4.7.4 Total Suspended Solids:

Weekly Average Concentration:

$[C]_{Weekly}$ = $[C]_{Monthly}$ (mg/L) x 1.5

Monthly Average Mass Loading:

$M_{Monthly}$ = $Q_{Monthly}$ (MGD) × $[C]_{Monthly}$ (mg/L or ppm) × 8.34 (lbs/gal)

Weekly Average Mass Loading:

M_{Weekly} = Q_{Weekly} (MGD) × $[C]_{Monthly}$ (mg/L or ppm) × 8.34 (lbs/gal)

Refer to Appendix B for the calculated results.

4.7.5 Ammonia:

Toxicity Analysis:

The chronic criterion based on *Villosa iris* (rainbow mussel) is determined as follows:

$$CCC\ mg/L = 0.8876 \times \left(\frac{0.0278}{1+10^{7.688-pH}} + \frac{1.1994}{1+10^{pH-7.688}}\right) \times 2.126 \times 10^{0.028 \times (20-MAX(T,7))}$$

Where: pH : pH of receiving stream and discharge
T : Temperature of receiving stream
CCC : Chronic Continuous Concentration

The ammonia effluent limit (monthly average) is then calculated as follows:

$$[NH_3]_{Effluent} = \frac{(Q_{Effluent}\ (ft^3/sec) + 30Q3\ (ft^3/sec)) \times CCC\ (mg/L) - 30Q3(ft^3/sec) \times [NH_3]_{Stream\ Background}(mg/L)}{Q_{Effluent}(ft^3/sec)}$$

Refer to *Appendix B* for detailed calculations.