado Water Quality Control Act or any other applicable state or federal statute or regulation or any order promulgated by the Division. The investigation may include, but is not limited to, the following: sampling of any discharge and/or process waters, the taking of photographs, interviewing of any person having knowledge related to the discharge permit or alleged violation, access to any and all facilities or areas within the permittee's premises that may have any affect on the discharge, permit, or alleged violation. Such entry is also authorized for the purpose of inspecting and copying records required to be kept concerning any effluent source.

d. The permittee shall provide access to the Division to sample the discharge at a point after the final treatment process but prior to the discharge mixing with state waters upon presentation of proper credentials.

In the making of such inspections, investigations, and determinations, the Division, insofar as practicable, may designate as its authorized representatives any qualified personnel of the Department of Agriculture. The Division may also request assistance from any other state or local agency or institution.

3. Duty to Provide Information

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

4. Availability of Reports

Except for data determined to be confidential under Section 308 of the Federal Clean Water Act and the Colorado Discharge Permit System Regulations 5 CCR 1002-61, Section 61.5(4), all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the Division and the Environmental Protection Agency.

The name and address of the permit applicant(s) and permittee(s), permit applications, permits and effluent data shall not be considered confidential. Knowingly making false statement on any such report may result in the imposition of criminal penalties as provided for in Section 309 of the Federal Clean Water Act, and Section 25-8-610 C.R.S.

5. Modification, Suspension, Revocation, or Termination of Permits By the Division

The filing of a request by the permittee for a permit modification, revocation and reissuance, termination or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

a. A permit may be modified, suspended, or terminated in whole or in part during its term for reasons determined by the Division including, but not limited to, the following:

   i) Violation of any terms or conditions of the permit;

   ii) Obtaining a permit by misrepresentation or failing to disclose any fact which is material to the granting or denial of a permit or to the establishment of terms or conditions of the permit; or

   iii) Materially false or inaccurate statements or information in the permit application or the permit.

   iv) A determination that the permitted activity endangers human health or the classified or existing uses of state waters and can only be regulated to acceptable levels by permit modifications or termination.

b. A permit may be modified in whole or in part for the following causes, provided that such modification complies with the provisions of Section 61.10 of the Colorado Discharge Permit System Regulations:

   i) There are material and substantial alterations or additions to the permitted facility or activity which occurred after permit issuance which justify the application of permit conditions that are different or absent in the existing permit.

   ii) The Division has received new information which was not available at the time of permit issuance (other than revised regulations, guidance, or test methods) and which would have justified the application of different permit

conditions at the time of issuance. For permits issued to new sources or new dischargers, this cause includes information derived from effluent testing required under Section 61.4(7)(e) of the Colorado Discharge Permit System Regulations. This provision allows a modification of the permit to include conditions that are less stringent than the existing permit only to the extent allowed under Section 61.10 of the Colorado Discharge Permit System Regulations.

iii) The standards or regulations on which the permit was based have been changed by promulgation of amended standards or regulations or by judicial decision after the permit was issued. Permits may be modified during their terms for this cause only as follows:

(A) The permit condition requested to be modified was based on a promulgated effluent limitation guideline, EPA approved water quality standard, or an effluent limitation set forth in 5 CCR 1002-62, § 62 et seq.; and

(B) EPA has revised, withdrawn, or modified that portion of the regulation or effluent limitation guideline on which the permit condition was based, or has approved a Commission action with respect to the water quality standard or effluent limitation on which the permit condition was based; and

(C) The permittee requests modification after the notice of final action by which the EPA effluent limitation guideline, water quality standard, or effluent limitation is revised, withdrawn, or modified; or

(D) For judicial decisions, a court of competent jurisdiction has remanded and stayed EPA promulgated regulations or effluent limitation guidelines, if the remand and stay concern that portion of the regulations or guidelines on which the permit condition was based and a request is filed by the permittee in accordance with this Regulation, within ninety (90) calendar days of judicial remand.

iv) The Division determines that good cause exists to modify a permit condition because of events over which the permittee has no control and for which there is no reasonable available remedy.

v) Where the Division has completed, and EPA approved, a total maximum daily load (TMDL) which includes a wasteload allocation for the discharge(s) authorized under the permit.

vi) The permittee has received a variance.

vii) When required to incorporate applicable toxic effluent limitation or standards adopted pursuant to § 307(a) of the Federal act.

viii) When required by the reopener conditions in the permit.

ix) As necessary under 40 C.F.R. 403.8(e), to include a compliance schedule for the development of a pretreatment program.

x) When the level of discharge of any pollutant which is not limited in the permit exceeds the level which can be achieved by the technology-based treatment requirements appropriate to the permittee under Section 61.8(2) of the Colorado Discharge Permit System Regulations.

xi) To establish a pollutant notification level required in Section 61.8(5) of the Colorado Discharge Permit System Regulations.

xii) To correct technical mistakes, such as errors in calculation, or mistaken interpretations of law made in determining permit conditions, to the extent allowed in Section 61.10 of the Colorado State Discharge Permit System Regulations.

xiii) When required by a permit condition to incorporate a land application plan for beneficial reuse of sewage sludge, to revise an existing land application plan, or to add a land application plan.

xiv) When another State whose waters may be affected by the discharge has not been notified.

xv) For any other cause provided in Section 61.10 of the Colorado Discharge Permit System Regulations.

c. At the request of a permittee, the Division may modify or terminate a permit and issue a new permit if the following conditions are met:

   i) The Regional Administrator has been notified of the proposed modification or termination and does not object in writing within thirty (30) calendar days of receipt of notification,

   ii) The Division finds that the permittee has shown reasonable grounds consistent with the Federal and State statutes and regulations for such modifications or termination;

   iii) Requirements of Section 61.15 of the Colorado Discharge Permit System Regulations have been met, and

   iv) Requirements of public notice have been met.

d. For permit modification, termination, or revocation and reissuance, the Division may request additional information from the permittee. In the case of a modified permit, the Division may require the submission of an updated application. In the case of revoked and reissued permit, the Division shall require the submission of a new application.

e. Permit modification (except for minor modifications), termination or revocation and reissuance actions shall be subject to the requirements of Sections 61.5(2), 61.5(3), 61.6, 61.7 and 61.15 of the Colorado Discharge Permit System Regulations. The Division shall act on a permit modification request, other than minor modification requests, within 180 calendar days of receipt thereof. Except for minor modifications, the terms of the existing permit govern and are enforceable until the newly issued permit is formally modified or revoked and reissued following public notice.

f. Upon consent by the permittee, the Division may make minor permit modifications without following the requirements of Sections 61.5(2), 61.5(3), 61.7, and 61.15 of the Colorado Discharge Permit System Regulations. Minor modifications to permits are limited to:

   i) Correcting typographical errors; or

   ii) Increasing the frequency of monitoring or reporting by the permittee; or

   iii) Changing an interim date in a schedule of compliance, provided the new date of compliance is not more than 120 calendar days after the date specific in the existing permit and does not interfere with attainment of the final compliance date requirement; or

   iv) Allowing for a transfer in ownership or operational control of a facility where the Division determines that no other change in the permit is necessary, provided that a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between the current and new permittees has been submitted to the Division; or

   v) Changing the construction schedule for a discharger which is a new source, but no such change shall affect a discharger's obligation to have all pollution control equipment installed and in operation prior to discharge; or

   vi) Deleting a point source outfall when the discharge from that outfall is terminated and does not result in discharge of pollutants from other outfalls except in accordance with permit limits.

   vii) Incorporating conditions of a POTW pretreatment program that has been approved in accordance with the procedures in 40 CFR 403.11 (or a modification thereto that has been approved in accordance with the procedures in 40 CFR 403.18) as enforceable conditions of the POTW's permits.

g. When a permit is modified, only the conditions subject to modification are reopened. If a permit is revoked and reissued, the entire permit is reopened and subject to revision and the permit is reissued for a new term.

h. The filing of a request by the permittee for a permit modification, revocation and reissuance or termination does not stay any permit condition.

i. All permit modifications and reissuances are subject to the antibacksliding provisions set forth in 61.10(e) through (g).

j. If cause does not exist under this section, the Division shall not modify or revoke and reissue the permit.

6. <u>Oil and Hazardous Substance Liability</u>

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 to under Section 311 (Oil and Hazardous Substance Liability) of the Clean Water Act.

7. State Laws

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 established pursuant to any applicable State law or regulation under authority granted by Section 510 of the Clean Water Act. Nothing in this permit shall be construed to prevent or limit application of any emergency power of the division.

8. Permit Violations

Failure to comply with any terms and/or conditions of this permit shall be a violation of this permit. The discharge of any pollutant identified in this permit more frequently than or at a level in excess of that authorized shall constitute a violation of the permit. Except as provided elsewhere in this permit, nothing in this permit shall be construed to relieve the permittee from civil or criminal penalties for noncompliance (40 CFR 122.41(a)(1)).

9. Severability

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

10. Confidentiality

Any information relating to any secret process, method of manufacture or production, or sales or marketing data which has been declared confidential by the permittee, and which may be acquired, ascertained, or discovered, whether in any sampling investigation, emergency investigation, or otherwise, shall not be publicly disclosed by any member, officer, or employee of the Commission or the Division, but shall be kept confidential. Any person seeking to invoke the protection of this Subsection (12) shall bear the burden of proving its applicability. This section shall never be interpreted as preventing full disclosure of effluent data.

11. Fees

The permittee is required to submit payment of an annual fee as set forth in the 2005 amendments to the Water Quality Control Act. Section 25-8-502 (l) (b), and the Colorado Discharge Permit System Regulations 5 CCR l002-61, Section 61.l5 as amended. Failure to submit the required fee when due and payable is a violation of the permit and will result in enforcement action pursuant to Section 25-8-60l et. seq., C.R.S. l973 as amended.

12. Duration of Permit

The duration of a permit shall be for a fixed term and shall not exceed five (5) years. If the permittee desires to continue to discharge, a permit renewal application shall be submitted at least one hundred eighty (180) calendar days before this permit expires. Filing of a timely and complete application shall cause the expired permit to continue in force to the effective date of the new permit. The permit's duration may be extended only through administrative extensions and not through interim modifications.If the permittee anticipates there will be no discharge after the expiration date of this permit, the Division should be promptly notified so that it can terminate the permit in accordance with Part II.B.4.

13. Section 307 Toxics

If a toxic effluent standard or prohibition, including any applicable schedule of compliance specified, is established by regulation pursuant to Section 307 of the Federal Act for a toxic pollutant which is present in the permittee's discharge and such standard or prohibition is more stringent than any limitation upon such pollutant in the discharge permit, the Division shall institute proceedings to modify or revoke and reissue the permit to conform to the toxic effluent standard or prohibition.

14. Effect of Permit Issuance

a. The issuance of a permit does not convey any property or water rights in either real or personal property, or stream flows or any exclusive privilege.

b. The issuance of a permit does not authorize any injury to person or property or any invasion of personal rights, nor does it authorize the infringement of federal, state, or local laws or regulations.

c. Except for any toxic effluent standard or prohibition imposed under Section 307 of the Federal act or any standard for sewage sludge use or disposal under Section 405(d) of the Federal act, compliance with a permit during its term constitutes compliance, for purposes of enforcement, with Sections 301, 302, 306, 318, 403, and 405(a) and (b) of the Federal act. However, a permit may be modified, revoked and reissued, or terminated during its term for cause as set forth in Section 61.8(8) of the Colorado Discharge Permit System Regulations.

d. Compliance with a permit condition which implements a particular standard for biosolid use or disposal shall be an affirmative defense in any enforcement action brought for a violation of that standard for biosolid use or disposal.

PART III
CATEGORICAL INDUSTRIES

Aluminum Forming
Asbestos Manufacturing
Battery Manufacturing
Builders' Paper and Board Mills
Canned & Preserved Fruits and Vegetables Processing
Canned & Preserved Seafood Processing
Carbon Black Manufacturing
Cement Manufacturing
Coal Mining
Coil Coating
Copper Forming
Dairy Products Processing
Electrical and Electronic Components
Electroplating
Explosives Manufacturing
Feedlots
Ferroalloy Manufacturing
Fertilizer Manufacturing
Glass Manufacturing
Grain Mills
Gum and Wood Chemicals Manufacturing
Hospital
Ink Formulation
Inorganic Chemicals Manufacturing
Iron and Steel Manufacturing
Leather Tanning and Finishing
Meat Products
Metal Finishing
Metal Molding and Casting (Foundries)
Mineral Mining and Processing
Nonferrous Metals Manufacturing
Nonferrous Metals Forming and Metal Powders
Oil and Gas Extraction
Organic Chemicals, Plastics, and Synthetic Fibers
Ore Mining and Dressing
Paint Formulation
Paving and Roofing Materials (Tars and Asphalt)
Pesticide Chemicals
Petroleum Refining
Pharmaceutical Manufacturing
Phosphate Manufacturing
Photographic
Plastics Molding and Forming
Porcelain Enameling
Pulp, Paper, and Paperboard Manufacturing
Rubber Manufacturing
Soap and Detergent Manufacturing
Steam Electric Power Generating
Sugar Processing
Textile Mills
Timber Products Processing

PRIORITY POLLUTANTS AND HAZARDOUS SUBSTANCES
ORGANIC TOXIC POLLUTANTS IN EACH OF FOUR FRACTIONS
IN ANALYSIS BY GAS CHROMATOGRAPHY/MASS SPECTROSCOPY (GC/MS)

Volatiles	**Base/Neutral**	**Acid Compounds**	**Pesticides**
acrolein	acenaphthene	2-chlorophenol	aldrin
acrylonitrile	acenaphthylene	2,4-dichlorophenol	alpha-BHC
benzene	anthracene	2,4,-dimethylphenol	beta-BHC
bromoform	benzidine	4,6-dinitro-o-cresol	gamma-BHC
carbon tetrachloride	benzo(a)anthracene	2,4-dinitrophenol	delta-BHC
chlorobenzene	benzo(a)pyrene	2-nitrophenol	chlordane
chlorodibromomethane	3,4-benzofluoranthene	4-nitrophenol	4,4'-DDT
chloroethane	benzo(ghi)perylene	p-chloro-m-cresol	4,4'-DDE
2-chloroethylvinyl ether	benzo(k)fluoranthene	pentachlorophenol	4,4'-DDD
chloroform	bis(2-chloroethoxy)methane	phenol	dieldrin
dichlorobromomethane	bis(2-chloroethyl)ether	2,4,6-trichlorophenol	alpha-endosulfan
1,1-dichlorethane	bis(2-chloroisopropyl)ether		beta-endosulfan
1,2-dichlorethane	bis(2-ethylhexyl)phthalate		endosulfan sulfate
1,1-dichlorethylene	4-bromophenyl phenyl ether		endrin
1,2-dichlorpropane	butylbenzyl phthalate		endrin aldehyde
1,3-dichlorpropylene	2-chloronaphthalene		heptachlor
ethylbenzene	4-chlorophenyl phenyl ether		heptachlor epoxide
methyl bromide	chrysene		PCB-1242
methyl chloride	dibenzo(a,h)anthracene		PCB-1254
methylene chloride	1,2-dichlorobenzene		PCB-1221

PRIORITY POLLUTANTS AND HAZARDOUS SUBSTANCES

ORGANIC TOXIC POLLUTANTS IN EACH OF FOUR FRACTIONS
IN ANALYSIS BY GAS CHROMATOGRAPHY/MASS SPECTROSCOPY (GC/MS)

Volatiles	Base/Neutral	Acid Compounds	Pesticides
1,1,2,2-tetrachloroethane	1,3-dichlorobenzene		PCB-1232
tetrachloroethylene	1,4-dichlorobenzene		PCB-1248
toluene	3,3-dichlorobenzidine		PCB-1260
1,2-trans-dichloroethylene	diethyl phthalate		PCB-1016
1,1,1-trichloroethane	dimethyl phthalate		toxaphene
1,1,2-trichloroethane	di-n-butyl phthalate		
trichloroethylene	2,4-dinitrotoluene		
vinyl chloride	2,6-dinitrotoluene		
	di-n-octyl phthalate		
	1,2-diphenylhydrazine (as azobenzene)		
	fluorene		
	fluoranthene		
	hexachlorobenzene		
	hexachlorobutadiene		
	hexachlorcyclopentadiene		
	hexachloroethane		
	indeno(1,2,3-cd)pyrene		
	isophorone		
	naphthalene		
	nitrobenzene		
	N-nitrosodimethylamine		
	N-nitrosodi-n-propylamine		
	N-nitrosodiphenylamine		
	phenanthrene		
	pyrene		
	1,2,4-trichlorobenzene		

OTHER TOXIC POLLUTANTS (AMMONIA, METALS AND CYANIDE) AND TOTAL PHENOLS

Antimony, Total
Arsenic, Total
Beryllium, Total
Cadmium, Total
Chromium, Total
Copper, Total
Lead, Total
Mercury, Total
Nickel, Total
Selenium, Total
Silver, Total
Thallium, Total
Zinc, Total
Cyanide, Total
Phenols, Total

TOXIC POLLUTANTS AND HAZARDOUS SUBSTANCES

REQUIRED TO BE IDENTIFIED BY EXISTING DISCHARGERS
IF EXPECTED TO BE PRESENT

Toxic Pollutants

Asbestos

Hazardous Substances

Acetaldehyde
Allyl alcohol
Allyl chloride
Amyl acetate
Aniline
Benzonitrile
Benzyl chloride
Butyl acetate
Butylamine
Captan
Carbaryl
Carbofuran
Carbon disulfide
Chlorpyrifos
Coumaphos
Cresol
Crotonaldehyde
Cyclohexane
2,4-D(2,4-Dichlorophenoxy acetic acid)
Diazinon
Dicamba
Dichlobenil
Dichlone
2,2-Dichloropropionic acid
Dichlorvos
Diethyl amine
Dimethyl amine
Dinitrobenzene
Diquat
Disulfoton
Diuron
Epichlorohydrin
Ethanolamine
Ethion
Ethylene diamine
Ethylene dibromide
Formaldehyde
Furfural
Guthion
Isoprene
Isopropanolamine
Keithane
Kepone
Malathion
Mercaptodimethur
Methoxychlor
Methyl mercaptan
Methyl methacrylate
Methyl parathion
Mexacarbate
Monoethyl amine
Monomethyl amine
Naled
Napthenic acid
Nitrotoluene
Parathion
Phenolsulfanate
Phosgene
Propargite
Propylene oxide
Pyrethrins
Quinoline
Resorcinol
Strontium
Strychnine
Styrene
TDE (Tetrachlorodiphenylethane)
2,4,5-T (2,4,5-Trichlorophenoxy acetic acid)
2,4,5-TP [2-(2,4,5-Trichlorophenoxy) propanoic acid]
Trichlorofan
Triethylamine
Trimethylamine
Uranium
Vandium
Vinyl Acetate
Xylene
Xylenol
Zirconium