

Official Draft Public Notice Version **February 15, 2022**

The findings, determinations, and assertions contained in this document are not final and subject to change following the public comment period.

STATE OF UTAH  
DIVISION OF WATER QUALITY  
DEPARTMENT OF ENVIRONMENTAL QUALITY  
SALT LAKE CITY, UTAH

UTAH POLLUTANT DISCHARGE ELIMINATION SYSTEM (UPDES) PERMITS

Major Industrial Permit No. **UT0000051**

Biosolids Permit No. **UTL000051**

In compliance with provisions of the Utah *Water Quality Act, Title 19, Chapter 5, Utah Code, as amended* (the "*Act*"),

**KENNECOTT UTAH COPPER LLC**

is hereby authorized to discharge from its facility located near Magna and in western Salt Lake County, Utah, with the outfalls located at the following:

**C-7 DITCH,  
I-80 CULVERT TO GREAT SALT LAKE,  
GREAT SALT LAKE,  
PINE CANYON CREEK, TOOELE COUNTY,  
BUTTERFIELD CREEK,  
RITER-UTAH SALT LAKE CANALS,  
GREAT SALT LAKE,  
INTERNAL DISCHARGE, HYDROMETALLURGICAL PLANT,**

to dispose of biosolids,

in accordance with specific limitations, outfalls, and other conditions set forth herein.

**This permit shall become effective on **Month XX, 20XX.****

**This permit expires at midnight on **Month XX, 20XX.****

**Signed this **XXth** day of **Month, 20XX.****

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Erica Brown Gaddis, PhD  
Director

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PND DRAFT

**I. DISCHARGE LIMITATIONS AND REPORTING REQUIREMENTS**

A. Description of Discharge Points. The authorization to discharge wastewater provided under this part is limited to those outfalls specifically designated below as discharge locations. Discharges at any location not authorized under a UPDES permit are violations of the *Act* and may be subject to penalties under the *Act*. Knowingly discharging from an unauthorized location or failing to report an unauthorized discharge may be subject to criminal penalties as provided under the *Act*.

<b>Outfall</b>	<b>Latitude</b>	<b>Longitude</b>	<b>Description of Discharge Point</b>	<b>Receiving Waters</b>
002	40° 44'30"	112° 05'15"	C-7 Ditch	Tailing pond outfall to C-7 ditch
004	40° 44'06"	112° 11'49"	I-80 culvert to Great Salt Lake	I-80 Culvert to Great Salt Lake
007	40° 46'15"	112° 07'00"	C-7 Ditch	Toe Ditch Pond to C-7 Ditch
008	40° 44'12"	112° 10'25"	Great Salt Lake	Artesian well water, refinery storm water to the Great Salt Lake
009	40° 32'07"	112° 11'39"	Pine Canyon Creek, Tooele County	Pine Canyon Tunnel, Tooele County
010	40° 29'33"	112° 07'20"	Butterfield Creek	Butterfield Tunnel to Butterfield Creek
011	40° 42'52"	112° 06'57"	Ritter-Utah Salt Lake Canals	Adamson Spring to the Ritter-Utah Salt Lake Canals
012	40° 45'20"	112° 10'02"	Great Salt Lake	Tailing discharge to the Great Salt Lake
104	40° 43'27"	112° 11'50"	Internal discharge, Hydrometallurgical Plant	Internal discharge from Hydrometallurgical Plant

B. Narrative Standard. It shall be unlawful, and a violation of this permit, for the permittee to discharge or place any waste or other substance in such a way as will be or may become offensive such as unnatural deposits, floating debris, oil, scum, or other nuisances such as color, odor or taste, or cause conditions which produce undesirable aquatic life or which produce objectionable tastes in edible aquatic organisms; or result in concentrations or combinations of substances which produce undesirable physiological responses in desirable resident fish, or other desirable aquatic life, or undesirable human health effects, as determined by a bioassay or other tests performed in accordance with standard procedures.

C. Specific Limitations and Self-Monitoring Requirements.

1. Effective immediately, and lasting through the life of this permit, there shall be no acute or chronic toxicity in Outfalls 002, 004, 007, 008, 009, 010, 011, 012, and 104 as defined in *Part VIII*, and determined by test procedures described in *Part I. C.6.a & b* of this permit.
2.
  - a. Effective immediately and lasting the duration of this permit, the permittee is authorized to discharge from Outfall 002 and 007. Such discharges shall be limited and monitored by the permittee as specified in Table 2 and 3.

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<b>Table 2</b>						
<b>Outfall 002</b>						
<b>Effluent Limitations</b>						
<b>Self-Monitoring and Reporting Requirements <sup>a</sup></b>						
<b>Parameter</b>	<b>Maximum Monthly Average</b>	<b>Daily Maximum</b>	<b>Daily Minimum</b>	<b>Frequency</b>	<b>Sample Type</b>	<b>Units</b>
Flow	50.0	-	-	Continuous	Recorder	MGD
Total Suspended Solids (TSS)	20	30	-	3 x weekly	Composite	mg/L
Total Arsenic (As)	0.172	0.366	-	3 x weekly	Composite	mg/L
Total Cadmium (Cd)	0.00079	0.008	-	3 x weekly	Composite	mg/L
Total Copper (Cu)	0.0351	0.0557	-	3 x weekly	Composite	mg/L
Total Lead (Pd)	0.0215	0.0532	-	3 x weekly	Composite	mg/L
Total Mercury (Hg)	0.000013	0.002	-	3 x weekly	Grab	mg/L
Total Zinc (Zn)	0.224	0.419	-	3 x weekly	Composite	mg/L
Total Selenium (Se) <sup>b, c</sup>	0.012	-	-	Monthly	Grab	mg/L
Total Cyanide	0.0056	0.0241	-	Monthly	Composite	mg/L
Oil & Grease	-	10	-	<sup>d</sup>	Grab	mg/L
Total Dissolved Solids (TDS)	-	-	-	Monthly	Composite	mg/L
pH	-	9.0	6.5	3 x weekly	Grab	SU

**Table 2 References**

- <sup>a.</sup> Samples collected in compliance with the monitoring requirements specified above shall be collected at the outfall to the C-7 ditch prior to mixing with the receiving water.
- <sup>b.</sup> Selenium will be analyzed by EPA Method 200.8 or alternative method approved by the State of Utah Bureau of Laboratory Improvement.
- <sup>c.</sup> 0.012 mg/L is consistent with the requirements of the U.S. Army Corps of Engineers 404 Permit #199450301 and shall not be exceeded at the Lower Lee Creek location north of Interstate 80 during a discharge from outfalls 002 and 007.
- <sup>d.</sup> Oil & Grease will be sampled when sheen is observed.

**End Table 2 References**

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<b>Table 3</b>						
<b>Outfall 007</b>						
<b>Effluent Limitations</b>						
<b>Self-Monitoring and Reporting Requirements <sup>a</sup></b>						
<b>Parameter</b>	<b>Maximum Monthly Average</b>	<b>Daily Maximum</b>	<b>Daily Minimum</b>	<b>Frequency</b>	<b>Sample Type</b>	<b>Units</b>
Flow	15.0	-	-	Continuous	Recorder	MGD
Total Suspended Solids (TSS)	20	30	-	3 x weekly	Composite	mg/L
Total Arsenic (As)	0.222	0.427	-	3 x weekly	Composite	mg/L
Total Cadmium (Cd)	0.00089	0.0093	-	3 x weekly	Composite	mg/L
Total Copper (Cu)	0.0458	0.065	-	3 x weekly	Composite	mg/L
Total Lead (Pd)	0.0284	0.605	-	3 x weekly	Composite	mg/L
Total Mercury (Hg)	0.000015	0.002	-	3 x weekly	Grab	mg/L
Total Zinc (Zn)	0.224	0.5	-	3 x weekly	Composite	mg/L
Total Selenium (Se) <sup>b, c</sup>	0.012	-	-	Monthly	Grab	mg/L
Total Cyanide	0.0056	0.0291	-	Monthly	Composite	mg/L
Oil & Grease	-	10	-	<sup>d</sup>	Grab	mg/L
Total Dissolved Solids (TDS)	-	-	-	Monthly	Composite	mg/L
pH	-	9.0	6.5	3 x weekly	Grab	SU

**Table 3 References**

- <sup>a.</sup> Samples collected in compliance with the monitoring requirements specified above shall be collected at the outfall to the C-7 ditch prior to mixing with the receiving water.
- <sup>b.</sup> Selenium will be analyzed by EPA Method 200.8 or alternative method approved by the State of Utah Bureau of Laboratory Improvement.
- <sup>c.</sup> 0.012 mg/L is consistent with the requirements of the U.S. Army Corps of Engineers 404 Permit #199450301 and shall not be exceeded at the Lower Lee Creek location north of Interstate 80 during a discharge from outfalls 002 and 007.
- <sup>d.</sup> Oil & Grease will be sampled when sheen is observed.

**End Table 3 References**

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- b. Effective immediately and lasting the duration of this permit, the permittee is authorized to discharge from Outfall 012. Such discharges shall be limited and monitored by the permittee as specified in Table 4.

<b>Table 4</b>							
<b>Outfall 012</b>							
<b>Effluent Limitations</b>							
<b>Self-Monitoring and Reporting Requirements <sup>a, b, c, d</sup></b>							
<b>Parameter</b>	<b>Maximum Monthly Average</b>	<b>Daily Maximum</b>	<b>Daily Minimum</b>	<b>Annual Max</b>	<b>Frequency</b>	<b>Sample Type</b>	<b>Units</b>
Flow	-	-	-	6468	Continuous	Recorder	MGY <sup>e</sup>
Total Suspended Solids (TSS)	20	30	-	-	Monthly	Composite	mg/L
Total Arsenic (As)	0.25	0.5	-	-	Daily	Composite	mg/L
Total Cadmium (Cd)	0.05	0.10	-	-	Daily	Composite	mg/L
Total Copper (Cu)	0.15	0.3	-	-	Daily	Composite	mg/L
Total Lead (Pb)	0.30	0.6	-	-	Daily	Composite	mg/L
Total Mercury (Hg) <sup>f</sup>	0.001	0.002	-	-	Monthly	Grab	mg/L
Total Zinc (Zn)	0.224	0.5	-	-	Daily	Composite	mg/L
Total Cyanide	0.1	0.2	-	-	Monthly	Grab	mg/L
Total Selenium (Se) <sup>g</sup>	-	0.054	-	-	Monthly	Composite	mg/L
Total Selenium (Se), load	-	-	-	900 <sup>h</sup>	Monthly	Calculated	Kg
Selenium	-	-	-	-	Annually	See Section I.C.4. of permit UT0000051	
Total Dissolved Solids (TDS)	-	-	-	-	Monthly	Composite	mg/L
Oil & Grease	-	10	-	-	<sup>i</sup>	Grab	mg/L
pH	-	9.0	6.5	-	Daily	Grab	SU
WET Acute Biomonitoring	-	LC <sub>50</sub> > 100% Effluent	-	-	Quarterly	Composite	-
WET Chronic Biomonitoring	-	TU <sub>c</sub> ≤ 1.6 <sup>j</sup>	-	-	Quarterly	Composite	-

**Table 4 References**

- a. See Definitions, *Part VIII* for definition of terms.
- b. Samples taken in compliance with the monitoring requirements specified above shall be taken at the outfall to the Great Salt Lake prior to mixing with the receiving water.
- c. There shall be no untreated sanitary wastewater discharged into the tailings impoundment.
- d. There shall be no floating solids or visible foam in other than trace amounts.
- e. Annual discharge will be limited annually to 6468 million gallons a year (19,850-acre feet/year)
- f. The mercury analytical method must be EPA Method 1631 used on grab samples collected from the tailings impoundment barge.

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- g. Selenium will be analyzed by EPA Method 200.8 or alternative method approved by the State of Utah Bureau of Laboratory Improvement.
- h. To ensure continued protection for Gilbert Bay, the contributions of selenium from Outfall 004 and 008 are included in the annual loading limit of 900 kg/yr the previous permit the limit was applicable to Outfall 012 only.
- i. Oil & Grease will be sampled when sheen is observed.
- j. TUC is calculated by dividing the receiving water effluent concentration determined in accordance with R317-2-5 by the chronic test IC<sub>25</sub>. The TUC is an indicator and an exceedance is not used for determining compliance.

**End Table 4 References**

- c. Effective immediately and lasting the duration of this permit, the permittee is authorized to discharge from Outfall 104. Such discharges shall be limited and monitored by the permittee as specified in Table 5 (this is Table 10 in the FSSOB).

<b>Table 5</b>					
<b>Outfall 104</b>					
<b>Effluent Limitations</b>					
<b>Self-Monitoring and Reporting Requirements <sup>a</sup></b>					
<b>Parameter</b>	<b>Maximum Monthly Average</b>	<b>Daily Maximum</b>	<b>Frequency</b>	<b>Sample Type</b>	<b>Units</b>
Flow	-	-	Continuous	Recorder	MGD
Total Suspended Solids (TSS)	237	296	Weekly	Composite	lb/day
Total Arsenic (As)	11.3	27.4	Weekly	Composite	lb/day
Total Cadmium (Cd)	1.57	3.93	Weekly	Composite	lb/day
Total Copper (Cu)	12.1	25.3	Weekly	Composite	lb/day
Total Lead (Pd)	2.56	5.51	Weekly	Composite	lb/day
Total Zinc (Zn)	8.26	20.1	Weekly	Composite	lb/day

**Table 5 References**

- <sup>a</sup> See Definitions, *Part VIII* for definition of terms.

**End Table 5 References**



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- d. Effective immediately and lasting the duration of this permit, the permittee is authorized to discharge from Outfall 004. Such discharges shall be limited and monitored by the permittee as specified in Table 6 (this is Table 11 in the FSSOB).

<b>Table 6</b>							
<b>Outfall 004</b>							
<b>Effluent Limitations</b>							
<b>Self-Monitoring and Reporting Requirements <sup>a, b, c</sup></b>							
<b>Parameter</b>	<b>Maximum Monthly Average</b>	<b>Daily Maximum</b>	<b>Daily Minimum</b>	<b>Annual Max</b>	<b>Frequency</b>	<b>Sample Type</b>	<b>Units</b>
Flow	-	-	-	-	Quarterly	Measured	MGD
Total Suspended Solids (TSS)	-	-	-	-	Quarterly	Grab	mg/L
Total Arsenic (As)	-	-	-	-	Quarterly	Grab	mg/L
Total Cadmium (Cd)	-	-	-	-	Quarterly	Grab	mg/L
Total Copper (Cu)	-	-	-	-	Quarterly	Grab	mg/L
Total Lead (Pd)	-	-	-	-	Quarterly	Grab	mg/L
Total Mercury (Hg) <sup>d</sup>	-	-	-	-	Quarterly	Grab	mg/L
Total Zinc (Zn)	-	-	-	-	Quarterly	Grab	mg/L
Total Selenium (Se)	-	-	-	-	Quarterly	Grab	mg/L
Total Dissolved Solids (TDS)	-	-	-	-	Quarterly	Grab	mg/L
Total Selenium (Se), load	-	-	-	900 <sup>e</sup>	Monthly	Calculated	Kg
Oil & Grease	-	-	-	-	<sup>f</sup>	Grab	mg/L
pH	-	-	-	-	Quarterly	Grab	SU

**Table 6 References**

- a. See Definitions, *Part VIII* for definition of terms.
- b. There shall be no floating solids or visible foam in other than trace amounts.
- c. Discharges from outfall 004 are not limited on flow, but will be monitored and reported if a discharge occurs.
- d. The mercury analytical method must be EPA Method 1631 used on grab samples collected from the tailings impoundment barge.
- e. To ensure continued protection for Gilbert Bay, the contributions of selenium from Outfall 004 and 008 are included in the annual loading limit of 900 kg/yr the previous permit the limit was applicable to Outfall 012 only.
- f. Oil & Grease will be sampled when sheen is observed.

**End Table 6 References**

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- e. Effective immediately and lasting the duration of this permit, the permittee is authorized to discharge from Outfall 008. Such discharges shall be limited and monitored by the permittee as specified in Table 7 (this is Table 12 in the FSSOB).

<b>Table 7</b>							
<b>Outfall 008</b>							
<b>Effluent Limitations</b>							
<b>Self-Monitoring and Reporting Requirements <sup>a, b</sup></b>							
<b>Parameter</b>	<b>Maximum Monthly Average</b>	<b>Daily Maximum</b>	<b>Daily Minimum</b>	<b>Annual Max</b>	<b>Frequency</b>	<b>Sample Type</b>	<b>Units</b>
Flow	5.5	-	-	-	Quarterly	Measured	MGD
Total Suspended Solids (TSS)	20	30	-	-	Quarterly	Grab	mg/L
Total Arsenic (As)	0.25	0.50	-	-	Quarterly	Grab	mg/L
Total Cadmium (Cd)	0.05	0.10	-	-	Quarterly	Grab	mg/L
Total Copper (Cu)	0.15	0.30	-	-	Quarterly	Grab	mg/L
Total Lead (Pd)	0.30	0.60	-	-	Quarterly	Grab	mg/L
Total Mercury (Hg) <sup>c</sup>	0.001	0.002	-	-	Quarterly	Grab	mg/L
Total Zinc (Zn)	0.224	0.50	-	-	Quarterly	Grab	mg/L
Total Selenium (Se)	-	0.054	-	-	Quarterly	Grab	mg/L
Total Dissolved Solids (TDS)	-	-	-	-	Quarterly	Grab	mg/L
Total Selenium (Se), load	-	-	-	900 <sup>d</sup>	Monthly	Calculated	Kg
Oil & Grease	-	10	-	-	<sup>e</sup>	Grab	mg/L
pH	-	9.0	6.5	-	Quarterly	Grab	SU

**Table 7 References**

- a. See Definitions, Part VIII for definition of terms.
- b. There shall be no floating solids or visible foam in other than trace amounts.
- c. The mercury analytical method must be EPA Method 1631 used on grab samples collected from the tailings impoundment barge.
- d. To ensure continued protection for Gilbert Bay, the contributions of selenium from Outfall 004 and 008 are included in the annual loading limit of 900 kg/yr the previous permit the limit was applicable to Outfall 012 only.
- e. Oil & Grease will be sampled when sheen is observed.

**End Table 7 References**

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- f. Effective immediately and lasting the duration of this permit, the permittee is authorized to discharge from Outfall 009. Such discharges shall be limited and monitored by the permittee as specified in Table 8 (this is Table 13 in the FSSOB).

<b>Table 8</b>						
<b>Outfall 009</b>						
<b>Effluent Limitations</b>						
<b>Self-Monitoring and Reporting Requirements <sup>a, b</sup></b>						
<b>Parameter</b>	<b>Maximum Monthly Average</b>	<b>Daily Maximum</b>	<b>Daily Minimum</b>	<b>Frequency</b>	<b>Sample Type</b>	<b>Units</b>
Flow	0.086	-	-	2 x Yearly	Measured	MGD
Total Suspended Solids (TSS)	20	30	-	2 x Yearly	Grab	mg/L
Total Arsenic (As)	0.25	0.5	-	2 x Yearly	Grab	mg/L
Total Cadmium (Cd)	0.00052	0.00287	-	2 x Yearly	Grab	mg/L
Total Copper (Cu)	0.0108	0.0175	-	2 x Yearly	Grab	mg/L
Total Lead (Pd)	0.001	0.026	-	2 x Yearly	Grab	mg/L
Total Mercury (Hg)	0.001	0.002	-	2 x Yearly	Grab	mg/L
Total Zinc (Zn)	0.224	0.301	-	2 x Yearly	Grab	mg/L
Total Selenium (Se) <sup>c</sup>	0.012	-	-	2 x Yearly	Grab	mg/L
Total Dissolved Solids (TDS)	-	-	-	2 x Yearly	Grab	mg/L
Oil & Grease	-	10	-	<sup>d</sup>	Grab	mg/L
pH	-	9.0	6.5	2 x Yearly	Grab	SU

**Table 8 References**

- a. See Definitions, *Part VIII* for definition of terms.
- b. There shall be no floating solids or visible foam in other than trace amounts.
- c. Selenium will be analyzed by Method 200.8 or alternative method approved by the State of Utah Bureau of Laboratory Improvement.
- d. Oil & Grease will be sampled when sheen is observed.

**End Table 8 References**

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- g. Effective immediately and lasting the duration of this permit, the permittee is authorized to discharge from Outfall 010. Such discharges shall be limited and monitored by the permittee as specified in Table 9 (this is Table 14 in the FSSOB).

<b>Table 9</b>						
<b>Outfall 010</b>						
<b>Effluent Limitations</b>						
<b>Self-Monitoring and Reporting Requirements <sup>a, b</sup></b>						
<b>Parameter</b>	<b>Maximum Monthly Average</b>	<b>Daily Maximum</b>	<b>Daily Minimum</b>	<b>Frequency</b>	<b>Sample Type</b>	<b>Units</b>
Flow	0.65	-	-	Quarterly	Measured	MGD
Total Suspended Solids (TSS)	20	30	-	Quarterly	Grab	mg/L
Total Arsenic (As)	-	0.10	-	Quarterly	Grab	mg/L
Total Cadmium (Cd)	0.0013	0.0066	-	Quarterly	Grab	mg/L
Total Copper (Cu)	-	0.038	-	Quarterly	Grab	mg/L
Iron (Fe)	-	1.09				
Total Lead (Pd)	0.023	0.100	-	Quarterly	Grab	mg/L
Total Mercury (Hg) <sup>c</sup>	0.00002	0.00023	-	Quarterly	Grab	mg/L
Total Zinc (Zn)	0.323	0.493	-	Quarterly	Grab	mg/L
Total Selenium (Se) <sup>d</sup>	0.005	0.0184	-	Quarterly	Grab	mg/L
Total Dissolved Solids (TDS)	-	1200	-	Quarterly	Grab	mg/L
Oil & Grease	-	10	-	<sup>e</sup>	Grab	mg/L
pH	-	9.0	6.5	Quarterly	Grab	SU

**Table 9 References**

- a. See Definitions, *Part VIII* for definition of terms.
- b. There shall be no floating solids or visible foam in other than trace amounts.
- c. Kennecott will voluntarily analyze mercury using a low-level total mercury analysis.
- d. Selenium will be analyzed by Method 200.8 or alternative method approved by the State of Utah Bureau of Laboratory Improvement.
- e. Oil & Grease will be sampled when sheen is observed.

**End Table 9 References**

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- h. Effective immediately and lasting the duration of this permit, the permittee is authorized to discharge from Outfall 011. Such discharges shall be limited and monitored by the permittee as specified in Table 10 (this is Table 15 in the FSSOB).

<b>Table 10</b>						
<b>Outfall 011</b>						
<b>Effluent Limitations</b>						
<b>Self-Monitoring and Reporting Requirements <sup>a, b, c</sup></b>						
<b>Parameter</b>	<b>Maximum Monthly Average</b>	<b>Daily Maximum</b>	<b>Daily Minimum</b>	<b>Frequency</b>	<b>Sample Type</b>	<b>Units</b>
Flow	3.9	-	-	Quarterly	Measured	MGD
Total Suspended Solids (TSS)	20	30	-	Quarterly	Grab	mg/L
Total Arsenic (As)	-	0.013	-	Quarterly	Grab	mg/L
Total Cadmium (Cd)	0.0013	0.010	-	Quarterly	Grab	mg/L
Total Copper (Cu)	0.102	0.119	-	Quarterly	Grab	mg/L
Total Lead (Pd)	0.0662	0.010	-	Quarterly	Grab	mg/L
Total Zinc (Zn)	0.224	0.50	-	Quarterly	Grab	mg/L
Total Selenium (Se) <sup>d</sup>	0.0058	0.013	-	Quarterly	Grab	mg/L
Total Dissolved Solids (TDS)	-	-	-	Quarterly	Grab	mg/L
Oil & Grease	-	10	-	<sup>e</sup>	Grab	mg/L
pH	-	9.0	6.5	Quarterly	Grab	SU

**Table 10 References**

- a. See Definitions, *Part VIII* for definition of terms.
- b. For intermittent discharges, the duration of the discharge shall be reported.
- c. There shall be no floating solids or visible foam in other than trace amounts.
- d. Selenium will be analyzed by Method 200.8 or alternative method approved by the State of Utah Bureau of Laboratory Improvement.
- e. Oil & Grease will be sampled when sheen is observed.

**End Table 10 References**

3. ***Joint Discharge Area Transitional Waters Monitoring Program:*** Kennecott is required to annually sample eight (8) bird eggs, if available, but not exceed 20% of available eggs, during the nesting season, April 15 through June 30, for the current permit cycle. The eggs will be collected from bird nests in the joint Jordan Valley Outfall 001 and Kennecott Outfall 002 affected outfall area. The geometric mean selenium concentration of all of the eggs but at least 5 eggs from a single season will be compared to the tissue-based selenium water quality standard of 12.5 mg/kg dry weight for Gilbert Bay of Great Salt Lake to demonstrate compliance with the Narrative Standards in the Class 5E Transitional Waters affected by the discharge. Jordan Valley must notify the Director within 7 business days of becoming aware of any egg concentrations that exceed 9.8 mg/kg. In addition, total mercury concentrations in the egg tissue samples must also be evaluated and reported by Kennecott.

Kennecott will conduct annual bird surveys approximately every two weeks between April 15 and June 30 (at least four times per season) to document bird abundance, diversity, and use of the Outfall 012 mud flat habitat, particularly for evidence of feeding and nesting. This data will be submitted in the Annual Project Operating Report.

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Kennecott is required to annually collect co-located macro-invertebrate and water samples once between April 15 and June 30 and as close in time as practical to the bird egg collection. These samples will be analyzed for selenium. Water samples will be analyzed for methyl and total mercury and biota samples will be analyzed for total mercury. The co-located macro-invertebrates and water samples will be collected at up to six (6) evenly spaced locations along the discharge watercourse from the discharge point to the water's edge from where Outfall 012 enters the standing waters of Great Salt Lake.

Kennecott is required to biannually collect co-located brine shrimp and water samples twice per year from the open waters of Gilbert Bay in the vicinity of the outfall. Sample collection is constrained by brine shrimp dynamics in the sampling area as brine shrimp may not always be present when sampling is attempted. The intent is to collect brine shrimp samples as close as available to where the effluent waters enter Gilbert Bay between April 15 and June 30 and in October. The water sample will be analyzed for total and methyl mercury and selenium. The brine shrimp sample will be analyzed for total mercury and selenium.

DWQ strongly recommends that Kennecott coordinate with other facilities that discharge in the same delta to avoid needless duplication and further impact to avian wildlife in the delta area. Other monitoring requirements may be shared if appropriate. The Director shall be notified as soon as possible, but no later than April 1, if the efforts to coordinate monitoring with other dischargers to the delta area are unsuccessful. The sampling and analyses will be completed in accordance a sampling plan approved by the Director. The sampling plan may be modified with Director approval. The detailed field and laboratory data, analysis and a summary of the results from the bird surveys, egg samples and co-located water, sediment and macro-invertebrates monitoring must be submitted to the DWQ by February 1, or another agreed upon date, following the end of the calendar year for which the results were obtained as a part of the Annual Project Operating Report.

4. ***Implementation of the 12.5 mg/kg Se Tissue Based Standard:*** Kennecott is subject to the following actions when the annual geometric mean dry weight concentrations of all the eggs but a minimum of 5 are measured in bird eggs collected for the Joint Discharge Area Transitional Waters Monitoring Program:

9.8 to 12.4 mg/kg Se and above: Kennecott will prepare and if necessary, implement a plan to decrease bird exposures to Se from the effluent unless Kennecott can demonstrate to the Director's satisfaction that the discharge is not the cause of the increasing Se concentrations in eggs. The plan, including an implementation schedule, must be approved by the Director within 180 days of notice that this condition exists.

12.5 mg/kg Se and above: The reopener provision for this permit will be exercised and Kennecott will be subject to additional Se reductions unless Kennecott can demonstrate to the Director's satisfaction that the discharge is not the cause of the Se exceedances in eggs. If these waters are determined to be impaired, Kennecott may be subject to additional Se reductions under the TMDL process.

5. ***Storm Exemptions***
  - a. If, as a result of precipitation or snowmelt Outfalls 002, 007, and/or 012 has an overflow or excess discharge of effluent which does not meet the limitations contained in Part I.D, pursuant to 40 CFR 440.131(b), Outfalls 002 and/or 012 may qualify for an exemption from such limitations if the permittee notifies the Director of the event in writing within thirty days of the event and the following conditions are met:

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- i. The facility is designed, constructed, and maintained to contain 6053-acre feet at the North expansion impoundment. This is the volume which would be generated by the permittee in a 24-hour period without an increase in volume from precipitation plus the maximum volume of wastewater resulting from a 10-year, 24-hour precipitation event. The facility must be capable of storing the above volumes or be capable of treating the maximum flow associated with these volumes.
  - ii. The permittee takes all reasonable steps to maintain treatment of the wastewater such as adding lime to maintain pH in the range of 6.5 to 9.0 in the effluent and minimizes the amount of overflow such as not discharging leach water to the tailings pond except for storm runoff at the mine exceeding the 10-year 24-hour storm volume and the conditions of Part I.C.
  - iii. The discharge is analyzed for the parameters listed in Part I.C.
  - iv. The discharge is reported pursuant to Part V.
  - v. The storm exemption is designed to provide an affirmative defense to an enforcement action. Therefore, the permittee has the burden of demonstrating to the Director that the above conditions have been met.
- b. If, as a result of precipitation or snowmelt, other areas of the mine operations have an overflow or discharge which does not meet the limitations established pursuant to 40 CFR 440.131 (b), as deemed applicable, the permittee may qualify for an exemption from such limitations with respect to such discharge if the permittee notifies the Director of the event in writing within thirty days of the event and the following conditions are met:
- i. The facility is designed, constructed, and maintained to contain the maximum volume of wastewater stored by the facility during normal operating conditions (without an increase in volume from precipitation) plus the maximum volume of wastewater resulting from 10-year, 24-hour precipitation event. In computing the maximum volume of wastewater which would result from a 10-year, 24-hour precipitation event, the permittee must include the volume which would result from all areas contributing runoff to the facility, i.e., all runoff that is not diverted from the area, or process subject to zero discharge, and other runoff that is allowed to commingle with the influent to the treatment system.
  - ii. The permittee takes all reasonable steps to minimize the overflow or excess discharge such as containment and reuse where practical.
  - iii. There is no discharge of leach water to Bingham Creek or the Jordan River.
  - iv. The permittee complies with the notification requirements of the permit. The storm exemption is designed to provide an affirmative defense to an enforcement action. Therefore, the operator has the burden of demonstrating to the appropriate authority that the above conditions have been met.

**6. *Compliance Schedule***

There is no Compliance Schedule included in this renewal permit.

**7. Acute/Chronic Whole Effluent Toxicity (WET) Testing.**

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- a. *Whole Effluent Testing – Acute Toxicity.* Effective immediately, the permittee shall quarterly conduct acute static renewal toxicity tests on a composite sample of the final effluent at Outfall 012. The sample shall be collected at the point of compliance before mixing with the receiving water.

Effective immediately, the permittee will sample monthly the calcium concentration of the 012 outfall. If the calcium concentration drops below 350 mg/L, a 96-hour acute toxicity test using *Mysidopsis bahia* (mysid shrimp) will be conducted to determine the appropriateness of this species for the 012 outfall.

The monitoring frequency for acute tests shall be quarterly unless a sample is found to be acutely toxic during a routine test. If that occurs, the monitoring frequency shall become weekly (See Part I.6.c., Accelerated Testing). Unless otherwise approved by the Director, samples shall be collected on a two-day progression; i.e., if the first sample is on a Monday, during the next sampling period, the sampling shall begin on a Wednesday, etc.

The static-renewal acute toxicity tests shall be conducted in general accordance with the procedures set out in the latest revision of Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms, Fifth Edition, October 2002, EPA-821-R-02-012 as per 40 CFR 136.3(a) TABLE IA-LIST OF APPROVED BIOLOGICAL METHODS. For Outfall 012, the permittee shall conduct the 96-hour static renewal toxicity test and a 7-day chronic static renewal toxicity test using *Cyprinodon variegatus*. Based on the Test Acceptability Criteria included in Utah Pollutant Discharge Elimination System (UPDES) Permit and Enforcement Guidance Document for Whole Effluent Toxicity Control (Biomonitoring) February, 2018, the Director may require acceptable variations in the test, i.e. temperature, carbon dioxide atmosphere, or any other acceptable variations in the testing procedure, as documented in the Fact Sheet Statement of Basis. If possible, dilution water should be taken from the receiving stream. A valid replacement test is required within the specified sampling period to remain in compliance.

Acute toxicity occurs when 50 percent or more mortality is observed for either species at any effluent concentration. Mortality in the control must simultaneously be 10 percent or less for the results to be considered valid. If more than 10 percent control mortality occurs, the test shall be repeated until satisfactory control mortality is achieved. The permittee shall meet all QA/QC requirements of the acute WET testing method listed in this Section of the permit.

If the permit contains a total residual chlorine limitation such that it may interfere with WET testing (>0.20 mg/L), the permittee may dechlorinate the sample in accordance with approved USEPA methods for WET testing the sample. If dechlorination is affecting the test, the permittee may collect the sample just before chlorination with Director approval.

Quarterly test results shall be reported along with the Discharge Monitoring Report (DMR) submitted for the end of the required reporting period (month, quarter or semi-annual) e.g., biomonitoring results for the calendar quarter ending March 31 shall be reported with the DMR due April 28, with the remaining biomonitoring reports submitted with DMRs due each July 28, October 28, and January 28. Monthly test results shall be reported along with the DMR submitted for that month. The format for the report shall be consistent with Appendix C of “Utah Pollutant Discharge



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Elimination System (UPDES) Permitting and Enforcement Guidance Document for Whole Effluent Toxicity (Biomonitoring), Utah Division of Water Quality, February 2018.

b. *Whole Effluent Testing – Chronic Toxicity.*

Chronic WET tests are considered an indicator for Class 5 waters (Great Salt Lake) because of uncertainties regarding the representativeness of the standard test species for Great Salt Lake. If a separate acute test is not conducted, the results of the acute duration portion of a chronic test are reported as specified in Part a. Whole Effluent Testing – Acute Toxicity. As an indicator, the chronic test results can demonstrate compliance with portions of the Narrative Standards (R317-2-7.2). However, the chronic WET test results alone do not demonstrate noncompliance with the Narrative Standards. As indicators, the chronic WET test results alone are not used for determining reasonable potential for toxicity or noncompliance with the permit.)

Effectively immediately, the permittee shall quarterly, conduct chronic static renewal toxicity tests on a composite sample of the final effluent at Outfall 012. The sample shall be collected at the point of compliance before mixing with the receiving water.

Three samples are required and samples shall be collected on Monday, Wednesday and Friday of each sampling period or collected on a two-day progression for each sampling period. This may be changed with Director approval. The chronic toxicity tests shall be conducted in general accordance with the procedures set out in the latest revision of *Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Water to Marine and Estuarine Organisms, Third Edition*, October 2002 EPA-821-R-02-014 as per 40 CFR 136.3(a) TABLE IA-LIST OF APPROVED BIOLOGICAL METHODS.

A multi dilution test consisting of at least five concentrations and a control is required at two dilutions below and two above the RWC, if possible. If test acceptability criteria are not met for control survival, growth, or reproduction, the test shall be considered invalid. A valid replacement test is required within the specified sampling period to remain in compliance with this permit. For Outfall 012, chronic toxicity occurs when, during a chronic toxicity test, the  $TU_c$  greater than 1.6. Toxic unit chronic ( $TU_c$ ) is the reciprocal of the effluent concentration that causes no observable effect on the test organisms by the end of the chronic exposure period and is calculated as  $100/LC_{25}$ . If a sample is found to be chronically toxic during a routine test, the monitoring frequency shall become biweekly (see *Part I.C.6.c. Accelerated Testing*).

If the permit contains a total residual chlorine limitation such that it may interfere with WET testing ( $>0.20$  mg/L), the permittee may dechlorinate the sample in accordance with the standard method. If dechlorination is negatively affecting the test, the permittee may collect the sample just before chlorination with Director approval.

Quarterly test results shall be reported along with the Discharge Monitoring Report (DMR) submitted for the end of the required reporting period (e.g., biomonitoring results for the calendar quarter ending March 31 shall be reported with the DMR due April 28, with the remaining biomonitoring reports submitted with DMRs due each July 28, October 28, and January 28). Monthly test results shall be reported along with the DMR submitted for that month. The format for the report shall be consistent with Appendix C of “Utah Pollutant Discharge Elimination System (UPDES) Permitting and Enforcement Guidance Document for Whole Effluent Toxicity, Utah Division of Water Quality, February, 2018.

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- c. *Accelerated Testing.* When whole effluent toxicity is indicated during routine WET testing as specified in this permit, the permittee shall notify the Director in writing within 5 days after becoming aware of the test result. The permittee shall perform an accelerated schedule of WET testing to establish whether a pattern of toxicity exists unless the permittee notifies the Director and commences a Preliminary Toxicity Investigation (PTI), Toxicity Identification Evaluation (TIE), or a Toxicity Reduction Evaluation (TRE). Accelerated testing or the PTI, TIE, or TRE will begin within fourteen days after the permittee becomes aware of the test result. Accelerated testing shall be conducted as specified under Part I. Pattern of Toxicity. If the accelerated testing demonstrates no pattern of toxicity, routine monitoring shall be resumed.
- d. *Pattern of Toxicity.* A pattern of toxicity is defined by the results of a series of up to five biomonitoring tests pursuant to the accelerated testing requirements using a full set of dilutions for acute (five plus the control) and five effluent dilutions for chronic (five plus the control), on the species found to be more sensitive, once every week for up to five consecutive weeks for acute and once every two weeks up to ten consecutive weeks for chronic.

If two (2) consecutive tests (not including the scheduled test which triggered the search for a pattern of toxicity) do not result in an exceedance of the acute or chronic toxicity criteria, no further accelerated testing will be required and no pattern of toxicity will be found to exist. The permittee will provide written verification to the Director within 5 days of determining no pattern of toxicity exists, and resume routine monitoring.

A pattern of toxicity may or may not be established based on the following:

WET tests should be run at least weekly (acute) or every two weeks (chronic) (note that only one test should be run at a time), for up to 5 tests, until either:

- 1) 2 consecutive tests fail, or 3 out of 5 tests fail, at which point a pattern of toxicity will have been identified, or
- 2) 2 consecutive tests pass, or 3 out of 5 tests pass, in which case no pattern of toxicity is identified.

e. *Preliminary Toxicity Investigation.*

- a. When a pattern of toxicity is detected the permittee will notify the Director in writing within 5 days and begin an evaluation of the possible causes of the toxicity. The permittee will have 15 working days from demonstration of the pattern of toxicity to complete an optional Preliminary Toxicity Investigation (PTI) and submit a written report of the results to the Director. The PTI may include, but is not limited to: additional chemical and biological monitoring, examination of pretreatment program records, examination of discharge monitoring reports, a thorough review of the testing protocol, evaluation of treatment processes and chemical use, inspection of material storage and transfer areas to determine if any spill may have occurred.
- b. If the PTI identifies a probable toxicant and/or a probable source of toxicity, the permittee shall submit, as part of its final results, written notification of that effect to the Director. Within thirty days of completing the PTI the permittee shall submit to the Director for approval a control program to control effluent toxicity and shall proceed to implement such plan in accordance with the Director's approval. The control program, as submitted to or revised by the Director, will be incorporated into the permit. After final implementation, the permittee must

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demonstrate successful removal of toxicity by passing a two species WET test as outlined in this permit. With adequate justification, the Director may extend these deadlines.

- c. If no probable explanation for toxicity is identified in the PTI, the permittee shall notify the Director as part of its final report, along with a schedule for conducting a Phase I Toxicity Reduction Evaluation (TRE) (see Part \_\_\_ Toxicity Reduction Evaluation
- d. If toxicity spontaneously disappears during the PTI, the permittee shall submit written notification to that effect to the Director, with supporting testing evidence.
- f. *Toxicity Reduction Evaluation (TRE)*. If a pattern of toxicity is detected the permittee shall initiate a TIE/TRE within 7 days unless the Director has accepted the decision to complete a PTI. With adequate justification, the Director may extend the 7-day deadline. The purpose of the TIE portion of a TRE will be to establish the cause of the toxicity, locate the source(s) of the toxicity, and the TRE will control or provide treatment for the toxicity.

A TRE may include but is not limited to one, all, or a combination of the following:

- a. Phase I – Toxicity Characterization
- b. Phase II – Toxicity Identification Procedures
- c. Phase III – Toxicity Control Procedures
- d. Any other appropriate procedures for toxicity source elimination and control.

If the TRE establishes that the toxicity cannot be immediately eliminated, the permittee shall submit a proposed compliance plan to the Director. The plan shall include the proposed approach to control toxicity and a proposed compliance schedule for achieving control. If the approach and schedule are acceptable to the Director, this permit may be reopened and modified.

If toxicity spontaneously disappears during the TIE/TRE, the permittee shall submit written notification to that effect to the Director.

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

- i. An alternative control program for compliance with the numerical requirements.
- ii. If necessary, as determined by the Director, provide a modified biomonitoring protocol which compensates for the pollutant(s) being controlled numerically.

This permit may be reopened and modified to incorporate any additional numerical limitations, a modified compliance schedule if judged necessary by the Director, and/or modified WET testing requirements without public notice.

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Failure to conduct an adequate TIE/TRE plan or program as described above, or the submittal of a plan or program judged inadequate by the Director, shall be considered a violation of this permit. After implementation of TIE/TRE plan, the permittee must demonstrate successful removal of toxicity by passing a two species WET test as outlined in this permit.

D. Reporting of Monitoring Results.

1. Reporting of Wastewater Monitoring Results

Monitoring results obtained during the previous month shall be summarized for each month and reported on NetDMR no later than the 28<sup>th</sup> day of the month following the completed reporting period. If no discharge occurs during the reporting period, "no discharge" shall be reported. Legible copies of these, and all other reports including whole effluent toxicity (WET) test reports required herein, shall be signed and certified in accordance with the requirements of *Signatory Requirements (see Part VII.G)*, and submitted by NetDMR.

2. The Annual Project Operating Report is due by February 1st of the following year.

3. The Selenium loading for Outfall 004, 008, and 012 will be reported in NetDMR with a combined total.

## II. PRETREATMENT REQUIREMENTS

- A. Discharge to POTW. Any wastewaters discharged to the sanitary sewer, either as a direct discharge or as a hauled waste, are subject to Federal, State and local pretreatment regulations. Pursuant to Section 307 of The Water Quality Act of 1987, the permittee shall comply with all applicable federal General Pretreatment Regulations promulgated at 40 CFR 403, the State Pretreatment Requirements at *UAC R317-8-8*, and any specific local discharge limitations developed by the Publicly Owned Treatment Works (POTW) accepting the wastewaters. At a minimum the discharge, into a POTW, must meet the requirements of Part II of the permit.
- B. Hazardous Waste Notification. The permittee must notify the POTW, the EPA Regional Waste Management Director, and the State hazardous waste authorities, in writing, if they discharge any substance into a POTW which if otherwise disposed of would be considered a hazardous waste under 40 CFR 261. This notification must include the name of the hazardous waste, the EPA hazardous waste number, and the type of discharge (continuous or batch).
- C. General and Specific Prohibitions.
1. General Prohibitions. The permittee may not introduce into a POTW any pollutant(s) which cause Pass Through or Interference. These general prohibitions and the specific prohibitions in paragraph 2. of this section apply to the introducing pollutants into a POTW whether or not the permittee is subject to other National Pretreatment Standards or any national, State, or local Pretreatment Requirements.
  2. Specific Prohibitions. The following pollutants shall not be introduced into a POTW:
    - a. Pollutants which create a fire or explosion hazard in the publicly owned treatment works (POTW), including, but not limited to, wastestreams with a closed cup flashpoint of less than 140°F (60°C);
    - b. Pollutants, which will cause corrosive structural damage to the POTW, but in no case, discharges with a pH lower than 5.0;
    - c. Solid or viscous pollutants in amounts which will cause obstruction to the flow in the POTW resulting in interference;
    - d. Any pollutant, including oxygen demanding pollutants (BOD, etc.), released in a discharge at such volume or strength as to cause interference in the POTW;
    - e. Heat in amounts, which will inhibit biological activity in the POTW, resulting in interference, but in no case, heat in such quantities that the influent to the sewage treatment works exceeds 104°F (40°C));
    - f. Petroleum oil, nonbiodegradable cutting oil, or products of mineral oil origin in amounts that will cause interference or pass through;
    - g. Pollutants, which result in the presence of toxic gases, vapor, or fumes within the POTW in a quantity that may cause worker health or safety problems;
    - h. Any trucked or hauled pollutants, except at discharge points designated by the POTW;  
or
    - i. Any pollutant that causes pass through or interference at the POTW.
    - j. Any specific pollutant which exceeds any local limitation established by the POTW.

**PART II**  
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**PRETREATMENT**

- D. Categorical Standards. In addition to the general and specific limitations expressed in *Part II. C.* of this section, applicable National Categorical Pretreatment Standards must be met by all industrial users discharging into a POTW. These standards are published in the federal regulations at *40 CFR 405 through 471*.
- E. Definitions. For this section the following definitions shall apply:
1. *Indirect Discharge* means the introduction of pollutants into a publicly-owned treatment works (POTW) from any non-domestic source regulated under section 307 (b), (c) or (d) of the CWA.
  2. *Interference* means a discharge which, alone or in conjunction with a discharge or discharges from other sources, both:
    - a. Inhibits or disrupts the POTW, its treatment processes or operations, or its sludge processes, use or disposal; and
    - b. Therefore is a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation) or of the prevention of sewage sludge use or disposal in compliance with the following statutory provisions and regulations or permits issued thereunder (or more stringent State or local regulations): Section 405 of the Clean Water Act, the Solid Waste Disposal Act (SWDA) (including title II, more commonly referred to as the Resource Conservation and Recovery Act (RCRA), and including State regulations contained in any State sludge management plan prepared pursuant to subtitle D of the SWDA), the Clean Air Act, the Toxic Substances Control Act, and the Marine Protection, Research and Sanctuaries Act.
  3. *Pass Through* means a Discharge which exits the POTW into waters of the United States in quantities or concentrations which, alone or in conjunction with a discharge or discharges from other sources, is a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation).
  4. *Publicly Owned Treatment Works or POTW* means a treatment works as defined by section 212 of the CWA, which is owned by a State or municipality (as defined by section 502(4) of the CWA). This definition includes any devices and systems used in the storage, treatment, recycling and reclamation of municipal sewage or industrial wastes of a liquid nature. It also includes sewers, pipes and other conveyances only if they convey wastewater to a POTW Treatment Plant. The term also means the municipality as defined in section 502(4) of the CWA, which has jurisdiction over the Indirect Discharges to and the discharges from such a treatment works.
  5. *Significant industrial user (SIU)* is defined as an industrial user discharging to a POTW that satisfies any of the following:
    - a. Has a process wastewater flow of 25,000 gallons or more per average work day;
    - b. Has a flow greater than five percent of the flow carried by the municipal system receiving the waste;
    - c. Is subject to Categorical Pretreatment Standards, or
    - d. Has a reasonable potential for adversely affecting the POTW's operation or for violating any pretreatment standard or requirement.
  6. *User or Industrial User (IU)* means a source of Indirect Discharge.

**III. BIOSOLIDS REQUIREMENTS**

A. Biosolids Treatment and Disposal. The authorization to dispose of biosolids provided under this permit is limited to those biosolids produced from the treatment works owned and operated by the permittee. The treatment methods and disposal practices are designated below.

1. Treatment

a. Biosolids are dewatered then transferred to a collocated landfill at the facility.

2. Description of Biosolids Disposal Method

a. Class A biosolids may be sold or given away to the public for lawn and garden use or land application.

b. Class B biosolids may be land applied for agriculture use or at reclamation sites at agronomic rates.

c. Biosolids may be disposed of in a landfill or transferred to another facility for treatment and/or disposal.

3. Changes in Treatment Systems and Disposal Practices.

a. Should the permittee change their disposal methods or the biosolids generation and handling processes of the plant, the permittee must notify the Director at least 30 days in advance if the process/method is specified in 40 CFR 503. This includes, but is not limited to, the permanent addition or removal of any biosolids treatment units (i.e., digesters, drying beds, belt presses, etc.) and/or any other change.

b. Should the permittee change their disposal methods or the biosolids generation and handling processes of the plant, the permittee must notify the Director at least 180 days in advance if the process/method is not specified in 40 CFR 503. This includes, but is not limited to, the permanent addition or removal of any biosolids treatment units (i.e., digesters, drying beds, belt presses, etc.) and/or any other change.

For any biosolids that are land filled, the requirements in *Section 2.12* of the latest version of the *EPA Region VIII Biosolids Management Handbook* must be followed

B. Specific Limitations and Monitoring Requirements. All biosolids generated by this facility to be sold or given away to the public shall meet the requirements of *Part III.B.1, 2, 3 and 4* listed below.

1. Metals Limitations. All biosolids sold or given away in a bag or similar container for application to lawns and home gardens must meet the metals limitations as described below. If these metals limitations are not met, the biosolids must be landfilled.

Pollutant Limits, (40 CFR Part 503.13(b)) Dry Mass Basis					
Heavy Metals	Table 1	Table 2	Table 3	Table 4	
	Ceiling Limits <sup>1</sup> , (mg/kg)	Conc. <sup>2</sup> , (mg/kg)	CPLR <sup>3</sup> , (mg/ha)	Pollutant Conc. Limits <sup>1</sup> , <sup>2</sup> , (mg/kg)	APLR <sup>4</sup> , (mg/ha-yr)
Total Arsenic	75	41	41	2.0	
Total Cadmium	85	39	39	1.9	

**PART III**  
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**BIOSOLIDS PERMIT NO. UTL-000051**

Pollutant Limits, (40 CFR Part 503.13(b)) Dry Mass Basis				
Heavy Metals	Table 1	Table 2	Table 3	Table 4
	Ceiling Conc. Limits <sup>1, 2</sup> (mg/kg)	CPLR <sup>3</sup> (mg/ha)	Pollutant Conc. Limits <sup>1, 2</sup> (mg/kg)	APLR <sup>4</sup> (mg/ha-yr)
Total Copper	4300	1500	1500	75
Total Lead	840	300	300	15
Total Mercury	57	17	17	0.85
Total Molybdenum	75	N/A	N/A	N/A
Total Nickel	420	420	420	21
Total Selenium	100	100	100	5.0
Total Zinc	7500	2800	2800	140
1, The limitations represent the maximum allowable levels of heavy metals in any biosolids intended for land application.				
2, These limitations represent the maximum allowable levels of heavy metals based on an average of all samples taken during a 30-day period.				
3, CPLR - Cumulative Pollutant Loading Rate				
4, APLR – Annual Pollutant Loading Rate				

2. Pathogen Limitations. All biosolids sold or given away in a bag or a similar container for application to lawns and home gardens must meet the pathogen limitations for Class A. Land applied biosolids must meet the pathogen limitations for Class B as described below. If the pathogen limitations are not met, the biosolids must be landfilled.

a. Class A biosolids shall meet one of the pathogen measurement requirements in the following Pathogen Control Class table or shall meet the requirements for a Process to Further Reduce Pathogens as defined in *40 CFR Part 503.32(a) Sewage Sludge – Class A*.

(1) Kennecott does not intend to give away biosolids for land application on home lawns or gardens, and will therefore not be required to meet PFRP.

b. Class B biosolids shall meet the pathogen measurement requirements in the following Pathogen Control Class table or shall meet the requirements for a Process to Significantly Reduce Pathogens as defined in *40 CFR Part 503.32(b) Sewage Sludge – Class B*. Kennecott does not intend to land apply the biosolids and will therefore not be required to meet PSRP.

In addition, the permittee shall comply with all applicable site restrictions listed below (*40 CFR Part 503.32, (b), (5)*):

(1) Food crops with harvested parts that touch the biosolids/soil mixture and are totally above the land surface shall not be harvested for 14 months after application.

(2) Food crops with harvested parts below the land surface shall not be harvested for 20 months after application if the biosolids remains on the land surface for four months or more prior to incorporation into the soil.

(3) Food crops with harvested parts below the surface of the land shall not be harvested for 38 months after application of sewage sludge when the sewage



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sludge remains on the land surface for less than four months prior to incorporation into the soil.

- (4) Food crops, feed crops, and fiber crops shall not be harvested from the land for 30 days after application.
- (5) Animals shall not be allowed to graze on the land for 30 days after application.
- (6) Turf grown on land where biosolids is applied shall not be harvested for one year after application if the harvested turf is placed on either land with a high potential for public exposure or a lawn.
- (7) Public access to land with a high potential for public exposure shall be restricted for one year after application.
- (8) Public access to land with a low potential for public exposure shall be restricted for 30 days after application.
- (9) The sludge or the application of the sludge shall not cause or contribute to the harm of a threatened or endangered species or result in the destruction or adverse modification of critical habitat of a threatened or endangered species after application.

Pathogen Control Class	
503.32 (a)(1) - (5), (7), -(8), Class A	503.32 (b)(1) - (5), Class B
B Salmonella species –less than three (3) MPN per four (4) grams total solids (DWB) or Fecal Coliforms – less than 1,000 MPN per gram total solids (DWB).	Fecal Coliforms – less than 2,000,000 MPN or CFU per gram total solids (DWB).
503.32 (a)(6) Class A—Alternative 4	
B Salmonella species –less than three (3) MPN per four (4) grams total solids (DWB) or less than 1,000 MPN Fecal Coliforms per gram total solids (DWB), And - Enteric viruses –less than one (1) plaque forming unit per four (4) grams total solids (DWB) And - Viable helminth ova –less than one (1) per four (4) grams total solids (DWB)	
MPN – Most Probable Number	
DWB – Dry Weight Basis.	
CFU – Colony Forming Units	

3. Vector Attraction Reduction Requirements.

- a. The permittee will meet vector attraction reduction through use of one of the methods listed in 40 CFR 503.33. Facility is meeting the requirements though the following methods.
  - (1) Kennecott dewateres the biosolids and bags them, then transfers them to the onsite landfill for disposal

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If the permittee intends to use another one of the alternatives, the Director and the EPA must be informed at least thirty (30) days prior to its use. This change may be made without additional public comment.

4. Self-Monitoring Requirements.

- a. At a minimum, upon the effective date of this permit, all chemical pollutants, pathogens and applicable vector attraction reduction requirements shall be monitored according to *40 CFR 503.16(1)(a)*.

Minimum Frequency of Monitoring (40 CFR Part 503.16, 503.26. and 503.46)		
Amount of Biosolids Disposed Per Year		Monitoring Frequency
Dry US Tons	Dry Metric Tons	Per Year or Batch
> 0 to < 320	> 0 to < 290 <sup>*1</sup>	Once Per Year or Batch
> 320 to < 1650	> 290 to < 1,500	Once a Quarter or Four Times
> 1,650 to < 16,500	> 1,500 to < 15,000	Bi-Monthly or Six Times
> 16,500	> 15,000	Monthly or Twelve Times

\*1. Kennecott has produced on average 1 DMT of biosolids per year, therefore they would sample once a year. Kennecott disposes of all biosolids they produce in a landfill, and is not required to sample for biosolids requirements.

- b. Sample collection, preservation and analysis shall be performed in a manner consistent with the requirements of *40 CRF 503* and/or other criteria specific to this permit. A metals analysis is to be performed using *Method SW 846* with *Method 3050* used for digestion. For the digestion procedure, an amount of biosolids equivalent to a dry weight of one gram shall be used. The methods are also described in the latest version of the *Region VIII Biosolids Management Handbook*.
- c. The Director may request additional monitoring for specific pollutants derived from biosolids if the data shows a potential for concern.
- d. After two (2) years of monitoring at the frequency specified, the permittee may request that the Director reduce the sampling frequency for the heavy metals. The frequency cannot be reduced to less than once per year for biosolids that are sold or given away to the public for any parameter. The frequency also cannot be reduced for any of the pathogen or vector attraction reduction requirements listed in this permit.

C. Management Practices of Biosolids.

1. Biosolids Distribution Information

- a. For biosolids that are sold or given away, an information sheet shall be provided to the person who receives the biosolids. The label or information sheet shall contain:
- (1) The name and address of the person who prepared the biosolids for a sale or to be given away.
  - (2) A statement that prohibits the application of the biosolids to the land except in accordance with the instructions on the label or information sheet.

2. Biosolids Application Site Storage

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- a. For biosolids or material derived from biosolids that are stored in piles for one year or longer, measures shall be taken to ensure that erosion (whether by wind or water) does not occur. However, best management practices should also be used for piles used for biosolids treatment. If a treatment pile is considered to have caused a problem, best management practices could be added as a requirement in the next permit renewal

3. Land Application Practices

- a. The permittee shall operate and maintain the land application site operations in accordance with the following requirements:
  - (1) The permittee shall provide to the Director and the EPA within 90 days of the effective date of this permit a land application plan.
  - (2) Application of biosolids shall be conducted in a manner that will not contaminate the groundwater or impair the use classification for that water underlying the sites.
  - (3) Application of biosolids shall be conducted in a manner that will not cause a violation of any receiving water quality standard from discharges of surface runoff from the land application sites. Biosolids shall not be applied to land 10 meters or less from waters of the United States (as defined in 40 CFR 122.2).
  - (4) No person shall apply biosolids for beneficial use to frozen, ice-covered, or snow-covered land where the slope of such land is greater than three percent and is less than or equal to six percent unless one of the following requirements is met:
    - (a) there is 80 percent vegetative ground cover; or,
    - (b) approval has been obtained based upon a plan demonstrating adequate runoff containment measures.
  - (5) Application of biosolids is prohibited to frozen, ice-covered, or snow-covered sites where the slope of the site exceeds six percent.
  - (6) Agronomic Rate
    - (a) Application of biosolids shall be conducted in a manner that does not exceed the agronomic rate for available nitrogen of the crops grown on the site. At a minimum, the permittee is required to follow the methods for calculating agronomic rate outlined in the latest version of the *Region VIII Biosolids Management Handbook* (other methods may be approved by the Director). The treatment plant shall provide written notification to the applier of the biosolids of the concentration of total nitrogen (as N on a dry weight basis) in the biosolids. Written permission from the Director is required to exceed the agronomic rate.
    - (b) The permittee may request the limits of *Part III, C, 6* be modified if different limits would be justified based on local conditions. The limits are required to be developed in cooperation with the local agricultural extension office or university.
    - (c) Deep soil monitoring for nitrate-nitrogen is required for all land application sites (does not apply to sites where biosolids are applied less than once every

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five years). A minimum of six samples for each 320 (or less) acre area is to be collected. These samples are to be collected down to either a 5-foot depth, or the confining layer, whichever is shallower (sample at 1 foot, 2-foot, 3-foot, 4 foot and 5-foot intervals). Each of these one-foot interval samples shall be analyzed for nitrate-nitrogen. In addition to the one-foot interval samples, a composite sample of the 5-foot intervals shall be taken, and analyzed for nitrate-nitrogen as well. Samples are required to be taken once every five years for non-irrigated sites that receive more than 18 inches of precipitation annually or for irrigated sites

- (7) Biosolids shall not be applied to any site area with standing surface water. If the annual high groundwater level is known or suspected to be within five feet of the surface, additional deep soil monitoring for nitrate-nitrogen as described in *Part III.C.(6),(c)*. is to be performed. At a minimum, this additional monitoring will involve a collection of more samples in the affected area and possibly more frequent sampling. The exact number of samples to be collected will be outlined in a deep soil monitoring plan to be submitted to the Director and the EPA within 90 days of the effective date of this permit. The plan is subject to approval by the Director.
- (8) The specified cover crop shall be planted during the next available planting season. If this does not occur, the permittee shall notify the Director in writing. Additional restrictions may be placed on the application of the biosolids on that site on a case-by-case basis to control nitrate movement. Deep soil monitoring may be increased under the discretion of the Director.
- (9) When weather and or soil conditions prevent adherence to the biosolids application procedure, biosolids shall not be applied on the site.
- (10) For biosolids that are sold or given away, an information sheet shall be provided to the person who receives the biosolids. The label or information sheet shall contain:
  - (a) The name and address of the person who prepared the biosolids for sale or give away for application to the land.
  - (b) A statement that prohibits the application of the biosolids to the land except in accordance with the instructions on the label or information sheet.
  - (c) The annual whole biosolids application rate for the biosolids that do not cause the metals loading rates in Tables 1, 2, and 3 (*Part III.B.1.*) to be exceeded.
- (11) Biosolids subject to the cumulative pollutant loading rates in Table 2 (*Part III.B.1.*) shall not be applied to agricultural land, forest, a public contact site, or a reclamation site if any of the cumulative pollutant loading rates in Table 2 have been reached.
- (12) If the treatment plant applies the biosolids, it shall provide the owner or leaseholder of the land on which the biosolids are applied notice and necessary information to comply with the requirements in this permit.
- (13) The permittee shall inspect the application of the biosolids to active sites to prevent malfunctions and deterioration, operator errors and discharges, which

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may cause or lead to the release of biosolids to the environment or a threat to human health. The permittee must conduct these inspections often enough to identify problems in time to correct them before they harm human health or the environment. The permittee shall keep an inspection log or summary including at least the date and time of inspection, the printed name and the handwritten signature of the inspector, a notation of observations made and the date and nature of any repairs or corrective action.

- D. Special Conditions on Biosolids Storage. Permanent storage of biosolids is prohibited. Biosolids shall not be temporarily stored for more than two (2) years. Written permission to store biosolids for more than two years must be obtained from the Director. Storage of biosolids for more than two years will be allowed only if it is determined that significant treatment is occurring.
- E. Representative Sampling. Biosolids samples used to measure compliance with *Part III* of this Permit shall be collected at locations representative of the quality of biosolids generated at the treatment works and immediately prior to land application.
- F. Reporting of Monitoring Results.
1. Biosolids. The permittee shall provide the results of all monitoring performed in accordance with Part III.B, and information on management practices, biosolids treatment, site restrictions and certifications shall be provided no later than February 19 of each year. Each report is for the previous calendar year. If no biosolids were sold or given away during the reporting period, "no biosolids were sold or given away" shall be reported. Legible copies of these, and all other reports required herein, shall be signed and certified in accordance with the Signatory Requirements (see Part VII.G), and submitted to the Utah Division of Water Quality and the EPA by the NeT-Biosolids system through the EPA Central Data Exchange (CDX) System
- G. Additional Record Keeping Requirements Specific to Biosolids.
1. Unless otherwise required by the Director, **the permittee is not required to keep records** on compost products if the permittee prepared them from biosolids that meet the limits in Table 3 (*Part III.B.1*), the Class A pathogen requirements in *Part III.B.2* and the vector attraction reduction requirements in *Part III.B.3*. The Director may notify the permittee that additional record keeping is required if it is determined to be significant to protecting public health and the environment.
  2. **The permittee is required** to keep the following information for at least 5 years:
    - a. Concentration of each heavy metal in Table 3 (*Part III.B.1*).
    - b. A description of how the pathogen reduction requirements in *Part III.B.2* were met.
    - c. A description of how the vector attraction reduction requirements in *Part III.B.3* were met.
    - d. A description of how the management practices in *Part III.C* were met (if necessary).
    - e. The following certification statement:  
"I certify under the penalty of law, that the heavy metals requirements in *Part III.B.1*, the pathogen requirements in *Part III.B.2*, the vector attraction requirements in *Part*

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*III.B.3*, the management practices in *Part III.C*. This determination has been made under my direction and supervision in accordance with the system designed to assure that qualified personnel properly gather and evaluate the information used to determine that the pathogen requirements, the vector attraction reduction requirements and the management practices have been met. I am aware that there are significant penalties for false certification including the possibility of imprisonment."

3. The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit and records of all data used to complete the application for this permit for the life of the permit. Data collected on site, copies of Biosolids Report forms, and a copy of this UPDES biosolids-only permit must be maintained on site during the duration of activity at the permitted location.

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**IV. STORM WATER REQUIREMENTS.**

- A. Industrial Storm Water Permit. Based on the type of industrial activities occurring at the facility, the permittee is required to maintain separate coverage or an appropriate exclusion under the Multi-Sector General Permit (MSGP) for Storm Water Discharges Associated with Industrial Activities (UTR000000). If the facility is not already covered, the permittee has 30 days from when this permit is issued to submit the appropriate Notice of Intent (NOI) for the MSGP or exclusion documentation.

Permit coverage under the Multi Sector General Permit (MSGP) for Storm Water Discharges from Industrial Activities is required based on the Standard Industrial Classification (SIC) code for the facility and the types of industrial activities occurring. If the facility is not already covered, it has 30 days from when this permit is issued to submit the appropriate Notice of Intent (NOI) for the MSGP or exclusion documentation. Previously storm water discharge requirements and coverage were combined in this individual permit. These have been separated to provide consistency among permittees, electronic reporting for storm water discharge monitoring reports, and increase flexibility to changing site conditions.

MSGP coverage applies to construction activities within active mining areas including all support facilities. Storm water discharges from earth-disturbing activities conducted prior to active mining activities are considered construction activities and must be covered under the Storm Water Construction General Permit. Mine-related facilities upgradient and within the collection zone of the storm water capture systems do not require separate storm water permit coverage and are subject to the discharge requirements of this permit.

- B. Construction Storm Water Permit. Any construction at the facility that disturbs an acre or more of land, including less than an acre if it is part of a common plan of development or sale, is required to obtain coverage under the UPDES Construction General Storm Water Permit (UTRC00000). Permit coverage must be obtained prior to land disturbance. If the site qualifies, a Low Erosivity Waiver (LEW) Certification may be submitted instead of permit coverage.

**V. MONITORING, RECORDING & GENERAL REPORTING REQUIREMENTS**

- A. Representative Sampling. Samples taken in compliance with the monitoring requirements established under *Part I* shall be collected from the effluent stream prior to discharge into the receiving waters. Samples and measurements shall be representative of the volume and nature of the monitored discharge. Samples of biosolids shall be collected at a location representative of the quality of biosolids immediately prior to the use-disposal practice.
- B. Monitoring Procedures. Monitoring must be conducted according to test procedures approved under *UAC R317-2-10 and 40CFR Part 503*, utilizing sufficiently sensitive test methods unless other test procedures have been specified in this permit.
- C. Penalties for Tampering. The *Act* provides that any person who falsifies, tampers with, or knowingly renders inaccurate, any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than six months per violation, or by both.
- D. Compliance Schedules. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any Compliance Schedule of this permit shall be submitted no later than 14 days following each schedule date.
- E. Additional Monitoring by the Permittee. If the permittee monitors any parameter more frequently than required by this permit, using test procedures approved under *UAC R317-2-10 and 40 CFR 503* or as specified in this permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR or the Biosolids Report Form. Such increased frequency shall also be indicated. Only those parameters required by the permit need to be reported.
- F. Records Contents. Records of monitoring information shall include:
1. The date, exact place, and time of sampling or measurements;
  2. The individual(s) who performed the sampling or measurements;
  3. The date(s) and time(s) analyses were performed;
  4. The individual(s) who performed the analyses;
  5. The analytical techniques or methods used; and,
  6. The results of such analyses.
- G. Retention of Records. The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least five years from the date of the sample, measurement, report or application. This period may be extended by request of the Director at any time. A copy of this UPDES permit must be maintained on site during the duration of activity at the permitted location
- H. Twenty-four Hour Notice of Noncompliance Reporting.
1. The permittee shall (orally) report any noncompliance including transportation accidents, spills, and uncontrolled runoff from biosolids transfer or land application sites which may seriously endanger health or environment, as soon as possible, but no later than twenty-four (24) hours from the time the permittee first became aware of circumstances. The report shall be made to the Division of Water Quality, (801) 536-4300, or 24-hour answering service (801) 536-4123.



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2. The following occurrences of noncompliance shall be reported by telephone (801) 536-4300 as soon as possible but no later than 24 hours from the time the permittee becomes aware of the circumstances:
    - a. Any noncompliance which may endanger health or the environment;
    - b. Any unanticipated bypass, which exceeds any effluent limitation in the permit (See *Part VI.G, Bypass of Treatment Facilities.*);
    - c. Any upset which exceeds any effluent limitation in the permit (See *Part VI.H, Upset Conditions.*);
    - d. Violation of a daily discharge limitation for any of the pollutants listed in the permit; or,
    - e. Violation of any of the Table 3 metals limits, the pathogen limits, the vector attraction reduction limits or the management practices for biosolids that have been sold or given away.
  3. A written submission shall also be provided within five days of the time that the permittee becomes aware of the circumstances. The written submission shall contain:
    - a. A description of the noncompliance and its cause;
    - b. The period of noncompliance, including exact dates and times;
    - c. The estimated time noncompliance is expected to continue if it has not been corrected;
    - d. Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance; and,
    - e. Steps taken, if any, to mitigate the adverse impacts on the environment and human health during the noncompliance period.
  4. The Director may waive the written report on a case-by-case basis if the oral report has been received within 24 hours by the Division of Water Quality, (801) 536-4300.
  5. Reports shall be submitted to the addresses in *Part I, Reporting of Monitoring Results.*
- I. Other Noncompliance Reporting. Instances of noncompliance not required to be reported within 24 hours shall be reported at the time that monitoring reports for *Part I* are submitted. The reports shall contain the information listed in *Part V.H.3*
- J. Inspection and Entry The permittee shall allow the Director, or an authorized representative, upon the presentation of credentials and other documents as may be required by law, to:
1. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of the permit;
  2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
  3. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit, including but

not limited to, biosolids treatment, collection, storage facilities or area, transport vehicles and containers, and land application sites;

4. Sample or monitor at reasonable times, for the purpose of assuring permit compliance or as otherwise authorized by the *Act*, any substances or parameters at any location, including, but not limited to, digested biosolids before dewatering, dewatered biosolids, biosolids transfer or staging areas, any ground or surface waters at the land application sites or biosolids, soils, or vegetation on the land application sites; and,
5. The permittee shall make the necessary arrangements with the landowner or leaseholder to obtain permission or clearance, the Director, or authorized representative, upon the presentation of credentials and other documents as may be required by law, will be permitted to enter without delay for the purposes of performing their responsibilities.

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## VI. COMPLIANCE RESPONSIBILITIES

- A. Duty to Comply. The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application. The permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity, which may result in noncompliance with permit requirements.
- B. Penalties for Violations of Permit Conditions. The *Act* provides that any person who violates a permit condition implementing provisions of the *Act* is subject to a civil penalty not to exceed \$10,000 per day of such violation. Any person who willfully or negligently violates permit conditions or the *Act* is subject to a fine not exceeding \$25,000 per day of violation. Any person convicted under *UCA 19-5-115(2)* a second time shall be punished by a fine not exceeding \$50,000 per day. Except as provided at *Part VI.G, Bypass of Treatment Facilities* and *Part VI.H, Upset Conditions*, nothing in this permit shall be construed to relieve the permittee of the civil or criminal penalties for noncompliance.
- C. Need to Halt or Reduce Activity not a Defense. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.
- D. Duty to Mitigate. The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit, which has a reasonable likelihood of adversely affecting human health or the environment. The permittee shall also take all reasonable steps to minimize or prevent any land application in violation of this permit.
- E. Proper Operation and Maintenance. The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also include adequate laboratory controls and quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems, which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit.
- F. Removed Substances. Collected screening, grit, solids, sludge, or other pollutants removed in the course of treatment shall be disposed of in such a manner so as to prevent any pollutant from entering any waters of the state or creating a health hazard. Sludge/digester supernatant and filter backwash shall not directly enter either the final effluent or waters of the state by any other direct route.
- G. Bypass of Treatment Facilities.
1. Bypass Not Exceeding Limitations. The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to paragraph 2 and 3 of this section.
  2. Prohibition of Bypass.
    - a. Bypass is prohibited, and the Director may take enforcement action against a permittee for bypass, unless:

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- (1) Bypass was unavoidable to prevent loss of human life, personal injury, or severe property damage;
  - (2) 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 backup equipment should have been installed in the exercise of reasonable engineering judgement to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance, and
  - (3) The permittee submitted notices as required under *Part VI.G.3.*
- b. The Director may approve an anticipated bypass, after considering its adverse effects, if the Director determines that it will meet the three conditions listed in *Parts VI.G.2.a (1), (2) and (3).*
3. Notice.
- a. *Anticipated bypass.* Except as provided above in *Part VI.G.2* and below in *Part VI.G.3.b*, if the permittee knows in advance of the need for a bypass, it shall submit prior notice, at least ninety days before the date of bypass. The prior notice shall include the following unless otherwise waived by the Director:
    - (1) Evaluation of alternative to bypass, including cost-benefit analysis containing an assessment of anticipated resource damages;
    - (2) A specific bypass plan describing the work to be performed including scheduled dates and times. The permittee must notify the Director in advance of any changes to the bypass schedule;
    - (3) Description of specific measures to be taken to minimize environmental and public health impacts;
    - (4) A notification plan sufficient to alert all downstream users, the public and others reasonably expected to be impacted by the bypass;
    - (5) A water quality assessment plan to include sufficient monitoring of the receiving water before, during and following the bypass to enable evaluation of public health risks and environmental impacts; and,
    - (6) Any additional information requested by the Director.
  - b. *Emergency Bypass.* Where ninety days advance notice is not possible, the permittee must notify the Director, and the Director of the Department of Natural Resources, as soon as it becomes aware of the need to bypass and provide to the Director the information in *Part VI.G.3.a.(1) through (6)* to the extent practicable.
  - c. *Unanticipated bypass.* The permittee shall submit notice of an unanticipated bypass to the Director as required under *Part V.H*, Twenty-Four Hour Reporting. The permittee shall also immediately notify the Director of the Department of Natural Resources, the public and downstream users and shall implement measures to minimize impacts to public health and environment to the extent practicable.

H. Upset Conditions.

1. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with technology-based permit effluent limitations if the requirements of paragraph 2 of this section are met. Director's administrative determination regarding a claim of upset cannot be judiciously challenged by the permittee until such time as an action is initiated for noncompliance.
  2. Conditions necessary for a demonstration of upset. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:
    - a. An upset occurred and that the permittee can identify the cause(s) of the upset;
    - b. The permitted facility was at the time being properly operated;
    - c. The permittee submitted notice of the upset as required under *Part V.H, Twenty-four Hour Notice of Noncompliance Reporting*; and,
    - d. The permittee complied with any remedial measures required under *Part VI.D, Duty to Mitigate*.
  3. Burden of proof. In any enforcement proceeding, the permittee seeking to establish the occurrence of an upset has the burden of proof.
- I. Toxic Pollutants. The permittee shall comply with effluent standards or prohibitions established under Section 307(a) of *The Water Quality Act of 1987* for toxic pollutants within the time provided in the regulations that establish those standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement.
- J. Changes in Discharge of Toxic Substances. Notification shall be provided to the Executive Secretary as soon as the permittee knows of, or has reason to believe:
1. That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":
    - a. One hundred micrograms per liter (100 ug/L);
    - b. Two hundred micrograms per liter (200 ug/L) for acrolein and acrylonitrile; five hundred micrograms per liter (500 ug/L) for 2,4-dinitrophenol and for 2-methyl-4, 6-dinitrophenol; and one milligram per liter (1 mg/L) for antimony;
    - c. Five (5) times the maximum concentration value reported for that pollutant in the permit application in accordance with *UAC R317-8-3.4(7)* or (10); or,
    - d. The level established by the Executive Secretary in accordance with *UAC R317-8-4.2(6)*.
  2. That any activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":

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- a. Five hundred micrograms per liter (500 ug/L);
- b. One milligram per liter (1 mg/L) for antimony;
- c. Ten (10) times the maximum concentration value reported for that pollutant in the permit application in accordance with *UAC R317-8-3.4(9)*; or,
- d. The level established by the Executive Secretary in accordance with *UAC R317-8-4.2(6)*.

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**VII. GENERAL REQUIREMENTS**

- A. Planned Changes. The permittee shall give notice to the Director as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when the alteration or addition could significantly change the nature or increase the quantity of parameters discharged or pollutant sold or given away. This notification applies to pollutants, which are not subject to effluent limitations in the permit. In addition, if there are any planned substantial changes to the permittee's existing sludge facilities or their manner of operation or to current sludge management practices of storage and disposal, the permittee shall give notice to the Director of any planned changes at least 30 days prior to their implementation.
- B. Anticipated Noncompliance. The permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity, which may result in noncompliance with permit requirements.
- C. Permit Actions. This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.
- D. Duty to Reapply. If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee shall apply for and obtain a new permit. The application shall be submitted at least 180 days before the expiration date of this permit.
- E. Duty to Provide Information. The permittee shall furnish to the Director, within a reasonable time, any information which the Director 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 Director, upon request, copies of records required to be kept by this permit.
- F. Other Information. When the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or any report to the Director, it shall promptly submit such facts or information.
- G. Signatory Requirements. All applications, reports or information submitted to the Director shall be signed and certified.
1. All permit applications shall be signed by either a principal executive officer or ranking elected official.
  2. All reports required by the permit and other information requested by the Director shall be signed by a person described above or by a duly authorized representative of that person. A person is a duly authorized representative only if:
    - a. The authorization is made in writing by a person described above and submitted to the Director, and,
    - b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility, such as the position of plant manager, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters. A duly authorized

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representative may thus be either a named individual or any individual occupying a named position.

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

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

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

H. Penalties for Falsification of Reports. The *Act* provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance shall, upon conviction be punished by a fine of not more than \$10,000.00 per violation, or by imprisonment for not more than six months per violation, or by both.

I. Availability of Reports. Except for data determined to be confidential under *UAC R317-8-3.2*, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the office of Director. As required by the *Act*, permit applications, permits and effluent data shall not be considered confidential.

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

K. Property Rights. The issuance of this permit does not convey any property rights of any sort, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations.

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

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

1. The current permittee notifies the Director at least 20 days in advance of the proposed transfer date;



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2. 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,
  3. The Director does not notify the existing permittee and the proposed new permittee of his or her intent to modify, or revoke and reissue the permit. If this notice is not received, the transfer is effective on the date specified in the agreement mentioned in paragraph 2 above.
- N. State or Federal 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 preserved by *UCA 19-5-117* and *Section 510* of the *Act* or any applicable Federal or State transportation regulations, such as but not limited to the Department of Transportation regulations.
- O. Water Quality - Reopener Provision. This permit may be reopened and modified (following proper administrative procedures) to include the appropriate effluent limitations and compliance schedule, if necessary, if one or more of the following events occurs:
1. Water Quality Standards for the receiving water(s) to which the permittee discharges are modified in such a manner as to require different effluent limits than contained in this permit.
  2. A final wasteload allocation is developed and approved by the State and/or EPA for incorporation in this permit.
  3. Revisions to the current CWA § 208 areawide treatment management plans or promulgations/revisions to TMDLs (40 CFR 130.7) approved by the EPA and adopted by DWQ which calls for different effluent limitations than contained in this permit.
- P. Biosolids – Reopener Provision. This permit may be reopened and modified (following proper administrative procedures) to include the appropriate biosolids limitations (and compliance schedule, if necessary), management practices, other appropriate requirements to protect public health and the environment, or if there have been substantial changes (or such changes are planned) in biosolids use or disposal practices; applicable management practices or numerical limitations for pollutants in biosolids have been promulgated which are more stringent than the requirements in this permit; and/or it has been determined that the permittees biosolids use or land application practices do not comply with existing applicable state or federal regulations.
- Q. Toxicity Limitation - Reopener Provision. Use the following paragraph if WET testing is required at the facility:
- This permit may be reopened and modified (following proper administrative procedures) to include, whole effluent toxicity (WET) limitations, a compliance date, a compliance schedule, a change in the whole effluent toxicity (biomonitoring) protocol, additional or modified numerical limitations, or any other conditions related to the control of toxicants if one or more of the following events occur;
1. Toxicity is detected, as per *Part I*. of this permit, during the duration of this permit.

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2. The TRE results indicate that the toxicant(s) represent pollutant(s) or pollutant parameter(s) that may be controlled with specific numerical limits, and the Director concludes that numerical controls are appropriate.
3. Following the implementation of numerical control(s) of toxicant(s), the Director agrees that a modified biomonitoring protocol is necessary to compensate for those toxicants that are controlled numerically.
4. The TRE reveals other unique conditions or characteristics, which in the opinion of the permit issuing authority justify the incorporation of unanticipated special conditions in the permit.

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VIII. DEFINITIONS

A. Wastewater.

1. The "7-day (and weekly) average", other than for *E. coli* bacteria, fecal coliform bacteria, and total coliform bacteria, is the arithmetic average of all samples collected during a consecutive 7-day period or calendar week, whichever is applicable. Geometric means shall be calculated for *E. coli* bacteria, fecal coliform bacteria, and total coliform bacteria. The 7-day and weekly averages are applicable only to those effluent characteristics for which there are 7-day average effluent limitations. The calendar week, which begins on Sunday and ends on Saturday, shall be used for purposes of reporting self-monitoring data on discharge monitoring report forms. Weekly averages shall be calculated for all calendar weeks with Saturdays in the month. If a calendar week overlaps two months (i.e., the Sunday is in one month and the Saturday in the following month), the weekly average calculated for that calendar week shall be included in the data for the month that contains Saturday.
2. The "30-day (and monthly) average," other than for *E. coli* bacteria, fecal coliform bacteria and total coliform bacteria, is the arithmetic average of all samples collected during a consecutive 30-day period or calendar month, whichever is applicable. Geometric means shall be calculated for *E. coli* bacteria, fecal coliform bacteria and total coliform bacteria. The calendar month shall be used for purposes of reporting self-monitoring data on discharge monitoring report forms.
3. "Act," means the *Utah Water Quality Act*.
4. "Acute toxicity" occurs when 50 percent or more mortality is observed for either test species at any effluent concentration (lethal concentration or "LC<sub>50</sub>").
5. "Bypass," means the diversion of waste streams from any portion of a treatment facility.
6. "Chronic toxicity" occurs when the IC<sub>25</sub> < XX% effluent. The XX% effluent is the concentration of the effluent in the receiving water, at the end of the mixing zone expressed as per cent effluent.
7. "IC<sub>25</sub>" is the concentration of toxicant (given in % effluent) that would cause a 25% reduction in mean young per female, or a 25% reduction in overall growth for the test population.
8. "Composite Samples" shall be flow proportioned. The composite sample shall, as a minimum, contain at least four (4) samples collected over the compositing period. Unless otherwise specified, the time between the collection of the first sample and the last sample shall not be less than six (6) hours nor more than 24 hours. Acceptable methods for preparation of composite samples are as follows:
  - a. Constant time interval between samples, sample volume proportional to flow rate at time of sampling;
  - b. Constant time interval between samples, sample volume proportional to total flow (volume) since last sample. For the first sample, the flow rate at the time the sample was collected may be used;

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- c. Constant sample volume, time interval between samples proportional to flow (i.e., sample taken every “X” gallons of flow); and,
  - d. Continuous sample volume, with sample collection rate proportional to flow rate.
9. “CWA” means *The Federal Water Pollution Control Act*, as amended, by *The Clean Water Act of 1987*.
  10. “Daily Maximum” (Daily Max.) is the maximum value allowable in any single sample or instantaneous measurement.
  11. “EPA,” means the United States Environmental Protection Agency.
  12. “Director,” means Director of the Division of Water Quality.
  13. A “grab” sample, for monitoring requirements, is defined as a single “dip and take” sample collected at a representative point in the discharge stream.
  14. An “instantaneous” measurement, for monitoring requirements, is defined as a single reading, observation, or measurement.
  15. “Severe Property Damage,” means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.
  16. “Upset,” means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventative maintenance, or careless or improper operation.

**B. Biosolids.**

1. “Biosolids,” means any material or material derived from sewage solids that have been biologically treated.
2. “Dry Weight-Basis,” means 100 percent solids (i.e. zero percent moisture).
3. “Land Application” is the spraying or spreading of biosolids onto the land surface; the injection of biosolids below the land surface; or the incorporation of biosolids into the land so that the biosolids can either condition the soil or fertilize crops or vegetation grown in the soil. Land application includes distribution and marketing (i.e. the selling or giving away of the biosolids).
4. “Pathogen,” means an organism that is capable of producing an infection or disease in a susceptible host.

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5. "Pollutant" for the purposes of this permit is an organic substance, an inorganic substance, a combination of organic and inorganic substances, or pathogenic organisms that after discharge and upon exposure, ingestion, inhalation, or assimilation into an organism either directly from the environment or indirectly by ingestion through the food-chain, could on the basis of information available to the Administrator of EPA, cause death, disease, behavioral abnormalities, cancer, genetic mutations, physiological malfunctions (including malfunction in reproduction), or physical deformations in either organisms or offspring of the organisms.
6. "Runoff" is rainwater, leachate, or other liquid that drains over any part of a land surface and runs off the land surface.
7. "Similar Container" is either an open or closed receptacle. This includes, but is not limited to, a bucket, a box, a carton, and a vehicle or trailer with a load capacity of one metric ton or less.
8. "Total Solids" are the materials in the biosolids that remain as a residue if the biosolids are dried at 103° or 105° Celsius.
9. "Treatment Works" are either Federally owned, publicly owned, or privately-owned devices or systems used to treat (including recycling and reclamation) either domestic sewage or a combination of domestic sewage and industrial waste or liquid manure.
10. "Vector Attraction" is the characteristic of biosolids that attracts rodents, flies mosquito's or other organisms capable of transporting infectious agents.
11. "Animals" for the purpose of this permit are domestic livestock.
12. "Annual Whole Sludge Application Rate" is the amount of sewage sludge (dry-weight basis) that can be applied to a unit area of land during a cropping cycle.
13. "Agronomic Rate" is the whole sludge application rate (dry-weight basis) designed to: (1) provide the amount of nitrogen needed by the crop or vegetation grown on the land; and (2) minimize the amount of nitrogen in the sewage sludge that passes below the root zone of the crop or vegetation grown on the land to the ground water.
14. "Annual Pollutant Loading Rate" is the maximum amount of a pollutant (dry-weight basis) that can be applied to a unit area of land during a 365-day period.
15. "Application Site or Land Application Site" means all contiguous areas of a users' property intended for sludge application.
16. "Cumulative Pollutant Loading Rate" is the maximum amount of an inorganic pollutant (dry-weight basis) that can be applied to a unit area of land.
17. "Grit and Screenings" are sand, gravel, cinders, other materials with a high specific gravity and relatively large materials such as rags generated during preliminary treatment of domestic sewage at a treatment works and shall be disposed of according to 40 CFR 258.

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18. “High Potential for Public Contact Site” is land with a high potential for contact by the public. This includes, but is not limited to, public parks, ball fields, cemeteries, plant nurseries, turf farms, and golf courses.
19. “Low Potential for Public Contact Site” is the land with a low potential for contact by the public. This includes, but is not limited to, farms, ranches, reclamation areas, and other lands which are private lands, restricted public lands, or lands which are not generally accessible to or used by the public.
20. “Monthly Average” is the arithmetic mean of all measurements taken during the month.
21. “Volatile Solids” is the amount of the total solids in sewage sludge lost when the sludge is combusted at 550 degrees Celsius for 15-20 minutes in the presence of excess air.

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