TABLE 1
MAXIMUM LIMITS FOR SUBSTANCES IN
OR CHARACTERISTICS OF CLASSES I, IA, II, AND III STREAMS

7446-41-7	Ammonia (Total as N) (a)	**Acute Standard** The one-hour average concentration of total ammonia (expressed as N in mg/l) does not exceed, more often than once every three years on the average, the numerical value given by the following formula: $$CMC = MIN\left(\left(\frac{0.275}{1+10^{7.204-pH}}+\frac{39.0}{1+10^{pH-7.204}}\right),\left(0.7249\times\left(\frac{0.0114}{1+10^{7.204-pH}}+\frac{1.6181}{1+10^{pH-7.204}}\right)\times\left(23.12\times 10^{0.036\times(20-T)}\right)\right)\right)$$ Acute Standard where salmonids absent Acute Standard where salmonids are present **Chronic Standard** The 30-day rolling average concentration of total ammonia (expressed as N in mg/L) is not to exceed, more than once every three years on average, the chronic criteria magnitude calculated using the following formula: $$CCC = 0.8876\times\left(\frac{0.0278}{1+10^{7.688-pH}}+\frac{1.1994}{1+10^{pH-7.688}}\right)\times\left(2.126\times 10^{0.028\times(20-MAX(T,7))}\right)$$ In addition, the highest four-day average within the 30-day averaging period should not be more than 2.5 times the criteria more than once in three years on average.

[1] CAS No. is the chemical abstract service registry number. The registry database contains records for specific substances identified by the chemical abstract service.

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OR CHARACTERISTICS OF CLASSES I, IA, II, AND III STREAMS

7446-41-7	Ammonia (Total as N) (a)	**Acute Standard** The one-hour average concentration of total ammonia (expressed as N in mg/l) does not exceed, more often than once every three years on the average, the numerical value given by the following formula: $$\frac{0.411}{1+10^{7.204-pH}}+\frac{58.4}{1+10^{pH-7.204}}$$ where salmonids are absent; or $$\frac{0.275}{1+10^{7.204-pH}}+\frac{39.0}{1+10^{pH-7.204}}$$ where salmonids are present. **Chronic Standard** The 30-day average concentration of total ammonia (expressed as N in mg/l) does not exceed, more often than once every three years on the average, the numerical value given by the following formula; and the highest 4-day average concentration of total ammonia within the 30-day averaging period does not exceed 2.5 times the numerical value given by the following formula:

$$(CV)\left(\frac{0.0577}{1+10^{7.688-pH}}\right)+\left(\frac{2.487}{1+10^{pH-7.688}}\right)$$

where CV = 2.85, when temperature (T) is ≤ 14°C;

or

where:

$$(CV) = 1.45^{10^{0.028(25-T)}}$$

when T > 14°C

Site-Specific Chronic Standard

The following site-specific standard applies to the Red River of the North beginning at the 12th Avenue North bridge in Fargo, North Dakota, and extending approximately 32 miles downstream to its confluence with the Buffalo River, Minnesota. This site-specific standard applies only during the months of October, November, December, January, and February. During the months of March through September, the statewide chronic ammonia standard applies.

The 30-day average concentration of total ammonia (expressed as N in mg/l) does not exceed, more often than once every three years on the average, the numerical value given by the following formula; and the highest 4-day average concentration of total ammonia within the 30-day averaging period does not exceed 2.5 times the numerical value given by the following formula:

$$(CV)\left(\frac{0.0577}{1+10^{7.688-pH}}\right)+\left(\frac{2.487}{1+10^{pH-7.688}}\right)$$

where CV = 4.63, when T ≤ 7° C; or

or

where:

$$(CV) = 1.45^{10^{0.028(25-T)}}$$

when T > 7°C