Effluent Characterization Screening Spreadsheet

Mining Permit Permit No. 56250301 **Site Name:** Rockwood Quarry

NPDES Permit No. PA0279935 **Outfall ID:** 001 and 002

Hardness (mg/L as $CaCO_3$): 100

Flow Ratio (for continuous discharges)

Stream Flow (gpm):

Outfall Discharge Flow (gpm):

Stream:Discharge Flow Ratio:

OR

Drainage Area Ratio (for precipitation induced discharges)

Watershed Drainage Area (acres): 3059

Outfall Drainage Area (acres): 137.2

Watershed:Outfall Area Ratio: 22

Parameter or Constituent Name	Fish and Aquatic Criteria Continuous Concentration (CCC)	Fish and Aquatic Criteria Maximum Concentration (CMC)	Human Health Criteria	Specific Water Quality Criteria	Most Stringent Criterion	Effective Criterion (based on ratio)	Quantitation Limit	< symbol in this column indicates value was reported as a detection limit	Maximum Concentration Expected or Reported from the Outfall	Candidate for WQBEL?
Total Iron (mg/L)	NA	NA	NA	1.5	1.5	1.50	0.02		1.0	No
Total Manganese (mg/L)	NA	NA	NA	1.0	1.0	1.00	0.002		0.38	No
Total Aluminum (mg/L)	NA	0.75	NA	NA	0.75	0.75	0.01		0.1	No
Osmotic Pressure (mOsm/kg)	NA	NA	NA	50	50	50	NA			
Sulfate (mg/L)	NA	NA	NA	250	250	250	1.0		30	No
Total Dissolved Solids (mg/L)	NA	NA	NA	500	500	500	2.0			
Total Antimony (µg/L)	220	1100	5.6	NA	5.6	5.6	2.0	<	2	No***
Total Arsenic (µg/L)	150	340	10	NA	10	10	3.0	<	3	No***
Total Beryllium (µg/L)	NA	NA	NA	NA	NA	NA	1.0	<	1	No***
Total Cadmium (µg/L) *	0.25	2.0	NA	NA	0.25	0.25	0.2	<	0.2	No***
Total Chromium (Cr^{+3}) (µg/L) *	74	570	NA	NA	74	74	4.0	<	4	No***
Total Copper (µg/L) *	9.0	13	NA	NA	9.0	9.0	4.0	<	4	No***
Total Lead (µg/L) *	2.5	65	NA	NA	2.5	2.5	1.0	<	1	No***
Total Mercury (Hg^{+2}) (µg/L)	0.9	1.6	0.05	NA	0.05	0.050	0.20	<	0.05	No***
Total Nickel (µg/L) *	52	468	610	NA	52	52	4.0	<	4	No***
Total Selenium (µg/L)	5.0	NA	NA	NA	5.0	5.0	5.0	<	4.6	No***
Total Silver (µg/L)	NA	3.2	NA	NA	3.2	3.2	0.4	<	0.4	No***
Total Thallium (µg/L)	13	65	0.24	NA	0.24	0.24	2.0	<	0.2	No***
Total Zinc (µg/L)*	118	117	NA	NA	118	118	5.0	<	5.2	No
Free Available Cyanide (µg/L)	5.2	22	4	NA	4	4	1.0	<	5	Yes or Resample
Total Phenols (Phenolics) (µg/L)	NA	NA	4000	5.0	5.0	5.0	5.0			

NA = Not Applicable

All concentrations are the total recoverable concentrations

If the stream:discharge ratio is less than 3.0 then the stream is effluent dominated and a constituent becomes a candidate for a WQBEL if the concentration exceeds 50% of the criterion

If the stream:discharge ratio is greater than 3.0 then a constituent becomes a candidate for a WQBEL if the concentration exceeds the criterion

This is in accordance with Standard Operating Procedure No. BCW-PMT-037 from PADEP Bureau of Clean Water

*Hardness Dependent, if no site specific stream hardness data is available a default value of 100 mg/L is used

The hardness value should represent the receiving stream after mixing with the discharge from the NPDES outfall

** Sulfate, Total Dissolved Solids, and Phenols are only candidates for a WQBEL if a downstream public water supply intake may be impacted

***The Quantitation Limit is greater than the either the criterion or 50% of the criterion (whichever is applicable based on the flow or area ratio)

If the detection limit for a constituent is reported as greater than the criterion but less than the Quantitation Limit then that constituent is not a candidate for WQBEL

Sources: PA Code Chapter 93.8c Table 5 for CCC, CMC, & HH criteria: http://www.pacode.com/secure/data/025/chapter93/s93.8c.html

PA Code Chapter 93.7 Table 3 for Specific Water Quality Criteria: https://www.pacode.com/secure/data/025/chapter93/s93.7.html