

Fact Sheet Attachment 4

City of American Canyon NPDES Permit Reissuance  
WQBEL Calculation

| PRIORITY POLLUTANTS   | Copper    | Mercury               | Nickle      | Selenium  | Zinc    | Cyanide   | Cyanide (SSO) | TCDD TEQ    |
|---|-----------|-----------------------|-------------|-----------|---------|-----------|---------------|-------------|
| Units   | ug/L      | ug/L                  | ug/L        | ug/L      | ug/L    | ug/L      | ug/L          | pg/L        |
| Basis and Criteria type   | CTR SW    | BP SW (4-d, 1-hr avg) | BP SW       | NTR       | BP SW   | NTR SW    | NTR SW        | CTR,hh      |
| Lowest WQO  | 3.70      | 0.025                 | 8.30        | 5.00      | 86.00   | 1.00      | 2.90          | 0.014       |
| Translators   |           |                       |             |           |         |           |               |             |
| Dilution Factor (D) (if applicable)                                       | 0         | 0                     | 0           | 0         | 0       | 0         | 3.5           | 0           |
| No. of samples per month  | 4         | 4                     | 4           | 4         | 4       | 4         | 4             | 4           |
| Aquatic life criteria analysis required? (Y/N)                            | Y         | Y                     | Y           | Y         | Y       | Y         | Y             | N           |
| HH criteria analysis required? (Y/N)                                      | N         | Y                     | Y           | N         | N       | Y         | Y             | Y           |
| Applicable Acute WQO  | 5.80      | 2.1                   | 75          | 20        | 95      | 1         | 9.4           | na          |
| Applicable Chronic WQO  | 3.70      | 0.025                 | 8.3         | 5         | 86      | 1         | 2.9           | na          |
| HH criteria   |           | 0.051                 | 4600        |           |         | 220000    | 220000        | 0.014       |
| Background (max conc for Aq Life calc)                                    | 32        | 0.015                 | 68.7        | 19        | 10      | 0.363     | 0.363         |             |
| Background (avg conc for HH calc)   |           | 0.00700               | 7.50        |           |         | 0.21      | 0.21          |             |
| Is the pollutant Bioaccumulative(Y/N)? (e.g., Hg)                         | N         | Y                     | N           | Y         | N       | N         | N             | Y           |
| ECA acute   | 5.8       | 2.1                   | 75          | 20        | 95      | 1         | 41.0295       |             |
| ECA chronic   | 3.7       | 0.025                 | 8.3         | 5         | 86      | 1         | 11.7795       |             |
| ECA HH  |           | 0.051                 | 4600        |           |         | 220000    | 989999.2685   | 0.014       |
| No. of data points <10 or at least 80% of data reported non detect? (Y/N) | N         | N                     | N           | N         | N       | N         | N             | Y           |
| Avg of effluent data points   | 3.174     | 0.0021                | 5.7864      | 1.0504    | 58.4706 | 2.0770    | 2.0770        |             |
| Std Dev of effluent data points   | 1.374     | 0.0011                | 3.8772      | 0.5722    | 23.0693 | 1.2508    | 1.2508        |             |
| CV calculated   | 0.43      | 0.50                  | 0.67        | 0.54      | 0.39    | 0.60      | 0.60          | N/A         |
| CV (Selected) - Final   | 0.43      | 0.50                  | 0.67        | 0.54      | 0.39    | 0.60      | 0.60          | 0.6         |
| ECA acute mult99  | 0.42      | 0.37                  | 0.29        | 0.35      | 0.44    | 0.32      | 0.32          |             |
| ECA chronic mult99  | 0.62      | 0.58                  | 0.49        | 0.56      | 0.65    | 0.53      | 0.53          |             |
| LTA acute   | 2.41      | 0.79                  | 21.90       | 6.96      | 42.16   | 0.32      | 13.13         |             |
| LTA chronic   | 2.30      | 0.015                 | 4.10        | 2.78      | 55.64   | 0.53      | 6.20          |             |
| minimum of LTAs   | 2.30      | 0.015                 | 4.10        | 2.78      | 42.16   | 0.32      | 6.20          |             |
| AMEL mult95   | 1.39      | 1.45                  | 1.62        | 1.50      | 1.35    | 1.55      | 1.55          | 1.55        |
| MDEL mult99   | 2.41      | 2.67                  | 3.42        | 2.87      | 2.25    | 3.12      | 3.12          | 3.11        |
| AMEL (aq life)  | 3.20      | 0.021                 | 6.65        | 4.17      | 57.04   | 0.50      | 9.64          |             |
| MDEL(aq life)   | 5.54      | 0.039                 | 14.04       | 7.99      | 95.00   | 1.00      | 19.37         |             |
| MDEL/AMEL Multiplier  | 1.73      | 1.84                  | 2.11        | 1.92      | 1.67    | 2.01      | 2.01          | 2.01        |
| AMEL (human hlth)   |           | 0.051                 | 4600        |           |         | 220000    | 989999        | 0.014       |
| MDEL (human hlth)   |           | 0.094                 | 9716        |           |         | 442118    | 1989532       | 0.028       |
| minimum of AMEL for Aq. life vs HH  | 3.20      | 0.02                  | 6.65        | 4.17      | 57.04   | 0.50      | 9.64          | 0.014       |
| minimum of MDEL for Aq. Life vs HH  | 5.54      | 0.039                 | 14.04       | 7.99      | 95.00   | 1.00      | 19.37         | 0.028       |
| Final limit - AMEL  | 3.2       | 0.021                 | 6.6         | 4.2       | 57.0    | 0.5       | 9.6           | 0.014       |
| Final limit - MDEL  | 5.5       | 0.039                 | 14.0        | 8.0       | 95.0    | 1.0       | 19.4          | 0.028       |
| Max Eff Conc (MEC)  | 7.5       | 0.0058                | 15.0        | 2.0       | 130     | 8         | 8             | 0.0002      |
| Feasibility to comply?  | No        | Yes                   | No          | Yes       | No      | No        | Yes           | No          |
| Interim limit   | 9.6       | NA                    | 15.0        | NA        | 125.0   | 7.3       | NA            | NA          |
| Distribution  | lognormal | lognormal             | no good fit | lognormal | weibull | lognormal | lognormal     | no good fit |