



















Table D-2: Vangorda Creek Drainage Water Quality  
2010 - Surface Water - Dissolved Metals

| Station     | Date       | Ag-d   | Al-d  | As-d | Ba-d   | B-d    | Be-d  | Bi-d   | Ca-d   | Cd-d | Co-d   | Cr-d | Cu-d   | Fe-d  | Hg-d  | K-d   | Li-d   | Mg-d    | Mn-d  | Mo-d  | Na-d   | Ni-d   | Pb-d   | Sb-d | S-d    | Se-d    | Si-d    | Sn-d    | Sr-d    | Ti-d  | Ti-d    | U-d     | V-d      | Zn-d     | Zr-d |      |
|-------------|------------|--------|-------|------|--------|--------|-------|--------|--------|------|--------|------|--------|-------|-------|-------|--------|---------|-------|-------|--------|--------|--------|------|--------|---------|---------|---------|---------|-------|---------|---------|----------|----------|------|------|
|             |            | µg/L   | µg/L  | µg/L | µg/L   | µg/L   | µg/L  | µg/L   | mg/L   | µg/L | µg/L   | µg/L | µg/L   | µg/L  | µg/L  | mg/L  | mg/L   | mg/L    | µg/L  | µg/L  | mg/L   | µg/L   | µg/L   | µg/L | µg/L   | µg/L    | µg/L    | µg/L    | µg/L    | µg/L  | µg/L    | µg/L    | µg/L     | µg/L     | µg/L | µg/L |
| V27         | 1/18/2010  | <0.005 | 2.70  | 0.45 | 45.400 | <50.0  | <0.01 | <0.005 | 69.50  | 0.06 | 0.0150 | <0.1 | 0.6000 | 5.00  | 0.85  | 0.003 | 30.60  | 0.990   | 0.82  | 3.45  | 0.750  | 0.8200 | 0.11   | 69   | 0.4400 | 4680.00 | <0.01   | 233.00  | <0.5    | 0.02  | 5.9300  | <0.2    | 27.000   | <0.1     |      |      |
| V27         | 2/24/2010  | <0.005 | 2.70  | 0.50 | 49.900 | <50.0  | <0.01 | <0.005 | 77.80  | 0.05 | 0.0120 | <0.1 | 0.5100 | 2.00  | 0.94  | 0.003 | 35.70  | 0.120   | 0.81  | 3.79  | 0.740  | 0.0930 | 0.10   | 76   | 0.5000 | 4280.00 | <0.01   | 272.00  | <0.5    | 0.01  | 7.0400  | <0.2    | 25.200   | <0.1     |      |      |
| V27         | 3/29/2010  | <0.005 | 2.70  | 0.51 | 49.600 | <50.0  | <0.01 | <0.005 | 75.70  | 0.05 | 0.0160 | <0.1 | 0.4200 | 2.00  | 0.87  | 0.003 | 38.20  | 0.210   | 0.81  | 4.09  | 0.750  | 0.1660 | 0.12   | 75   | 0.4700 | 4500.00 | <0.01   | 281.00  | <0.5    | 0.01  | 7.7500  | <0.2    | 26.600   | <0.1     |      |      |
| V27         | 4/20/2010  | <0.005 | 7.10  | 0.57 | 53.500 | <50.0  | <0.01 | <0.005 | 90.10  | 0.12 | 0.1620 | <0.1 | 1.0000 | 24.00 | 1.37  | 0.004 | 42.30  | 8.440   | 0.75  | 3.96  | 1.480  | 0.6990 | 0.12   | 106  | 0.4600 | 4570.00 | <0.01   | 299.00  | <0.5    | 0.02  | 7.0200  | <0.2    | 57.900   | <0.1     |      |      |
| V27         | 5/12/2010  | <0.005 | 19.00 | 0.59 | 34.000 | <50.0  | <0.01 | 0.01   | 46.60  | 0.05 | 0.0540 | <0.1 | 2.7600 | 61.00 | 0.96  | 0.003 | 19.60  | 3.120   | 0.53  | 2.53  | 1.220  | 5.7400 | 0.12   | 44   | 0.2300 | 4560.00 | 0.10    | 167.00  | <0.5    | 0.02  | 3.7300  | <0.2    | 30.700   | <0.1     |      |      |
| V27         | 6/16/2010  | <0.005 | 18.20 | 0.29 | 21.600 | <50.0  | <0.01 | 0.01   | 17.60  | 0.04 | 0.0350 | <0.1 | 1.1200 | 27.00 | 0.50  | 0.001 | 6.78   | 2.950   | 0.23  | 1.55  | 0.510  | 1.1000 | 0.06   | 14   | 0.1000 | 3300.00 | 0.05    | 74.00   | <0.5    | 0.01  | 1.0600  | <0.2    | 18.100   | <0.1     |      |      |
| V27         | 7/14/2010  | <0.005 | 14.30 | 0.31 | 50.600 | <50.0  | <0.01 | <0.005 | 137.00 | 0.41 | 0.2070 | <0.1 | 1.9200 | 30.00 | 1.39  | 0.012 | 31.50  | 118.000 | 0.26  | 2.90  | 1.140  | 4.8700 | 0.08   | 153  | 0.1500 | 3540.00 | 0.03    | 471.00  | <0.5    | 0.18  | 1.2900  | <0.2    | 68.400   | <0.1     |      |      |
| V27         | 8/4/2010   | <0.005 | 10.00 | 0.44 | 32.400 | <50.0  | <0.01 | <0.005 | 36.50  | 0.07 | 0.0510 | <0.1 | 2.2200 | 21.00 | 0.75  | 0.003 | 13.70  | 5.720   | 0.37  | 2.45  | 0.800  | 1.2300 | 0.10   | 32   | 0.2100 | 4330.00 | 0.04    | 138.00  | <0.5    | 0.03  | 2.2300  | <0.2    | 41.500   | <0.1     |      |      |
| V27         | 9/7/2010   | <0.005 | 6.80  | 0.32 | 29.000 | <50.0  | <0.01 | <0.005 | 29.40  | 0.05 | 0.0280 | <0.1 | 0.8900 | 14.00 | 0.61  | 0.002 | 10.70  | 4.670   | 0.32  | 2.17  | 0.500  | 0.3500 | 0.07   | 25   | 0.1500 | 4090.00 | 0.07    | 121.00  | <0.5    | 0.01  | 1.6900  | <0.2    | 22.500   | <0.1     |      |      |
| V27         | 10/5/2010  | <0.005 | 7.70  | 0.38 | 39.300 | <50.0  | <0.01 | 0.01   | 46.10  | 0.08 | 0.0730 | <0.1 | 1.1000 | 19.00 | 1.51  | 0.002 | 20.10  | 9.220   | 0.43  | 4.73  | 0.790  | 0.8360 | 0.08   | 45   | 0.2200 | 4700.00 | 0.02    | 173.00  | <0.5    | 0.01  | 2.9900  | <0.2    | 33.800   | <0.1     |      |      |
| V27         | 11/1/2010  | <0.005 | 4.60  | 0.40 | 44.300 | <50.0  | <0.01 | <0.005 | 48.50  | 0.04 | 0.0200 | <0.1 | 0.5900 | 6.00  | 0.66  | 0.003 | 23.70  | 1.780   | 0.58  | 3.15  | 0.660  | 0.3370 | 0.10   | 51   | 0.2800 | 4250.00 | 0.02    | 197.00  | <0.5    | 0.01  | 4.0000  | <0.2    | 24.400   | <0.1     |      |      |
| V27         | 12/1/2010  | <0.005 | 3.00  | 0.40 | 44.900 | <50.0  | <0.01 | 0.03   | 60.20  | 0.05 | 0.0180 | <0.1 | 0.5600 | 5.00  | 0.79  | 0.003 | 27.70  | 0.820   | 0.53  | 3.32  | 1.220  | 0.4240 | 0.10   | 62   | 0.3400 | 4730.00 | <0.01   | 216.00  | <0.5    | 0.01  | 4.7900  | <0.2    | 25.700   | <0.1     |      |      |
| V27 Average |            | 0.0025 | 8.23  | 0.43 | 41.208 | 25.00  | 0.01  | 0.01   | 61.25  | 0.09 | 0.0576 | 0.05 | 1.1408 | 18.00 | 0.93  | 0.003 | 25.05  | 13.003  | 0.54  | 3.17  | 0.880  | 1.3888 | 0.10   | 63   | 0.2958 | 4294.17 | 0.03    | 220.17  | 0.25    | 0.03  | 4.1267  | 0.10    | 33.483   | 0.05     |      |      |
| V27 Max     |            | <0.005 | 19.00 | 0.59 | 53.500 | <50.0  | <0.01 | 0.03   | 137.00 | 0.41 | 0.2070 | <0.1 | 2.7600 | 61.00 | 1.51  | 0.012 | 42.30  | 118.000 | 0.82  | 4.73  | 1.480  | 5.7400 | 0.12   | 153  | 0.5000 | 4730.00 | 0.10    | 471.00  | <0.5    | 0.18  | 7.7500  | <0.2    | 68.400   | <0.1     |      |      |
| V27 Min     |            | <0.005 | 2.70  | 0.29 | 21.600 | <50.0  | <0.01 | <0.005 | 17.60  | 0.04 | 0.0120 | <0.1 | 0.4200 | 2.00  | 0.50  | 0.001 | 6.78   | 0.120   | 0.23  | 1.55  | 0.500  | 0.0930 | 0.06   | 14   | 0.1000 | 3300.00 | <0.01   | 74.00   | <0.5    | 0.01  | 1.0600  | <0.2    | 18.100   | <0.1     |      |      |
| V27 N > DL  |            | 0      | 12    | 12   | 12     | 0      | 0     | 4      | 12     | 12   | 12     | 0    | 12     | 12    | 0     | 12    | 12     | 12      | 12    | 12    | 12     | 12     | 12     | 12   | 12     | 12      | 12      | 12      | 7       | 12    | 0       | 12      | 0        | 12       | 0    |      |
| V27 Median  |            | <0.005 | 6.95  | 0.42 | 44.600 | <50.0  | <0.01 | <0.005 | 54.35  | 0.05 | 0.0315 | <0.1 | 0.9450 | 16.50 | 0.86  | 0.003 | 25.70  | 3.035   | 0.53  | 3.24  | 0.770  | 0.7595 | 0.10   | 57   | 0.2550 | 4415.00 | 0.02    | 206.50  | <0.5    | 0.01  | 3.8650  | <0.2    | 26.800   | <0.1     |      |      |
| V2A         | 2/3/2010   | <0.03  | 2.00  | 1.00 | 92.800 | <300.0 | <0.05 | <0.03  | 344.00 | 0.43 | 0.1000 | <0.5 | 1.6000 | <5.0  | 3.94  | 0.010 | 211.00 | 7.500   | 2.30  | 13.90 | 34.200 | 0.8200 | 0.40   | 421  | 0.7000 | 5860.00 | <0.05   | 1080.00 | <3.0    | 0.02  | 41.0000 | <1.0    | 680.000  | <0.5     |      |      |
| V2A         | 3/2/2010   | <0.03  | 2.00  | 1.00 | 67.600 | <300.0 | <0.05 | <0.03  | 323.00 | 0.43 | 0.3700 | <0.5 | 1.2000 | 15.00 | 3.54  | 0.010 | 208.00 | 24.900  | 2.20  | 12.50 | 30.100 | 0.5000 | 0.30   | 443  | 0.6000 | 5370.00 | <0.05   | 958.00  | <3.0    | <0.01 | 35.0000 | <1.0    | 744.000  | <0.5     |      |      |
| V2A         | 4/7/2010   | <0.03  | 4.00  | 0.80 | 77.200 | <300.0 | <0.05 | <0.03  | 263.00 | 0.41 | 0.1300 | <0.5 | 1.3000 | 8.00  | 3.00  | 0.011 | 175.00 | 11.800  | 2.10  | 10.60 | 31.600 | 0.5300 | 0.40   | 340  | 0.6000 | 4730.00 | <0.05   | 838.00  | <3.0    | <0.01 | 32.9000 | <1.0    | 725.000  | <0.5     |      |      |
| V2A         | 5/1/2010   | <0.005 | 2.80  | 1.16 | 57.000 | <50.0  | <0.01 | <0.005 | 217.00 | 0.24 | 0.2470 | <0.1 | 1.0800 | 16.00 | 3.28  | 0.008 | 143.00 | 19.700  | 1.96  | 8.12  | 24.300 | 1.1600 | 0.36   | 302  | 0.5200 | 3850.00 | 0.02    | 718.00  | <0.5    | 0.01  | 24.9000 | <0.2    | 463.000  | <0.1     |      |      |
| V2A         | 5/18/2010  | <0.03  | 9.00  | 1.30 | 58.800 | <300.0 | <0.05 | <0.03  | 282.00 | 0.45 | 0.2700 | <0.5 | 1.3000 | 26.00 | 3.90  | 0.012 | 203.00 | 7.300   | 2.10  | 10.30 | 46.000 | 0.7700 | 0.50   | 367  | 0.5000 | 5030.00 | 0.08    | 945.00  | <3.0    | 0.03  | 35.7000 | <1.0    | 811.000  | <0.5     |      |      |
| V2A         | 6/2/2010   | <0.03  | 4.00  | 1.20 | 55.500 | <300.0 | <0.05 | <0.03  | 291.00 | 0.38 | 0.0800 | <0.5 | 1.1000 | 13.00 | 3.80  | 0.009 | 211.00 | 4.100   | 2.40  | 10.20 | 48.700 | 0.4200 | 0.50   | 419  | 0.5000 | 5150.00 | <0.05   | 930.00  | <3.0    | 0.03  | 36.7000 | <1.0    | 838.000  | <0.5     |      |      |
| V2A         | 6/15/2010  | <0.03  | 7.00  | 1.40 | 56.900 | <300.0 | <0.05 | <0.03  | 284.00 | 0.49 | 0.1100 | <0.5 | 1.5000 | 19.00 | 4.40  | 0.013 | 245.00 | 4.500   | 1.70  | 12.30 | 55.400 | 1.2800 | 0.60   | 512  | 0.6000 | 5260.00 | <0.05   | 994.00  | <3.0    | 0.03  | 35.0000 | <1.0    | 921.000  | <0.5     |      |      |
| V2A         | 7/7/2010   | <0.03  | 13.00 | 1.20 | 55.900 | <300.0 | <0.05 | <0.03  | 267.00 | 0.44 | 0.0800 | <0.5 | 1.4000 | 31.00 | 4.40  | 0.014 | 229.00 | 2.700   | 2.40  | 10.70 | 51.100 | 4.7900 | 0.60   | 452  | 0.5000 | 4430.00 | <0.05   | 999.00  | <3.0    | 0.03  | 34.4000 | <1.0    | 794.000  | <0.5     |      |      |
| V2A         | 7/22/2010  | <0.03  | 5.00  | 1.10 | 55.100 | <300.0 | <0.05 | <0.03  | 297.00 | 0.48 | 0.0600 | <0.5 | 1.0000 | 11.00 | 4.50  | 0.014 | 254.00 | 2.000   | 2.00  | 11.90 | 56.200 | 0.7800 | 0.50   | 502  | 0.5000 | 5250.00 | <0.05   | 1010.00 | <3.0    | 0.03  | 39.5000 | <1.0    | 846.000  | <0.5     |      |      |
| V2A         | 8/5/2010   | <0.03  | 8.00  | 1.20 | 54.200 | <300.0 | <0.05 | <0.03  | 306.00 | 0.61 | 0.0600 | <0.5 | 1.6000 | 13.00 | <0.05 | 4.60  | 0.017  | 269.00  | 2.900 | 1.90  | 11.40  | 67.000 | 0.8200 | 0.60 | 495    | 0.5000  | 5030.00 | 0.06    | 1080.00 | <3.0  | 0.03    | 45.6000 | <1.0     | 1140.000 | <0.5 |      |
| V2A         | 8/18/2010  | <0.03  | 4.00  | 1.20 | 57.600 | <300.0 | <0.05 | <0.03  | 303.00 | 0.43 | 0.0500 | <0.5 | 1.2000 | 6.00  | 4.40  | 0.015 | 252.00 | 1.800   | 2.00  | 11.70 | 62.700 | 0.4300 | 0.70   | 468  | 0.5000 | 5050.00 | <0.05   | 1040.00 | <3.0    | 0.03  | 46.2000 | <1.0    | 875.000  | <0.5     |      |      |
| V2A         | 9/7/2010   | <0.03  | 6.00  | 0.90 | 58.100 | <300.0 | <0.05 | <0.03  | 278.00 | 0.49 | <0.03  | <0.5 | 1.4000 | 10.00 | 4.20  | 0.014 | 220.00 | 3.300   | 1.80  | 10.30 | 57.000 | 1.0800 | 0.50   | 430  | 0.4000 | 4910.00 | <0.05   | 988.00  | <3.0    | 0.02  | 39.3000 | <1.0    | 854.000  | <0.5     |      |      |
| V2A         | 9/23/2010  | <0.03  | 16.00 | 1.10 | 57.800 | <300.0 | <0.05 | <0.03  | 270.00 | 0.50 | 0.0600 | <0.5 | 1.5000 | 41.00 | 4.10  | 0.014 | 222.00 | 1.900   | 1.80  | 10.50 | 52.400 | 0.3500 | 0.50   | 477  | 0.5000 | 5210.00 | <0.05   | 943.00  | <3.0    | 0.02  | 38.3000 | <1.0    | 874.000  | <0.5     |      |      |
| V2A         | 10/7/2010  | <0.03  | 5.00  | 0.90 | 59.700 | <300.0 | <0.05 | <0.03  | 296.00 | 0.56 | 0.0600 | <0.5 | 1.2000 | 9.00  | 4.40  | 0.014 | 245.00 | 1.400   | 1.70  | 12.20 | 58.700 | 0.3800 | 0.40   | 508  | 0.5000 | 5610.00 | <0.05   | 980.00  | <3.0    | 0.02  | 38.3000 | <1.0    | 1050.000 | <0.5     |      |      |
| V2A         | 10/21/2010 | <0.03  | 4.00  | 0.90 | 59.000 | <300.0 | <0.05 | <0.03  | 299.00 | 0.59 | 0.0400 | <0.5 | 1.3000 | 10.00 | 4.10  | 0.013 | 234.00 | 3.200   | 1.60  | 12.20 | 56.800 | 0.5200 | 0.40   | 481  | 0.6000 | 5670.00 | <0.05   | 989.00  | <3.0    | <0.01 | 37.7000 | <1.0    | 1030.000 | <0.5     |      |      |
| V2A         | 11/4/2010  | <0.03  | 15.00 | 1.00 | 56.800 | <300.0 | <0.05 | <0.03  | 294.00 | 0.46 | 0.0500 | <0.5 | 3.5000 | 13    |       |       |        |         |       |       |        |        |        |      |        |         |         |         |         |       |         |         |          |          |      |      |

Table D-2: Vangorda Creek Drainage Water Quality  
2010 - Surface Water - Dissolved Metals

| Station    | Date      | Ag-d   | Al-d  | As-d   | Ba-d   | B-d   | Be-d  | Bi-d   | Ca-d   | Cd-d | Co-d   | Cr-d | Cu-d   | Fe-d  | Hg-d | K-d   | Li-d  | Mg-d   | Mn-d | Mo-d | Na-d  | Ni-d   | Pb-d | Sb-d | S-d    | Se-d    | Si-d  | Sn-d   | Sr-d | Ti-d   | Tl-d    | U-d  | V-d    | Zn-d | Zr-d |      |
|------------|-----------|--------|-------|--------|--------|-------|-------|--------|--------|------|--------|------|--------|-------|------|-------|-------|--------|------|------|-------|--------|------|------|--------|---------|-------|--------|------|--------|---------|------|--------|------|------|------|
|            |           | µg/L   | µg/L  | µg/L   | µg/L   | µg/L  | µg/L  | µg/L   | mg/L   | µg/L | µg/L   | µg/L | µg/L   | µg/L  | µg/L | mg/L  | mg/L  | mg/L   | µg/L | µg/L | mg/L  | µg/L   | µg/L | µg/L | mg/L   | µg/L    | µg/L  | µg/L   | µg/L | µg/L   | µg/L    | µg/L | µg/L   | µg/L | µg/L | µg/L |
| V5         | 1/6/2010  | <0.005 | 1.90  | 0.45   | 88.700 | <50.0 | <0.01 | <0.005 | 121.00 | 0.06 | 0.0440 | <0.1 | 0.6600 | 11.00 | 1.69 | 0.007 | 53.90 | 12.200 | 2.47 | 5.64 | 1.820 | 0.1920 | 0.17 | 70   | 4.8000 | 5980.00 | <0.01 | 424.00 | <0.5 | <0.002 | 7.1500  | <0.2 | 3.200  | <0.1 |      |      |
| V5         | 2/18/2010 | <0.005 | 2.10  | 0.42   | 84.700 | <50.0 | <0.01 | <0.005 | 108.00 | 0.05 | 0.0610 | 0.20 | 0.7900 | 7.00  | 1.49 | 0.007 | 47.30 | 11.200 | 2.32 | 5.30 | 1.710 | 0.1880 | 0.17 | 60   | 3.4300 | 5650.00 | <0.01 | 401.00 | <0.5 | 0.00   | 7.2200  | <0.2 | 5.200  | <0.1 |      |      |
| V5         | 3/30/2010 | <0.005 | 2.00  | 0.43   | 81.400 | <50.0 | <0.01 | <0.005 | 104.00 | 0.05 | 0.0600 | <0.1 | 0.6100 | 11.00 | 1.46 | 0.007 | 50.10 | 8.700  | 2.69 | 5.64 | 1.720 | 0.1010 | 0.16 | 59   | 3.7400 | 5290.00 | <0.01 | 404.00 | <0.5 | 0.00   | 7.5900  | <0.2 | 2.900  | <0.1 |      |      |
| V5         | 4/20/2010 | <0.005 | 8.40  | 0.61   | 59.800 | <50.0 | <0.01 | <0.005 | 65.80  | 0.04 | 0.1230 | <0.1 | 1.0600 | 35.00 | 2.34 | 0.005 | 28.00 | 24.800 | 1.61 | 4.13 | 1.620 | 0.1420 | 0.13 | 36   | 1.2400 | 4100.00 | 0.03  | 231.00 | 0.60 | <0.002 | 3.5700  | <0.2 | 1.700  | <0.1 |      |      |
| V5         | 5/12/2010 | <0.005 | 14.80 | 0.63   | 55.400 | <50.0 | <0.01 | <0.005 | 60.50  | 0.03 | 0.2120 | <0.1 | 1.5700 | 61.00 | 1.11 | 0.004 | 23.00 | 38.700 | 1.57 | 2.75 | 2.730 | 0.7390 | 0.17 | 31   | 1.3400 | 4380.00 | <0.01 | 227.00 | <0.5 | <0.002 | 4.0700  | <0.2 | 3.500  | <0.1 |      |      |
| V5         | 6/17/2010 | <0.005 | 10.90 | 0.55   | 51.000 | <50.0 | <0.01 | 0.01   | 46.40  | 0.02 | 0.0680 | <0.1 | 0.9800 | 31.00 | 0.78 | 0.003 | 18.30 | 7.180  | 1.06 | 2.71 | 1.040 | 0.8220 | 0.12 | 20   | 0.8100 | 4110.00 | <0.01 | 194.00 | <0.5 | <0.002 | 2.6100  | <0.2 | 2.800  | <0.1 |      |      |
| V5         | 7/14/2010 | <0.005 | 15.50 | 0.66   | 46.800 | <50.0 | <0.01 | <0.005 | 42.80  | 0.05 | 0.2140 | <0.1 | 1.8500 | 32.00 | 0.91 | 0.003 | 16.20 | 27.000 | 0.89 | 2.69 | 1.630 | 1.1200 | 0.12 | 19   | 0.6400 | 5180.00 | 0.02  | 175.00 | <0.5 | 0.01   | 2.3000  | <0.2 | 24.000 | <0.1 |      |      |
| V5         | 8/4/2010  | <0.005 | 8.30  | 0.68   | 63.800 | <50.0 | <0.01 | <0.005 | 64.50  | 0.04 | 0.1000 | <0.1 | 0.8800 | 48.00 | 0.93 | 0.004 | 25.10 | 15.800 | 1.51 | 3.39 | 1.630 | 0.6510 | 0.12 | 29   | 1.0600 | 4970.00 | <0.01 | 250.00 | <0.5 | 0.00   | 3.9000  | <0.2 | 2.700  | <0.1 |      |      |
| V5         | 9/7/2010  | <0.005 | 8.60  | 0.60   | 63.700 | <50.0 | <0.01 | 0.01   | 57.90  | 0.04 | 0.1340 | <0.1 | 1.1400 | 61.00 | 0.99 | 0.004 | 21.90 | 21.700 | 1.27 | 3.03 | 1.540 | 0.3240 | 0.12 | 25   | 0.7700 | 4680.00 | <0.01 | 244.00 | <0.5 | 0.00   | 3.2900  | <0.2 | 7.600  | <0.1 |      |      |
| V5         | 10/5/2010 | <0.005 | 5.40  | 0.50   | 63.000 | <50.0 | <0.01 | <0.005 | 67.80  | 0.07 | 0.1250 | <0.1 | 0.6700 | 23.00 | 1.15 | 0.004 | 27.40 | 17.800 | 1.29 | 3.60 | 1.150 | 0.2730 | 0.11 | 31   | 1.2600 | 5260.00 | <0.01 | 261.00 | <0.5 | 0.00   | 3.4700  | <0.2 | 17.200 | <0.1 |      |      |
| V5         | 11/2/2010 | <0.005 | 3.80  | 0.45   | 68.700 | <50.0 | <0.01 | <0.005 | 71.70  | 0.03 | 0.0440 | <0.1 | 0.7300 | 17.00 | 1.03 | 0.004 | 32.10 | 6.530  | 1.68 | 4.15 | 1.170 | 0.1370 | 0.12 | 36   | 1.5700 | 4740.00 | <0.01 | 288.00 | <0.5 | <0.002 | 4.4100  | <0.2 | 5.900  | <0.1 |      |      |
| V5         | 12/1/2010 | 0.0640 | 2.40  | 0.37   | 69.300 | <50.0 | <0.01 | 0.01   | 85.00  | 0.05 | 0.0910 | <0.1 | 1.0500 | 12.00 | 2.66 | 0.005 | 34.80 | 26.800 | 1.64 | 4.53 | 1.610 | 0.2040 | 0.14 | 42   | 1.6300 | 5330.00 | 0.03  | 318.00 | <0.5 | 0.00   | 5.1400  | <0.2 | 7.100  | <0.1 |      |      |
| V5 Average |           | 0.0076 | 7.01  | 0.53   | 66.358 | 25.00 | 0.01  | 0.00   | 74.62  | 0.04 | 0.1063 | 0.06 | 0.9992 | 29.08 | 1.38 | 0.005 | 31.51 | 18.201 | 1.67 | 3.96 | 1.614 | 0.4078 | 0.14 | 38   | 1.8575 | 4972.50 | 0.01  | 284.75 | 0.28 | 0.00   | 4.5600  | 0.10 | 6.983  | 0.05 |      |      |
| V5 Max     |           | 0.0640 | 15.50 | 0.68   | 88.700 | <50.0 | <0.01 | 0.01   | 121.00 | 0.07 | 0.2140 | 0.20 | 1.8500 | 61.00 | 2.66 | 0.007 | 53.90 | 38.700 | 2.69 | 5.64 | 2.730 | 1.1200 | 0.17 | 70   | 4.8000 | 5980.00 | 0.03  | 424.00 | 0.60 | 0.01   | 7.5900  | <0.2 | 24.000 | <0.1 |      |      |
| V5 Min     |           | <0.005 | 1.90  | 0.37   | 46.800 | <50.0 | <0.01 | <0.005 | 42.80  | 0.02 | 0.0440 | <0.1 | 0.6100 | 7.00  | 0.78 | 0.003 | 16.20 | 6.530  | 0.89 | 2.69 | 1.040 | 0.1010 | 0.11 | 19   | 0.6400 | 4100.00 | <0.01 | 175.00 | <0.5 | <0.002 | 2.3000  | <0.2 | 1.700  | <0.1 |      |      |
| V5 N > DL  |           | 1      | 12    | 12     | 12     | 0     | 0     | 3      | 12     | 12   | 12     | 1    | 12     | 12    | 0    | 12    | 12    | 12     | 12   | 12   | 12    | 12     | 12   | 12   | 12     | 12      | 12    | 3      | 12   | 1      | 7       | 12   | 0      | 12   | 0    |      |
| V5 Median  |           | <0.005 | 6.85  | 0.53   | 63.750 | <50.0 | <0.01 | <0.005 | 66.80  | 0.04 | 0.0955 | <0.1 | 0.9300 | 27.00 | 1.13 | 0.004 | 27.70 | 16.800 | 1.59 | 3.87 | 1.625 | 0.2385 | 0.13 | 34   | 1.3000 | 5075.00 | <0.01 | 255.50 | <0.5 | 0.00   | 3.9850  | <0.2 | 4.350  | <0.1 |      |      |
| V8         | 1/6/2010  | <0.005 | 2.80  | 0.37   | 79.600 | <50.0 | <0.01 | <0.005 | 107.00 | 0.08 | 0.1090 | <0.1 | 0.6200 | 17.00 | 1.53 | 0.007 | 47.80 | 10.600 | 1.40 | 5.49 | 2.600 | 0.2690 | 0.18 | 76   | 2.3600 | 5370.00 | <0.01 | 413.00 | <0.5 | 0.01   | 9.4700  | <0.2 | 16.100 | <0.1 |      |      |
| V8         | 2/18/2010 | <0.005 | 2.00  | 0.39   | 77.400 | <50.0 | <0.01 | <0.005 | 100.00 | 0.06 | 0.0870 | <0.1 | 0.5500 | 7.00  | 1.37 | 0.007 | 46.00 | 7.480  | 1.44 | 5.20 | 2.170 | 0.0370 | 0.18 | 71   | 1.8200 | 5070.00 | <0.01 | 405.00 | <0.5 | 0.01   | 10.1000 | <0.2 | 13.000 | <0.1 |      |      |
| V8         | 3/30/2010 | <0.005 | 2.50  | 0.39   | 73.600 | <50.0 | <0.01 | <0.005 | 94.10  | 0.06 | 0.0570 | <0.1 | 0.8100 | 15.00 | 1.33 | 0.007 | 47.60 | 5.690  | 1.47 | 5.55 | 2.270 | 0.1990 | 0.16 | 67   | 1.9400 | 5070.00 | <0.01 | 406.00 | <0.5 | 0.01   | 10.6000 | <0.2 | 13.200 | <0.1 |      |      |
| V8         | 4/20/2010 | <0.005 | 3.90  | 0.53   | 63.600 | <50.0 | <0.01 | <0.005 | 81.10  | 0.05 | 0.0960 | <0.1 | 1.3400 | 18.00 | 1.88 | 0.006 | 35.80 | 9.770  | 1.22 | 4.40 | 2.050 | 0.2260 | 0.15 | 62   | 1.0800 | 4360.00 | <0.01 | 302.00 | <0.5 | 0.01   | 7.1700  | <0.2 | 6.300  | <0.1 |      |      |
| V8         | 5/12/2010 | <0.005 | 5.80  | 0.51   | 46.700 | <50.0 | <0.01 | <0.005 | 57.60  | 0.03 | 0.0810 | <0.1 | 1.3500 | 30.00 | 1.05 | 0.004 | 22.80 | 9.310  | 0.98 | 2.78 | 1.640 | 0.1710 | 0.15 | 38   | 0.7800 | 4340.00 | <0.01 | 218.00 | <0.5 | 0.01   | 5.3600  | <0.2 | 6.400  | <0.1 |      |      |
| V8         | 6/17/2010 | <0.005 | 10.20 | 0.39   | 38.000 | <50.0 | <0.01 | <0.005 | 35.50  | 0.03 | 0.0380 | <0.1 | 0.9500 | 21.00 | 0.66 | 0.003 | 14.10 | 2.710  | 0.61 | 2.16 | 0.840 | 0.8850 | 0.11 | 20   | 0.3800 | 3710.00 | <0.01 | 149.00 | <0.5 | 0.01   | 2.4000  | <0.2 | 6.200  | <0.1 |      |      |
| V8         | 7/14/2010 | <0.005 | 12.10 | 0.41   | 68.200 | <50.0 | <0.01 | <0.005 | 104.00 | 0.10 | 0.1440 | <0.1 | 1.6600 | 24.00 | 1.13 | 0.008 | 28.60 | 19.900 | 0.54 | 2.97 | 1.420 | 1.2000 | 0.12 | 102  | 0.3600 | 4300.00 | 0.02  | 378.00 | <0.5 | 0.05   | 2.5900  | <0.2 | 32.600 | <0.1 |      |      |
| V8         | 8/4/2010  | <0.005 | 5.40  | 0.51   | 53.300 | <50.0 | <0.01 | <0.005 | 59.20  | 0.05 | 0.0530 | <0.1 | 0.9600 | 15.00 | 0.97 | 0.005 | 23.00 | 6.280  | 0.91 | 3.27 | 1.120 | 0.3200 | 0.14 | 37   | 0.6200 | 4590.00 | <0.01 | 238.00 | <0.5 | 0.02   | 4.3900  | <0.2 | 10.900 | <0.1 |      |      |
| V8         | 9/7/2010  | 0.0080 | 10.30 | 0.42   | 49.200 | <50.0 | <0.01 | 0.04   | 52.20  | 0.03 | 0.0480 | <0.1 | 0.9700 | 32.00 | 0.85 | 0.004 | 19.60 | 5.290  | 0.78 | 2.91 | 1.050 | 0.5290 | 0.11 | 31   | 0.4700 | 4400.00 | <0.01 | 212.00 | <0.5 | 0.01   | 3.4900  | <0.2 | 7.600  | <0.1 |      |      |
| V8         | 10/5/2010 | <0.005 | 4.00  | 0.41   | 54.900 | <50.0 | <0.01 | <0.005 | 62.60  | 0.03 | 0.0450 | <0.1 | 0.6500 | 19.00 | 1.07 | 0.004 | 26.70 | 6.390  | 0.88 | 3.53 | 1.040 | 0.0910 | 0.12 | 38   | 0.7400 | 4760.00 | <0.01 | 248.00 | <0.5 | 0.01   | 4.1300  | <0.2 | 9.200  | <0.1 |      |      |
| V8         | 11/2/2010 | <0.005 | 4.00  | 0.37   | 58.500 | <50.0 | <0.01 | 0.01   | 65.70  | 0.04 | 0.0820 | 0.20 | 1.0900 | 15.00 | 1.13 | 0.005 | 29.50 | 5.280  | 1.08 | 3.99 | 1.740 | 0.7250 | 0.14 | 44   | 0.8300 | 4350.00 | 0.04  | 275.00 | <0.5 | 0.01   | 5.6000  | <0.2 | 24.200 | <0.1 |      |      |
| V8         | 12/1/2010 | <0.005 | 2.40  | 0.37   | 63.500 | <50.0 | <0.01 | 0.43   | 81.60  | 0.05 | 0.0450 | <0.1 | 0.6000 | 15.00 | 1.17 | 0.005 | 35.50 | 6.060  | 1.07 | 4.36 | 1.840 | 0.1130 | 0.14 | 55   | 1.0500 | 4990.00 | <0.01 | 319.00 | <0.5 | 0.01   | 6.9600  | <0.2 | 12.100 | <0.1 |      |      |
| V8 Average |           | 0.0030 | 5.45  | 0.42   | 60.542 | 25.00 | 0.01  | 0.04   | 75.05  | 0.05 | 0.0738 | 0.06 | 0.9625 | 19.00 | 1.18 | 0.005 | 31.42 | 7.897  | 1.03 | 3.88 | 1.648 | 0.3971 | 0.14 | 53   | 1.0358 | 4609.17 | 0.01  | 296.92 | 0.25 | 0.01   | 6.0217  | 0.10 | 13.150 | 0.05 |      |      |
| V8 Max     |           | 0.0080 | 12.10 | 0.53   | 79.600 | <50.0 | <0.01 | 0.43   | 107.00 | 0.10 | 0.1440 | 0.20 | 1.6600 | 32.00 | 1.88 | 0.008 | 47.80 | 19.900 | 1.47 | 5.55 | 2.600 | 1.2000 | 0.18 | 102  | 2.3600 | 5370.00 | 0.04  | 413.00 | <0.5 | 0.05   | 10.6000 | <0.2 | 32.600 | <0.1 |      |      |
| V8 Min     |           | <0.005 | 2.00  | 0.37   | 38.000 | <50.0 | <0.01 | <0.005 | 35.50  | 0.03 | 0.0380 | <0.1 | 0.5500 | 7.00  | 0.66 | 0.003 | 14.10 | 2.710  | 0.54 | 2.16 | 0.840 | 0.0370 | 0.11 | 20   | 0.3600 | 3710.00 | <0.01 | 149.00 | <0.5 | 0.01   | 2.4000  | <0.2 | 6.200  | <0.1 |      |      |
| V8 N > DL  |           | 1      | 12    | 12     | 12     | 0     | 0     | 3      | 12     | 12   | 12     | 1    | 12     | 12    | 0    | 12    | 12    | 12     | 12   | 12   | 12    | 12     | 12   | 12   | 12     | 12      | 12    | 2      | 12   | 0      | 12      | 12   | 0      | 12   | 0    |      |
| V8 Median  |           | <0.005 | 4.00  | 0.40</ |        |       |       |        |        |      |        |      |        |       |      |       |       |        |      |      |       |        |      |      |        |         |       |        |      |        |         |      |        |      |      |      |

Table D-3: Vangorda Creek Drainage Water Quality  
2010 - Surface Water - Total Metals

| Station     | Date      | Ag     | Al       | As     | B        | Ba      | Be    | Bi     | Ca     | Cd     | Co        | Cr    | Cu       | Fe        | Hg    | K    | Li   | Mg     | Mn         | Mo    | Na    | Ni       | P    | Pb       | S       | Sb    | Se     | Si       | Sn     | Sr      | Ti     | Tl     | U       | V      | Zn          | Zr     |      |      |
|-------------|-----------|--------|----------|--------|----------|---------|-------|--------|--------|--------|-----------|-------|----------|-----------|-------|------|------|--------|------------|-------|-------|----------|------|----------|---------|-------|--------|----------|--------|---------|--------|--------|---------|--------|-------------|--------|------|------|
|             |           | µg/L   | µg/L     | µg/L   | µg/L     | µg/L    | µg/L  | µg/L   | mg/L   | µg/L   | µg/L      | µg/L  | µg/L     | µg/L      | µg/L  | mg/L | mg/L | mg/L   | µg/L       | µg/L  | mg/L  | µg/L     | mg/L | µg/L     | µg/L    | µg/L  | µg/L   | µg/L     | µg/L   | µg/L    | µg/L   | µg/L   | µg/L    | µg/L   | µg/L        | µg/L   | µg/L | µg/L |
| LCD         | 5/12/2010 | 0.2700 | 3100.00  | 1.300  | <50.0    | 31.000  | 0.50  | <1.0   | 126.00 | 156.00 | 610.0000  | <1.0  | 51.4000  | 26100.00  | <0.02 | 1.98 | 0.02 | 171.00 | 84900.000  | <1.0  | 1.53  | 480.000  |      | 37.3000  | 567.00  | <0.5  | 0.4000 | 3050.00  | <5.0   | 406.00  | <5.0   | 0.25   | 8.1000  | <5.0   | 203000.000  | <0.5   |      |      |
| LCD         | 6/16/2010 | <0.4   | 11800.00 | 4.000  | <1000.0  | 22.000  | <2.0  | <20.0  | 212.00 | 544.00 | 2380.0000 | <20.0 | 244.0000 | 62400.00  |       | 3.00 | <0.1 | 583.00 | 318000.000 | <20.0 | 4.00  | 1680.000 |      | 320.0000 | 1720.00 | <10.0 | <2.0   | 8330.00  | <100.0 | 863.00  | <100.0 | <1.0   | 32.0000 | <100.0 | 887000.000  | <10.0  |      |      |
| LCD         | 7/14/2010 | 0.5600 | 13500.00 | 10.100 | 113.00   | 22.000  | 1.90  | <1.0   | 273.00 | 563.00 | 2880.0000 | 2.00  | 262.0000 | 93100.00  | <0.02 | 3.63 |      | 664.00 | 375000.000 | 9.00  | 5.31  | 1850.000 |      | 470.0000 | 1970.00 | <0.5  | 1.0000 | 12000.00 | <5.0   | 1130.00 | <5.0   | 1.46   | 47.3000 | <5.0   | 738000.000  | <0.5   |      |      |
| LCD         | 8/4/2010  | 1.0100 | 16900.00 | 8.500  | <50.0    | 33.000  | 2.40  | <1.0   | 312.00 | 684.00 | 3480.0000 | 4.00  | 310.0000 | 114000.00 |       | 4.48 | 0.10 | 820.00 | 506000.000 | 15.00 | 6.46  | 2280.000 |      | 545.0000 | 2520.00 | <0.5  | 0.5000 | 14400.00 | <5.0   | 1210.00 | <5.0   | 1.76   | 56.9000 | <5.0   | 1120000.000 | 0.60   |      |      |
| LCD         | 9/7/2010  | 1.0200 | 18400.00 | 4.300  | <50.0    | 20.000  | 2.50  | <1.0   | 316.00 | 791.00 | 3540.0000 | <1.0  | 326.0000 | 128000.00 |       | 3.98 | 0.11 | 839.00 | 457000.000 | 17.00 | 4.86  | 2430.000 |      | 541.0000 | 2330.00 | <0.5  | 0.5000 | 12500.00 | <5.0   | 1270.00 | <5.0   | 1.59   | 52.6000 | <5.0   | 1160000.000 | <0.5   |      |      |
| LCD         | 10/5/2010 | 0.8900 | 18600.00 | 10.600 | <50.0    | 114.000 | 2.40  | <1.0   | 347.00 | 682.00 | 3990.0000 | 14.00 | 326.0000 | 142000.00 |       | 5.60 | 0.11 | 888.00 | 497000.000 | 12.00 | 8.10  | 2460.000 |      | 543.0000 | 2670.00 | 1.10  | 0.5000 | 19000.00 | <5.0   | 1420.00 | 74.00  | 2.01   | 48.9000 | 7.00   | 1010000.000 | 2.00   |      |      |
| LCD Average |           | 0.6583 | 13716.67 | 6.467  | 118.83   | 40.333  | 1.78  | 2.08   | 264.33 | 570.00 | 2813.3333 | 5.17  | 253.2333 | 94266.67  | 0.01  | 3.78 | 0.08 | 660.83 | 372983.333 | 10.58 | 5.04  | 1863.333 |      | 409.3833 | 1962.83 | 1.18  | 0.6500 | 11546.67 | 10.42  | 1049.83 | 22.33  | 1.26   | 40.9667 | 11.17  | 853000.000  | 1.39   |      |      |
| LCD Max     |           | 1.0200 | 18600.00 | 10.600 | <1,000.0 | 114.000 | 2.50  | <20.0  | 347.00 | 791.00 | 3990.0000 | <20.0 | 326.0000 | 142000.00 | <0.02 | 5.60 | 0.11 | 888.00 | 506000.000 | <20.0 | 8.10  | 2460.000 |      | 545.0000 | 2670.00 | <10.0 | <2.0   | 19000.00 | <100.0 | 1420.00 | <100.0 | 2.01   | 56.9000 | <100.0 | 1160000.000 | <10.0  |      |      |
| LCD Min     |           | 0.2700 | 3100.00  | 1.300  | <50.0    | 20.000  | 0.50  | <1.0   | 126.00 | 156.00 | 610.0000  | <1.0  | 51.4000  | 26100.00  | <0.02 | 1.98 | 0.02 | 171.00 | 84900.000  | <1.0  | 1.53  | 480.000  |      | 37.3000  | 567.00  | <0.5  | 0.4000 | 3050.00  | <5.0   | 406.00  | <5.0   | 0.25   | 8.1000  | <5.0   | 203000.000  | <0.5   |      |      |
| LCD N > DL  |           | 5      | 6        | 6      | 1        | 6       | 5     | 0      | 6      | 6      | 6         | 3     | 6        | 6         | 0     | 6    | 4    | 6      | 6          | 6     | 4     | 6        | 6    | 0        | 6       | 6     | 1      | 5        | 6      | 0       | 6      | 1      | 5       | 6      | 1           | 6      | 2    |      |
| LCD Median  |           | 0.7250 | 15200.00 | 6.400  | <50.0    | 26.500  | 1.70  | <1.0   | 292.50 | 622.50 | 3180.0000 | 0.00  | 286.0000 | 103550.00 | <0.02 | 3.81 | <0.1 | 742.00 | 416000.000 | 13.50 | 5.09  | 2065.000 |      | 505.5000 | 2150.00 | <0.5  | 0.5000 | 12250.00 | <5.0   | 1170.00 | <5.0   | 1.5250 | 48.1000 | <5.0   | 948500.000  | 0.4250 |      |      |
| V1          | 1/7/2010  | <0.005 | 5.20     | 0.270  | <50.0    | 39.300  | <0.01 | <0.005 | 15.50  | <0.005 | 0.0120    | <0.1  | 0.2300   | 7.00      |       | 0.50 | 0.00 | 2.53   | 0.240      | 0.60  | 1.97  | 0.260    |      | 0.1400   | <3.0    | 0.04  | 0.1900 | 5090.00  | <0.01  | 77.40   | <0.5   | <0.002 | 1.0500  | <0.2   | 0.800       | <0.1   |      |      |
| V1          | 2/18/2010 | <0.005 | 5.00     | 0.280  | <50.0    | 35.900  | <0.01 | <0.005 | 16.30  | <0.005 | 0.0120    | <0.1  | 0.2100   | 5.00      |       | 0.54 | 0.00 | 2.68   | 0.280      | 0.64  | 2.00  | 0.210    |      | 0.0870   | 4.00    | 0.03  | 0.1700 | 4560.00  | <0.01  | 74.30   | <0.5   | <0.002 | 1.2500  | <0.2   | 0.800       | <0.1   |      |      |
| V1          | 3/29/2010 | <0.005 | 4.60     | 0.280  | <50.0    | 34.800  | <0.01 | <0.005 | 15.40  | <0.005 | 0.0120    | <0.1  | 0.2300   | 3.00      |       | 0.51 | 0.00 | 2.77   | 0.220      | 0.71  | 2.13  | 0.180    |      | 0.1040   | <10.0   | 0.04  | 0.2000 | 4850.00  | <0.01  | 76.10   | <0.5   | <0.002 | 1.4700  | <0.2   | 1.000       | <0.1   |      |      |
| V1          | 4/20/2010 | <0.005 | 5.70     | 0.240  | <50.0    | 37.400  | <0.01 | <0.005 | 14.60  | 0.01   | 0.0190    | <0.1  | 0.2500   | 7.00      |       | 0.56 | 0.00 | 2.43   | 0.640      | 0.60  | 1.76  | 0.180    |      | 0.3730   | <10.0   | 0.03  | 0.1800 | 4040.00  | <0.01  | 79.30   | <0.5   | <0.002 | 1.4100  | <0.2   | 0.800       | <0.1   |      |      |
| V1          | 5/12/2010 | <0.005 | 23.10    | 0.360  | <50.0    | 31.900  | <0.01 | <0.005 | 13.90  | 0.01   | 0.0380    | <0.1  | 0.6400   | 111.00    |       | 0.78 | 0.00 | 2.31   | 1.880      | 0.30  | 1.74  | 0.520    |      | 0.1070   | <10.0   | 0.04  | 0.1100 | 5120.00  | <0.01  | 70.00   | <0.5   | <0.002 | 0.6400  | <0.2   | 3.400       | <0.1   |      |      |
| V1          | 6/16/2010 | <0.005 | 21.10    | 0.230  | <50.0    | 16.900  | 0.02  | <0.005 | 6.39   | 0.01   | 0.0300    | <0.1  | 0.4500   | 32.00     |       | 0.31 | 0.00 | 1.00   | 2.580      | 0.19  | 1.29  | 0.270    |      | 0.9770   | <10.0   | 0.03  | 0.0500 | 3930.00  | <0.01  | 35.90   | <0.5   | <0.002 | 0.3310  | <0.2   | 4.600       | <0.1   |      |      |
| V1          | 7/14/2010 | <0.005 | 17.00    | 0.190  | <50.0    | 23.000  | <0.01 | <0.005 | 7.76   | 0.01   | 0.0170    | <0.1  | 0.3500   | 22.00     |       | 0.29 | 0.00 | 1.07   | 1.140      | 0.11  | 1.22  | 0.180    |      | 0.0870   | <10.0   | <0.02 | 0.0500 | 4090.00  | <0.01  | 43.60   | <0.5   | <0.002 | 0.2730  | <0.2   | 0.800       | <0.1   |      |      |
| V1          | 8/4/2010  | <0.005 | 8.50     | 0.270  | <50.0    | 28.900  | <0.01 | <0.005 | 11.30  | 0.01   | 0.0340    | <0.1  | 0.4600   | 11.00     |       | 0.41 | 0.00 | 1.79   | 2.730      | 0.21  | 1.81  | 0.250    |      | 0.1080   | <10.0   | 0.03  | 0.1000 | 4380.00  | <0.01  | 60.80   | <0.5   | <0.002 | 0.3910  | <0.2   | 5.900       | <0.1   |      |      |
| V1          | 9/7/2010  | <0.005 | 9.00     | 0.240  | <50.0    | 27.300  | <0.01 | <0.005 | 11.00  | 0.01   | 0.0110    | <0.1  | 0.3000   | 24.00     |       | 0.33 | 0.00 | 1.50   | 0.640      | 0.20  | 1.69  | 0.160    |      | 0.0910   | <10.0   | 0.70  | 0.0700 | 4520.00  | <0.01  | 56.40   | <0.5   | <0.002 | 0.3280  | <0.2   | 1.100       | <0.1   |      |      |
| V1          | 10/5/2010 | <0.005 | 9.20     | 0.230  | <50.0    | 29.800  | <0.01 | <0.005 | 12.30  | 0.01   | 0.0170    | <0.1  | 0.2800   | 16.00     |       | 0.42 | 0.00 | 1.90   | 0.760      | 0.30  | 1.94  | 0.200    |      | 0.1050   | <10.0   | 0.03  | 0.1000 | 5140.00  | <0.01  | 60.10   | <0.5   | <0.002 | 0.5260  | <0.2   | 0.800       | <0.1   |      |      |
| V1          | 11/1/2010 | <0.005 | 6.30     | 0.220  | <50.0    | 37.000  | <0.01 | <0.005 | 12.30  | 0.01   | 0.0150    | <0.1  | 0.3300   | 8.00      |       | 0.42 | 0.00 | 2.15   | 0.530      | 0.39  | 1.94  | 0.200    |      | 0.9620   | <10.0   | 0.03  | 0.1200 | 4640.00  | <0.01  | 68.70   | <0.5   | <0.002 | 0.5560  | <0.2   | 2.100       | <0.1   |      |      |
| V1          | 12/1/2010 | <0.005 | 6.90     | 0.250  | <50.0    | 36.200  | <0.01 | 0.01   | 14.90  | 0.01   | 0.0330    | <0.1  | 0.8900   | 23.00     |       | 0.52 | 0.00 | 2.47   | 3.280      | 0.48  | 2.04  | 0.290    |      | 1.3800   | <10.0   | 0.03  | 0.2100 | 5090.00  | <0.01  | 76.70   | <0.5   | <0.002 | 0.7610  | <0.2   | 6.400       | <0.1   |      |      |
| V1 Average  |           | 0.0025 | 10.13    | 0.255  | 25.00    | 31.533  | 0.01  | 0.00   | 12.64  | 0.01   | 0.0208    | 0.05  | 0.3850   | 22.42     |       | 0.47 | 0.00 | 2.05   | 1.243      | 0.39  | 1.79  | 0.242    |      | 0.3768   | 4.63    | 0.09  | 0.1292 | 4620.83  | 0.01   | 64.94   | 0.25   | 0.00   | 0.7488  | 0.10   | 2.375       | 0.05   |      |      |
| V1 Max      |           | <0.005 | 23.10    | 0.360  | <50.0    | 39.300  | 0.02  | 0.01   | 16.30  | 0.01   | 0.0380    | <0.1  | 0.8900   | 111.00    |       | 0.78 | 0.00 | 2.77   | 3.280      | 0.71  | 2.13  | 0.520    |      | 1.3800   | <10.0   | 0.70  | 0.2100 | 5140.00  | <0.01  | 79.30   | <0.5   | <0.002 | 1.4700  | <0.2   | 6.400       | <0.1   |      |      |
| V1 Min      |           | <0.005 | 4.60     | 0.190  | <50.0    | 16.900  | <0.01 | <0.005 | 6.39   | <0.005 | 0.0110    | <0.1  | 0.2100   | 3.00      |       | 0.29 | 0.00 | 1.00   | 0.220      | 0.11  | 1.22  | 0.160    |      | 0.0870   | <3.0    | <0.02 | 0.0500 | 3930.00  | <0.01  | 35.90   | <0.5   | <0.002 | 0.2730  | <0.2   | 0.800       | <0.1   |      |      |
| V1 N > DL   |           | 0      | 12       | 12     | 0        | 12      | 1     | 1      | 12     | 9      | 12        | 0     | 12       | 12        | 0     | 12   | 12   | 12     | 12         | 12    | 12    | 12       | 0    | 12       | 12      | 1     | 11     | 12       | 12     | 0       | 12     | 0      | 0       | 12     | 0           | 12     | 0    |      |
| V1 Median   |           | <0.005 | 7.70     | 0.245  | <50.0    | 33.350  | <0.01 | <0.005 | 13.10  | 0.01   | 0.0170    | <0.1  | 0.3150   | 13.50     |       | 0.46 | 0.00 | 2.23   | 0.700      | 0.35  | 1.88  | 0.205    |      | 0.1075   | <10.0   | 0.03  | 0.1150 | 4600.00  | <0.01  | 69.35   | <0.5   | <0.002 | 0.5980  | <0.2   | 1.050       | <0.1   |      |      |
| V17A        | 6/16/2010 | <0.005 | 46.40    | 1.060  | <50.0    | 18.100  | 0.03  | <0.005 | 13.10  | 0.08   | 0.2980    | <0.1  | 1.2800   | 171.00    |       | 0.29 | 0.00 | 3.32   | 47.400     | 0.06  | 1.55  | 0.610    |      | 1.0400   | <10.0   | 0.05  | <0.04  | 5030.00  | <0.01  | 59.40   | <0.5   | 0.00   | 0.8830  | <0.2   | 89.400      | 0.20   |      |      |
| V2          | 1/7/2010  | 0.0400 | 59.00    | 1.200  | <300.0   | 87.000  | <0.05 | <0.03  | 313.00 | 0.14   | 0.1800    | <0.5  | 1.4000   | 123.00    | <0.05 | 2.80 | 0.01 | 175.00 | 7.400      | 1.90  | 11.40 | 2.000    |      | 3.1100   | 380.00  | 0.30  | 0.6000 | 5660.00  | <0.05  | 929.00  | <3.0   | <0.01  | 29.3000 | <1.0   | 22.500      | <0.5   |      |      |
| V2          | 2/3/2010  | <0.03  | 13.00    | 0.800  | <300.0   | 67.800  | <0.05 | <0.03  | 366.00 | 0.18   | 0.1200    | <0.5  | 1.0000   | 29.00     | <0.05 | 2.88 | 0.01 | 214.00 | 3.300      | 1.70  | 11.90 | 2.500    |      | 0.8500   | 410.00  | 0.20  | 0.5000 | 5460.00  | <0.05  | 1070.00 | <3.0   | <0.01  | 32.3000 | <1.0   | 32.300      |        |      |      |

Table D-3: Vangorda Creek Drainage Water Quality  
2010 - Surface Water - Total Metals

| Station     | Date       | Ag     | Al      | As    | B      | Ba     | Be    | Bi     | Ca     | Cd     | Co       | Cr   | Cu        | Fe       | Hg    | K    | Li     | Mg        | Mn       | Mo    | Na      | Ni     | P        | Pb     | S      | Sb     | Se      | Si      | Sn      | Sr      | Ti   | Tl      | U      | V          | Zn      | Zr   |      |
|-------------|------------|--------|---------|-------|--------|--------|-------|--------|--------|--------|----------|------|-----------|----------|-------|------|--------|-----------|----------|-------|---------|--------|----------|--------|--------|--------|---------|---------|---------|---------|------|---------|--------|------------|---------|------|------|
|             |            | µg/L   | µg/L    | µg/L  | µg/L   | µg/L   | µg/L  | µg/L   | mg/L   | µg/L   | µg/L     | µg/L | µg/L      | µg/L     | µg/L  | mg/L | mg/L   | mg/L      | µg/L     | µg/L  | mg/L    | µg/L   | µg/L     | µg/L   | µg/L   | µg/L   | µg/L    | µg/L    | µg/L    | µg/L    | µg/L | µg/L    | µg/L   | µg/L       | µg/L    | µg/L | µg/L |
| V23         | 3/4/2010   | <0.005 | 9.20    | 1.590 | <50.0  | 71.600 | <0.01 | <0.005 | 125.00 | 1.08   | 6.0600   | <0.1 | 1.1600    | 36.00    | 3.28  | 0.02 | 70.40  | 196.000   | 2.94     | 12.20 | 99.600  |        | 1.0700   | 160.00 | 3.33   | 3.2300 | 4950.00 | <0.01   | 777.00  | <0.5    | 0.50 | 14.0000 | 0.30   | 3110.000   | <0.1    |      |      |
| V23         | 6/16/2010  | <0.005 | 53.00   | 2.980 | <50.0  | 45.200 | 0.02  | 0.01   | 104.00 | 1.84   | 3.9600   | 0.50 | 2.1800    | 400.00   | 2.74  | 0.02 | 60.90  | 82.300    | 2.59     | 8.48  | 109.000 |        | 13.1000  | 156.00 | 3.58   | 1.2900 | 3150.00 | 0.02    | 695.00  | 0.90    | 0.57 | 11.5000 | 1.70   | 3830.000   | 0.20    |      |      |
| V23         | 9/7/2010   | 0.0070 | 28.80   | 1.930 | <50.0  | 46.800 | <0.01 | <0.005 | 114.00 | 0.90   | 3.6500   | 0.20 | 1.3400    | 134.00   | 3.09  | 0.02 | 65.70  | 69.300    | 2.55     | 9.73  | 97.900  | <0.002 | 2.6700   | 153.00 | 3.77   | 1.4400 | 2820.00 | <0.01   | 702.00  | 1.10    | 0.86 | 8.5500  | 0.30   | 2010.000   | <0.1    |      |      |
| V23         | 12/16/2010 | <0.005 | 13.80   | 1.980 | <50.0  | 60.700 | <0.01 | <0.005 | 160.00 | 1.26   | 5.8100   | <0.1 | 1.7000    | 88.00    | 4.83  | 0.03 | 90.80  | 161.000   | 2.89     | 13.40 | 146.000 |        | 2.6200   | 212.00 | 4.42   | 1.8900 | 4520.00 | 0.03    | 1010.00 | <0.5    | 0.99 | 14.1000 | <0.2   | 5140.000   | <0.1    |      |      |
| V23 Average |            | 0.0036 | 26.20   | 2.120 | 25.00  | 56.075 | 0.01  | 0.00   | 125.75 | 1.27   | 4.8700   | 0.20 | 1.5950    | 164.50   | 3.49  | 0.03 | 71.95  | 127.150   | 2.74     | 10.95 | 113.125 | 0.00   | 4.8650   | 170.25 | 3.78   | 1.9625 | 3860.00 | 0.02    | 796.00  | 0.63    | 0.73 | 12.0375 | 0.60   | 3522.500   | 0.09    |      |      |
| V23 Max     |            | 0.0070 | 53.00   | 2.980 | <50.0  | 71.600 | 0.02  | 0.01   | 160.00 | 1.84   | 6.0600   | 0.50 | 2.1800    | 400.00   | 4.83  | 0.03 | 90.80  | 196.000   | 2.94     | 13.40 | 146.000 | 0.01   | 13.1000  | 212.00 | 4.42   | 3.2300 | 4950.00 | 0.03    | 1010.00 | 1.10    | 0.99 | 14.1000 | 1.70   | 5140.000   | 0.20    |      |      |
| V23 Min     |            | <0.005 | 9.20    | 1.590 | <50.0  | 45.200 | <0.01 | <0.005 | 104.00 | 0.90   | 3.6500   | <0.1 | 1.1600    | 36.00    | 2.74  | 0.02 | 60.90  | 69.300    | 2.55     | 8.48  | 97.900  | <0.002 | 1.0700   | 153.00 | 3.33   | 1.2900 | 2820.00 | <0.01   | 695.00  | <0.5    | 0.50 | 8.5500  | <0.2   | 2010.000   | <0.1    |      |      |
| V23 N > DL  |            | 1      | 4       | 4     | 0      | 4      | 1     | 1      | 4      | 4      | 4        | 4    | 2         | 4        | 4     | 4    | 4      | 4         | 4        | 4     | 4       | 4      | 1        | 4      | 4      | 4      | 4       | 4       | 2       | 4       | 4    | 2       | 4      | 4          | 3       | 4    | 1    |
| V23 Median  |            | <0.005 | 21.30   | 1.955 | <50.0  | 53.750 | <0.01 | <0.005 | 119.50 | 1.17   | 4.8850   | 0.13 | 1.5200    | 111.00   | 3.19  | 0.02 | 68.05  | 121.650   | 2.74     | 10.97 | 104.300 | 0.00   | 2.6450   | 158.00 | 3.68   | 1.6650 | 3835.00 | 0.01    | 739.50  | 0.58    | 0.71 | 12.7500 | 0.30   | 3470.000   | <0.1    |      |      |
| V24         | 6/22/2010  | 0.2000 | 3330.00 | 4.500 | <300.0 | 33.000 | 0.60  | <5.0   | 173.00 | 149.00 | 661.0000 | <5.0 | 1170.0000 | 48200.00 | 2.30  | 0.04 | 118.00 | 47800.000 | <5.0     | 4.20  | 525.000 |        | 358.0000 | 497.00 | <3.0   | <0.5   | 4350.00 | <30.0   | 913.00  | <30.0   | 1.40 | 7.4000  | <30.0  | 183000.000 | <3.0    |      |      |
| V24         | 6/29/2010  | 0.1000 | 2770.00 | 3.300 | <200.0 | 31.000 | <0.4  | <4.0   | 177.00 | 147.00 | 650.0000 | <4.0 | 1060.0000 | 46400.00 | 2.20  | 0.04 | 106.00 | 44300.000 | <4.0     | 4.20  | 518.000 |        | 373.0000 | 421.00 | <2.0   | <0.4   | 4710.00 | <20.0   | 892.00  | <20.0   | 1.90 | 7.3000  | <20.0  | 167000.000 | <2.0    |      |      |
| V24         | 7/6/2010   | 0.1700 | 2570.00 | 3.900 | 62.00  | 26.000 | 0.40  | <1.0   | 178.00 | 130.00 | 629.0000 | <1.0 | 876.0000  | 45300.00 | 2.33  | 0.04 | 102.00 | 45900.000 | <1.0     | 3.69  | 497.000 |        | 383.0000 | 459.00 | <0.5   | 0.2000 | 4660.00 | <5.0    | 900.00  | <5.0    | 1.97 | 6.1000  | <5.0   | 146000.000 | <0.5    |      |      |
| V24         | 7/13/2010  | 0.0800 | 2340.00 | 6.500 | <100.0 | 31.000 | 0.50  | <2.0   | 202.00 | 138.00 | 705.0000 | <2.0 | 838.0000  | 50200.00 | 2.60  | 0.05 | 111.00 | 49500.000 | <2.0     | 4.00  | 564.000 |        | 452.0000 | 524.00 | <1.0   | 0.3000 | 4970.00 | <10.0   | 1000.00 | <10.0   | 2.00 | 6.0000  | <10.0  | 176000.000 | <1.0    |      |      |
| V24 Average |            | 0.1375 | 2752.50 | 4.550 | 90.50  | 30.250 | 0.43  | 1.50   | 182.50 | 141.00 | 661.2500 | 1.50 | 986.0000  | 47525.00 | 2.36  | 0.04 | 109.25 | 46875.000 | 1.50     | 4.02  | 526.000 |        | 391.5000 | 475.25 | 0.81   | 0.2375 | 4672.50 | 8.13    | 926.25  | 8.13    | 1.82 | 6.7000  | 8.13   | 168000.000 | 0.81    |      |      |
| V24 Max     |            | 0.2000 | 3330.00 | 6.500 | <300.0 | 33.000 | 0.60  | <5.0   | 202.00 | 149.00 | 705.0000 | <5.0 | 1170.0000 | 50200.00 | 2.60  | 0.05 | 118.00 | 49500.000 | <5.0     | 4.20  | 564.000 |        | 452.0000 | 524.00 | <3.0   | <0.5   | 4970.00 | <30.0   | 1000.00 | <30.0   | 2.00 | 7.4000  | <30.0  | 183000.000 | <3.0    |      |      |
| V24 Min     |            | 0.0800 | 2340.00 | 3.300 | 62.00  | 26.000 | 0.40  | <1.0   | 173.00 | 130.00 | 629.0000 | <1.0 | 838.0000  | 45300.00 | 2.20  | 0.04 | 102.00 | 44300.000 | <1.0     | 3.69  | 497.000 |        | 358.0000 | 421.00 | <0.5   | 0.2000 | 4350.00 | <5.0    | 900.00  | <5.0    | 1.40 | 6.0000  | <5.0   | 146000.000 | <0.5    |      |      |
| V24 N > DL  |            | 4      | 4       | 4     | 1      | 4      | 3     | 0      | 4      | 4      | 4        | 4    | 4         | 4        | 4     | 4    | 4      | 4         | 4        | 4     | 4       | 0      | 4        | 4      | 4      | 4      | 2       | 4       | 4       | 0       | 4    | 4       | 0      | 4          | 4       | 0    |      |
| V24 Median  |            | 0.1350 | 2670.00 | 4.200 | 75.0   | 31.000 | 0.45  | 1.50   | 177.50 | 142.50 | 655.5000 | 1.50 | 968.0000  | 47300.00 | 2.32  | 0.04 | 108.50 | 46850.000 | 1.50     | 4.10  | 521.500 |        | 378.0000 | 478.00 | 0.7500 | 0.2750 | 4685.00 | 7.50    | 906.50  | 7.50    | 1.94 | 6.7000  | 7.50   | 171500.000 | 0.7500  |      |      |
| V25         | 6/22/2010  | <0.03  | 41.00   | <0.1  | <300.0 | 23.100 | <0.05 | <0.03  | 379.00 | 1.85   | 2.2700   | <0.5 | 4.8000    | 175.00   | <0.05 | 2.20 | 0.04   | 64.70     | 794.000  | <0.3  | 3.80    | 2.000  |          | 0.7700 | 479.00 | <0.1   | 0.3000  | <500.00 | <0.05   | 1160.00 | <3.0 | 0.16    | 0.1200 | <1.0       | 600.000 | <0.5 |      |
| V25         | 6/29/2010  | <0.03  | 17.00   | <0.1  | <300.0 | 23.100 | <0.05 | <0.03  | 451.00 | 1.32   | 0.5100   | <0.5 | 0.5000    | 15.00    | 2.50  | 0.04 | 79.40  | 1740.000  | <0.3     | 4.20  | 0.600   |        | 0.9500   | 506.00 | <0.1   | <0.2   | <500.00 | <0.05   | 1370.00 | <3.0    | 0.39 | 0.1300  | <1.0   | 97.500     | <0.5    |      |      |
| V25         | 7/6/2010   | <0.03  | 9.00    | <0.1  | <300.0 | 20.000 | <0.05 | <0.03  | 462.00 | 1.07   | 0.4700   | <0.5 | 0.4000    | 15.00    | 2.90  | 0.05 | 98.30  | 1130.000  | <0.3     | 4.90  | 0.600   |        | 0.3000   | 564.00 | <0.1   | <0.2   | <500.00 | <0.05   | 1450.00 | <3.0    | 1.34 | 0.1300  | <1.0   | 58.900     | <0.5    |      |      |
| V25         | 7/13/2010  | <0.03  | 13.00   | <0.1  | <300.0 | 19.700 | <0.05 | <0.03  | 500.00 | 1.40   | 0.7700   | <0.5 | 0.7000    | 24.00    | 3.00  | 0.05 | 105.00 | 1730.000  | 0.40     | 7.30  | 0.800   |        | 0.8400   | 558.00 | <0.1   | <0.2   | <500.00 | <0.05   | 1630.00 | <3.0    | 1.60 | 0.1100  | <1.0   | 63.700     | <0.5    |      |      |
| V25         | 8/12/2010  | <0.03  | 63.00   | 0.200 | <300.0 | 25.100 | <0.05 | <0.03  | 489.00 | 0.47   | 0.9100   | <0.5 | 0.4000    | 120.00   | <0.05 | 3.10 | 0.05   | 105.00    | 183.000  | 0.40  | 5.00    | 1.400  |          | 0.4700 | 577.00 | 0.20   | <0.2    | 556.00  | <0.05   | 1650.00 | <3.0 | 1.30    | 0.3100 | <1.0       | 95.000  | <0.5 |      |
| V25 Average |            | 0.0150 | 28.60   | 0.080 | 150.00 | 22.200 | 0.03  | 0.02   | 456.20 | 1.22   | 0.9860   | 0.25 | 1.3600    | 69.80    | 0.03  | 2.74 | 0.05   | 90.48     | 1115.400 | 0.25  | 5.04    | 1.080  |          | 0.6660 | 536.80 | 0.08   | 0.1400  | 311.20  | 0.03    | 1452.00 | 1.50 | 0.96    | 0.1600 | 0.50       | 183.020 | 0.25 |      |
| V25 Max     |            | <0.03  | 63.00   | 0.200 | <300.0 | 25.100 | <0.05 | <0.03  | 500.00 | 1.85   | 2.2700   | <0.5 | 4.8000    | 175.00   | <0.05 | 3.10 | 0.05   | 105.00    | 1740.000 | 0.40  | 7.30    | 2.000  |          | 0.9500 | 577.00 | 0.20   | 0.3000  | 556.00  | <0.05   | 1650.00 | <3.0 | 1.60    | 0.3100 | <1.0       | 600.000 | <0.5 |      |
| V25 Min     |            | <0.03  | 9.00    | <0.1  | <300.0 | 19.700 | <0.05 | <0.03  | 379.00 | 0.47   | 0.4700   | <0.5 | 0.4000    | 15.00    | <0.05 | 2.20 | 0.04   | 64.70     | 183.000  | <0.3  | 3.80    | 0.600  |          | 0.3000 | 479.00 | <0.1   | <0.2    | <500.00 | <0.05   | 1160.00 | <3.0 | 0.16    | 0.1100 | <1.0       | 58.900  | <0.5 |      |
| V25 N > DL  |            | 0      | 5       | 1     | 0      | 5      | 0     | 0      | 5      | 5      | 5        | 0    | 5         | 5        | 0     | 5    | 5      | 5         | 5        | 5     | 5       | 0      | 5        | 5      | 5      | 5      | 1       | 1       | 1       | 0       | 5    | 0       | 5      | 0          | 5       | 0    |      |
| V25 Median  |            | <0.03  | 17.00   | <0.1  | <300.0 | 23.100 | <0.05 | <0.03  | 462.00 | 1.32   | 0.7700   | <0.5 | 0.5000    | 24.00    | <0.05 | 2.90 | 0.05   | 98.30     | 1130.000 | <0.3  | 4.90    | 0.800  |          | 0.7700 | 558.00 | <0.1   | <0.2    | <500.00 | <0.05   | 1450.00 | <3.0 | 1.30    | 0.1300 | <1.0       | 95.000  | <0.5 |      |
| V25BSP      | 4/27/2010  | <0.005 | 9.80    | 0.130 | <50.0  | 16.700 | <0.01 | <0.005 | 99.00  | 0.09   | 0.1290   | <0.1 | 1.8500    | 34.00    | <0.01 | 1.54 | 0.01   | 18.40     | 13.200   | 0.27  | 4.20    | 0.400  |          | 1.1700 | 103.00 | 0.15   | 0.4700  | 4910.00 | <0.01   | 318.00  | <0.5 | 0.03    | 0.5700 | <0.2       | 38.800  | <0.1 |      |
| V25BSP      | 5/11/2010  | <0.005 | 155.00  | 0.390 | <50.0  | 10.000 | <0.01 | <0.005 | 43.80  | 0.11   | 1.3300   | 0.20 | 6.2400    | 182.00   | <0.01 | 1.16 | 0.00   | 7.50      | 15.000   | 0.53  | 1.96    | 1.230  |          | 2.0200 | 35.00  | 0.13   | 0.2100  | 3040.00 | <0.01   | 143.00  | 3.80 | 0.08    | 0.8590 | 0.30       | 44.700  | 0.20 |      |
| V25BSP      | 6/15/2010  | <0.005 | 17.00   | 0.300 | <50.0  | 14.700 | <0.01 | <0.005 | 58.90  | 0.11   | 0.3030   | <0.1 | 9.8100    | 8.00     | <0.01 | 1.27 | 0.00   | 12.40     | 5.500    | 0.92  | 3.21    | 2.210  |          | 0.4030 | 59.00  | 0.23   | 0.2400  | 3470.00 | <0.01   | 217.00  | <0.5 | 0.10    | 1.2900 | <0.2       | 32.600  | <0.1 |      |
| V25BSP      | 6/22/2010  | <0.005 | 122.00  | 0.640 | <50.0  | 21.500 | <0.01 | 0.01   | 53.90  | 0.19   | 2.3700   | 0.20 | 8.0600    | 163.00   | <0.01 | 1.29 | 0.00   | 11.70     | 57.400   | 0.47  | 3.28    | 2.060  |          | 3.4100 | 47.00  | 0.22   | 0.2300  | 3010.00 | <0.01</ |         |      |         |        |            |         |      |      |

Table D-3: Vangorda Creek Drainage Water Quality  
2010 - Surface Water - Total Metals

| Station     | Date       | Ag     | Al    | As    | B      | Ba     | Be    | Bi     | Ca     | Cd   | Co     | Cr    | Cu       | Fe     | Hg   | K    | Li     | Mg      | Mn   | Mo    | Na     | Ni   | P       | Pb     | S    | Sb     | Se      | Si    | Sn      | Sr   | Ti     | Tl      | U    | V        | Zn   | Zr   |
|-------------|------------|--------|-------|-------|--------|--------|-------|--------|--------|------|--------|-------|----------|--------|------|------|--------|---------|------|-------|--------|------|---------|--------|------|--------|---------|-------|---------|------|--------|---------|------|----------|------|------|
|             |            | µg/L   | µg/L  | µg/L  | µg/L   | µg/L   | µg/L  | µg/L   | mg/L   | µg/L | µg/L   | µg/L  | µg/L     | µg/L   | µg/L | mg/L | mg/L   | mg/L    | µg/L | µg/L  | mg/L   | µg/L | µg/L    | µg/L   | µg/L | µg/L   | µg/L    | µg/L  | µg/L    | µg/L | µg/L   | µg/L    | µg/L | µg/L     | µg/L | µg/L |
| V2A         | 2/3/2010   | <0.03  | 38.00 | 1.100 | <300.0 | 95.400 | <0.05 | <0.03  | 355.00 | 0.37 | 0.1700 | <0.5  | 1.8000   | 91.00  | 4.02 | 0.01 | 218.00 | 9.200   | 2.40 | 14.20 | 32.700 |      | 3.3300  | 385.00 | 0.40 | 0.6000 | 5780.00 | <0.05 | 1130.00 | <3.0 | 0.02   | 41.7000 | <1.0 | 667.000  | <0.5 |      |
| V2A         | 3/2/2010   | <0.03  | 17.00 | 1.200 | <300.0 | 66.000 | <0.05 | <0.03  | 286.00 | 0.39 | 0.3500 | <0.5  | 1.5000   | 55.00  | 3.14 | 0.01 | 189.00 | 23.400  | 2.00 | 11.60 | 29.300 |      | 2.8100  | 402.00 | 0.40 | 0.7000 | 5490.00 | <0.05 | 882.00  | <3.0 | <0.01  | 34.8000 | <1.0 | 710.000  | <0.5 |      |
| V2A         | 4/7/2010   | <0.03  | 27.00 | 1.100 | <300.0 | 75.400 | <0.05 | <0.03  | 269.00 | 0.47 | 0.2300 | <0.5  | 1.5000   | 49.00  | 3.00 | 0.01 | 174.00 | 13.600  | 2.20 | 10.50 | 30.400 |      | 2.2900  | 394.00 | 0.50 | 0.6000 | 5010.00 | <0.05 | 859.00  | <3.0 | <0.01  | 32.5000 | <1.0 | 736.000  | <0.5 |      |
| V2A         | 5/1/2010   | <0.03  | 52.00 | 1.500 | <300.0 | 59.400 | <0.05 | <0.03  | 217.00 | 0.29 | 0.3900 | <0.5  | 1.9000   | 109.00 | 3.10 | 0.01 | 142.00 | 24.000  | 1.90 | 8.10  | 25.100 |      | 3.4000  | 309.00 | 0.40 | 0.7000 | 4680.00 | 0.15  | 712.00  | 4.00 | 0.02   | 24.2000 | <1.0 | 514.000  | <0.5 |      |
| V2A         | 5/18/2010  | <0.03  | 8.00  | 1.200 | <300.0 | 54.000 | <0.05 | <0.03  | 250.00 | 0.33 | 0.2600 | <0.5  | 1.2000   | 17.00  | 3.30 | 0.01 | 181.00 | 7.300   | 1.90 | 9.50  | 42.000 |      | 0.5400  | 391.00 | 0.50 | 0.6000 | 4460.00 | <0.05 | 869.00  | <3.0 | 0.04   | 33.7000 | <1.0 | 747.000  | <0.5 |      |
| V2A         | 6/2/2010   | <0.03  | 6.00  | 1.100 | <300.0 | 54.600 | <0.05 | <0.03  | 288.00 | 0.42 | 0.1100 | <0.5  | 1.2000   | 18.00  | 3.80 | 0.01 | 211.00 | 4.600   | 2.20 | 10.70 | 46.400 |      | 0.4200  | 442.00 | 0.40 | 0.6000 | 5050.00 | <0.05 | 895.00  | <3.0 | 0.03   | 36.3000 | <1.0 | 794.000  | <0.5 |      |
| V2A         | 6/15/2010  | <0.03  | 7.00  | 1.200 | <300.0 | 55.300 | <0.05 | <0.03  | 277.00 | 0.47 | 0.0900 | <0.5  | 1.3000   | 17.00  | 4.40 | 0.01 | 242.00 | 5.000   | 2.10 | 11.60 | 53.600 |      | 0.7700  | 447.00 | 0.50 | 0.6000 | 4570.00 | <0.05 | 1000.00 | <3.0 | 0.03   | 36.6000 | <1.0 | 907.000  | <0.5 |      |
| V2A         | 7/7/2010   | <0.03  | 9.00  | 1.000 | <300.0 | 55.200 | <0.05 | <0.03  | 292.00 | 0.50 | 0.0700 | <0.5  | 1.3000   | 23.00  | 4.10 | 0.01 | 227.00 | 2.500   | 2.50 | 10.60 | 51.900 |      | 1.3200  | 427.00 | 0.60 | 0.5000 | 4990.00 | 0.17  | 981.00  | <3.0 | 0.03   | 35.8000 | <1.0 | 811.000  | <0.5 |      |
| V2A         | 7/22/2010  | <0.03  | 9.00  | 1.100 | <300.0 | 53.700 | <0.05 | <0.03  | 279.00 | 0.45 | 0.0700 | <0.5  | 1.2000   | 16.00  | 3.80 | 0.01 | 212.00 | 2.000   | 2.10 | 9.70  | 53.900 |      | 0.5400  | 436.00 | 0.60 | 0.5000 | 4650.00 | <0.05 | 1010.00 | <3.0 | 0.03   | 40.5000 | <1.0 | 795.000  | <0.5 |      |
| V2A         | 8/5/2010   | <0.03  | 9.00  | 1.300 | <300.0 | 52.800 | <0.05 | <0.03  | 308.00 | 0.63 | 0.0800 | <0.5  | 1.6000   | 25.00  | 4.40 | 0.02 | 264.00 | 2.700   | 1.90 | 11.40 | 68.100 |      | 1.0800  | 471.00 | 0.60 | 0.6000 | 4850.00 | <0.05 | 1070.00 | <3.0 | 0.04   | 49.4000 | <1.0 | 1120.000 | <0.5 |      |
| V2A         | 8/18/2010  | <0.03  | 27.00 | 1.100 | <300.0 | 60.600 | <0.05 | <0.03  | 310.00 | 0.51 | 0.0700 | <0.5  | 1.4000   | 63.00  | 4.80 | 0.02 | 258.00 | 3.000   | 1.90 | 11.60 | 58.600 |      | 1.7300  | 495.00 | 0.50 | 0.4000 | 5640.00 | <0.05 | 1080.00 | <3.0 | 0.03   | 42.6000 | <1.0 | 882.000  | <0.5 |      |
| V2A         | 9/7/2010   | <0.03  | 9.00  | 1.000 | <300.0 | 57.300 | <0.05 | <0.03  | 304.00 | 0.56 | 0.0600 | 0.80  | 1.3000   | 19.00  | 4.70 | 0.02 | 247.00 | 2.300   | 1.90 | 12.20 | 59.300 |      | 0.5700  | 478.00 | 1.10 | 0.5000 | 4810.00 | <0.05 | 1050.00 | <3.0 | 0.02   | 40.1000 | <1.0 | 951.000  | <0.5 |      |
| V2A         | 9/23/2010  | 0.0080 | 14.20 | 1.090 | <50.0  | 56.800 | <0.01 | <0.005 | 257.00 | 0.50 | 0.0710 | 0.50  | 1.3400   | 54.00  | 3.91 | 0.01 | 215.00 | 2.570   | 1.84 | 10.40 | 53.500 |      | 0.9870  | 448.00 | 0.42 | 0.5600 | 4680.00 | 0.02  | 923.00  | <0.5 | 0.02   | 38.2000 | 0.50 | 913.000  | <0.1 |      |
| V2A         | 10/7/2010  | <0.03  | 10.00 | 0.900 | <300.0 | 63.000 | <0.05 | <0.03  | 305.00 | 0.57 | 0.0800 | <0.5  | 1.3000   | 17.00  | 4.40 | 0.01 | 244.00 | 1.500   | 1.70 | 12.10 | 57.900 |      | 0.4800  | 479.00 | 0.40 | 0.5000 | 5720.00 | <0.05 | 998.00  | <3.0 | 0.02   | 39.0000 | <1.0 | 1010.000 | <0.5 |      |
| V2A         | 10/21/2010 | <0.03  | 25.00 | 1.000 | <300.0 | 59.400 | <0.05 | <0.03  | 288.00 | 0.58 | 0.1100 | <0.5  | 1.3000   | 47.00  | 3.80 | 0.01 | 214.00 | 2.700   | 1.60 | 10.90 | 52.600 |      | 1.2200  | 450.00 | 0.40 | 0.5000 | 5310.00 | <0.05 | 978.00  | <3.0 | 0.02   | 39.1000 | <1.0 | 1060.000 | <0.5 |      |
| V2A         | 11/4/2010  | <0.005 | 30.60 | 1.270 | <50.0  | 54.100 | <0.01 | <0.005 | 295.00 | 0.46 | 0.1110 | 0.30  | 1.4800   | 81.00  | 3.84 | 0.01 | 220.00 | 4.120   | 1.71 | 12.00 | 51.000 |      | 2.2100  | 439.00 | 0.43 | 0.4600 | 5300.00 | <0.01 | 1010.00 | 0.70 | 0.02   | 37.6000 | <0.2 | 880.000  | 0.20 |      |
| V2A Average |            | 0.0138 | 18.61 | 1.135 | 134.38 | 60.813 | 0.02  | 0.01   | 286.25 | 0.47 | 0.1451 | 0.30  | 1.4138   | 43.81  | 3.91 | 0.01 | 216.13 | 6.906   | 1.99 | 11.07 | 47.894 |      | 1.4811  | 430.81 | 0.51 | 0.5575 | 5061.88 | 0.04  | 965.44  | 1.53 | 0.02   | 37.6313 | 0.48 | 843.563  | 0.23 |      |
| V2A Max     |            | <0.03  | 52.00 | 1.500 | <300.0 | 95.400 | <0.05 | <0.03  | 355.00 | 0.63 | 0.3900 | 0.80  | 1.9000   | 109.00 | 4.80 | 0.02 | 264.00 | 24.000  | 2.50 | 14.20 | 68.100 |      | 3.4000  | 495.00 | 1.10 | 0.7000 | 5780.00 | 0.17  | 1130.00 | 4.00 | 0.04   | 49.4000 | <1.0 | 1120.000 | <0.5 |      |
| V2A Min     |            | <0.005 | 6.00  | 0.900 | <50.0  | 52.800 | <0.01 | <0.005 | 217.00 | 0.29 | 0.0600 | 0.30  | 1.2000   | 16.00  | 3.00 | 0.01 | 142.00 | 1.500   | 1.60 | 8.10  | 25.100 |      | 0.4200  | 309.00 | 0.40 | 0.4000 | 4460.00 | <0.01 | 712.00  | <0.5 | <0.01  | 24.2000 | <0.2 | 514.000  | <0.1 |      |
| V2A N > DL  |            | 1      | 16    | 16    | 0      | 16     | 0     | 0      | 16     | 16   | 16     | 3     | 16       | 16     | 0    | 16   | 16     | 16      | 16   | 16    | 16     | 0    | 16      | 16     | 16   | 16     | 16      | 16    | 3       | 16   | 2      | 14      | 16   | 1        | 16   | 1    |
| V2A Median  |            | <02.03 | 12.10 | 1.100 | <300.0 | 57.050 | <0.05 | <0.03  | 288.00 | 0.47 | 0.1000 | <0.05 | 1.3200   | 36.00  | 3.88 | 0.01 | 216.50 | 3.560   | 1.90 | 11.15 | 52.250 |      | 1.1500  | 440.50 | 0.47 | 0.5800 | 5000.00 | <0.05 | 989.50  | <3.0 | 0.02   | 37.9000 | <1.0 | 845.500  | <0.5 |      |
| V4          | 1/18/2010  | <0.005 | 4.50  | 0.600 | <50.0  | 84.500 | <0.01 | <0.005 | 94.20  | 0.03 | 0.0610 | <0.1  | 0.5400   | 183.00 | 1.26 | 0.01 | 36.20  | 60.300  | 1.10 | 3.87  | 0.690  |      | 10.8000 | 28.00  | 0.12 | 0.9000 | 5300.00 | <0.01 | 387.00  | <0.5 | 0.01   | 13.2000 | <0.2 | 7.800    | <0.1 |      |
| V4          | 2/24/2010  | <0.005 | 3.10  | 0.650 | <50.0  | 88.900 | <0.01 | <0.005 | 98.60  | 0.01 | 0.0630 | <0.1  | 0.3800   | 249.00 | 1.26 | 0.01 | 38.80  | 78.700  | 1.06 | 4.17  | 0.690  |      | 0.0250  | 33.00  | 0.07 | 1.1300 | 5830.00 | <0.01 | 411.00  | <0.5 | <0.002 | 13.8000 | <0.2 | 1.200    | <0.1 |      |
| V4          | 3/29/2010  | <0.005 | 21.10 | 1.300 | <50.0  | 88.600 | <0.01 | <0.005 | 94.00  | 0.02 | 0.1170 | <0.1  | 5.9900   | 816.00 | 1.24 | 0.01 | 38.30  | 109.000 | 1.18 | 4.24  | 0.840  |      | 0.9150  | 29.00  | 0.10 | 0.8400 | 5520.00 | 0.05  | 398.00  | <0.5 | <0.002 | 15.9000 | <0.2 | 9.900    | <0.1 |      |
| V4          | 4/20/2010  | <0.005 | 18.00 | 1.060 | <50.0  | 63.900 | <0.01 | <0.005 | 65.50  | 0.02 | 0.0870 | <0.1  | 0.7100   | 556.00 | 1.48 | 0.00 | 27.60  | 58.000  | 1.10 | 2.81  | 0.720  |      | 0.1350  | 19.00  | 0.10 | 0.5200 | 4110.00 | 0.02  | 279.00  | 1.30 | <0.002 | 9.1300  | <0.2 | 1.600    | <0.1 |      |
| V4          | 5/12/2010  | <0.005 | 64.90 | 0.900 | <50.0  | 54.000 | <0.01 | <0.005 | 49.60  | 0.03 | 0.2280 | <0.1  | 1.4300   | 399.00 | 1.04 | 0.00 | 16.90  | 51.000  | 0.96 | 1.78  | 1.380  |      | 0.8450  | <10.0  | 0.15 | 0.6800 | 4400.00 | <0.01 | 200.00  | 3.30 | <0.002 | 5.0900  | <0.2 | 4.200    | 0.20 |      |
| V4          | 6/16/2010  | <0.005 | 20.40 | 0.740 | <50.0  | 65.300 | <0.01 | <0.005 | 68.80  | 0.01 | 0.0380 | 0.20  | 225.0000 | 136.00 | 0.79 | 0.00 | 25.30  | 17.100  | 1.39 | 2.45  | 0.830  |      | 0.1480  | 19.00  | 0.18 | 0.6900 | 4830.00 | 0.05  | 293.00  | <0.5 | <0.002 | 8.7000  | <0.2 | 1.900    | <0.1 |      |
| V4          | 7/14/2010  | <0.005 | 5.30  | 0.720 | <50.0  | 82.400 | <0.01 | <0.005 | 87.00  | 0.03 | 0.0430 | <0.1  | 0.6200   | 127.00 | 0.94 | 0.00 | 27.10  | 24.400  | 1.17 | 2.72  | 0.680  |      | 1.4000  | 22.00  | 0.10 | 0.5100 | 4700.00 | <0.01 | 337.00  | <0.5 | <0.002 | 8.1800  | <0.2 | 5.900    | <0.1 |      |
| V4          | 8/4/2010   | <0.005 | 4.50  | 0.850 | <50.0  | 77.700 | <0.01 | <0.005 | 80.20  | 0.01 | 0.0710 | 0.30  | 0.6000   | 174.00 | 0.96 | 0.01 | 32.00  | 37.900  | 1.31 | 3.30  | 0.760  |      | 0.1550  | 25.00  | 0.11 | 0.5400 | 4880.00 | <0.01 | 349.00  | <0.5 | <0.002 | 10.5000 | <0.2 | 4.400    | <0.1 |      |
| V4          | 9/7/2010   | <0.005 | 5.00  | 0.850 | <50.0  | 77.800 | <0.01 | <0.005 | 85.90  | 0.01 | 0.0510 | <0.1  | 0.5000   | 252.00 | 1.06 | 0.01 | 31.40  | 45.900  | 1.26 | 3.19  | 0.630  |      | 0.0310  | 22.00  | 0.79 | 0.5000 | 4980.00 | <0.01 | 356.00  | <0.5 | <0.002 | 10.9000 | <0.2 | 0.800    | <0.1 |      |
| V4          | 10/5/2010  | <0.005 | 9.50  | 0.870 | <50.0  | 76.100 | <0.01 | <0.005 | 89.50  | 0.02 | 0.0780 | <0.1  | 0.5400   | 377.00 | 1.10 | 0.01 | 35.70  | 72.900  | 1.12 | 3.71  | 0.660  |      | 1.1900  | 27.00  | 0.09 | 0.5400 | 5540.00 | <0.01 | 346.00  | <0.5 | <0.002 | 11.1000 | <0.2 | 3.900    | <0.1 |      |
| V4          | 11/1/2010  | <0.005 | 7.90  | 0.760 | <50.0  | 91.200 | <0.01 | <0.005 | 94.10  | 0.02 | 0.0670 | <0.1  | 0.4600   | 298.00 | 1.12 | 0.0  |        |         |      |       |        |      |         |        |      |        |         |       |         |      |        |         |      |          |      |      |

Table D-3: Vangorda Creek Drainage Water Quality  
2010 - Surface Water - Total Metals

| Station    | Date      | Ag     | Al     | As    | B     | Ba      | Be    | Bi     | Ca     | Cd   | Co     | Cr   | Cu     | Fe      | Hg   | K    | Li    | Mg     | Mn   | Mo   | Na    | Ni   | P      | Pb     | S    | Sb     | Se      | Si    | Sn     | Sr    | Ti   | Tl      | U    | V      | Zn   | Zr   |
|------------|-----------|--------|--------|-------|-------|---------|-------|--------|--------|------|--------|------|--------|---------|------|------|-------|--------|------|------|-------|------|--------|--------|------|--------|---------|-------|--------|-------|------|---------|------|--------|------|------|
|            |           | µg/L   | µg/L   | µg/L  | µg/L  | µg/L    | µg/L  | µg/L   | mg/L   | µg/L | µg/L   | µg/L | µg/L   | µg/L    | µg/L | mg/L | mg/L  | mg/L   | µg/L | µg/L | mg/L  | µg/L | mg/L   | µg/L   | µg/L | µg/L   | µg/L    | µg/L  | µg/L   | µg/L  | µg/L | µg/L    | µg/L | µg/L   | µg/L | µg/L |
| V8         | 1/6/2010  | <0.005 | 31.00  | 0.400 | <50.0 | 80.500  | <0.01 | <0.005 | 97.40  | 0.07 | 0.1420 | <0.1 | 0.9400 | 72.00   | 1.34 | 0.01 | 43.40 | 12.100 | 1.32 | 4.96 | 2.640 |      | 0.2910 | 65.00  | 0.18 | 2.0500 | 5010.00 | <0.01 | 400.00 | 1.10  | 0.01 | 9.1800  | <0.2 | 16.000 | <0.1 |      |
| V8         | 2/18/2010 | <0.005 | 12.40  | 0.360 | <50.0 | 74.200  | <0.01 | <0.005 | 96.90  | 0.07 | 0.0880 | <0.1 | 0.5200 | 43.00   | 1.30 | 0.01 | 43.00 | 8.490  | 1.34 | 4.90 | 2.170 |      | 0.0860 | 73.00  | 0.16 | 1.8700 | 4940.00 | <0.01 | 385.00 | <0.5  | 0.01 | 9.3400  | <0.2 | 12.600 | <0.1 |      |
| V8         | 3/30/2010 | <0.005 | 7.30   | 0.420 | <50.0 | 73.700  | <0.01 | <0.005 | 97.20  | 0.06 | 0.0730 | <0.1 | 0.6400 | 30.00   | 1.42 | 0.01 | 45.20 | 6.660  | 1.47 | 5.19 | 2.140 |      | 0.2340 | 76.00  | 0.17 | 1.9700 | 5010.00 | <0.01 | 402.00 | <0.5  | 0.01 | 10.4000 | <0.2 | 12.700 | <0.1 |      |
| V8         | 4/20/2010 | 0.0120 | 870.00 | 2.290 | <50.0 | 104.000 | 0.13  | 0.02   | 79.10  | 0.21 | 1.2900 | 1.20 | 5.0800 | 1230.00 | 1.87 | 0.01 | 34.60 | 73.900 | 0.72 | 4.20 | 5.980 |      | 5.8300 | 59.00  | 0.16 | 1.0800 | 4870.00 | <0.01 | 313.00 | 10.30 | 0.02 | 7.5200  | 2.20 | 25.500 | 1.10 |      |
| V8         | 5/12/2010 | <0.005 | 236.00 | 0.810 | <50.0 | 56.400  | 0.02  | <0.005 | 60.80  | 0.06 | 0.3310 | 0.40 | 2.1200 | 370.00  | 1.15 | 0.00 | 23.80 | 26.500 | 0.91 | 2.89 | 2.580 |      | 0.9990 | 38.00  | 0.15 | 0.7700 | 4720.00 | <0.01 | 230.00 | 7.50  | 0.02 | 5.6100  | 0.40 | 11.400 | 0.30 |      |
| V8         | 6/17/2010 | <0.005 | 250.00 | 0.910 | <50.0 | 50.600  | 0.05  | 0.04   | 37.70  | 0.07 | 0.4490 | 0.50 | 2.0400 | 415.00  | 0.75 | 0.00 | 14.90 | 23.700 | 0.45 | 2.27 | 1.990 |      | 1.6300 | 22.00  | 0.12 | 0.3900 | 4920.00 | <0.01 | 154.00 | 5.80  | 0.01 | 2.6900  | 0.80 | 12.900 | 0.40 |      |
| V8         | 7/14/2010 | <0.005 | 235.00 | 0.690 | <50.0 | 76.400  | 0.02  | <0.005 | 103.00 | 0.12 | 0.3290 | 0.50 | 1.3200 | 446.00  | 1.07 | 0.01 | 24.80 | 29.400 | 0.42 | 2.49 | 1.660 |      | 1.1700 | 102.00 | 0.10 | 0.3300 | 4590.00 | <0.01 | 366.00 | 7.80  | 0.05 | 2.1200  | 0.60 | 19.000 | 0.30 |      |
| V8         | 8/4/2010  | <0.005 | 18.00  | 0.550 | <50.0 | 50.600  | <0.01 | <0.005 | 56.40  | 0.05 | 0.0560 | <0.1 | 0.8800 | 51.00   | 0.89 | 0.00 | 21.90 | 8.770  | 0.91 | 3.07 | 1.020 |      | 0.5540 | 40.00  | 0.14 | 0.6100 | 4850.00 | <0.01 | 229.00 | <0.5  | 0.01 | 3.8600  | <0.2 | 9.200  | <0.1 |      |
| V8         | 9/7/2010  | <0.005 | 19.50  | 0.480 | <50.0 | 49.700  | <0.01 | <0.005 | 51.70  | 0.04 | 0.0550 | <0.1 | 0.8800 | 68.00   | 0.85 | 0.00 | 19.70 | 8.130  | 0.82 | 2.90 | 1.140 |      | 0.1930 | 30.00  | 0.78 | 0.4700 | 4460.00 | <0.01 | 214.00 | <0.5  | 0.01 | 3.4600  | <0.2 | 7.200  | <0.1 |      |
| V8         | 10/5/2010 | <0.005 | 8.20   | 0.430 | <50.0 | 52.300  | <0.01 | <0.005 | 63.20  | 0.04 | 0.0460 | <0.1 | 0.6500 | 37.00   | 1.02 | 0.00 | 26.90 | 5.390  | 0.93 | 3.64 | 1.080 |      | 0.0770 | 41.00  | 0.12 | 0.7000 | 5050.00 | <0.01 | 244.00 | <0.5  | 0.01 | 4.5400  | <0.2 | 7.500  | <0.1 |      |
| V8         | 11/2/2010 | <0.005 | 22.40  | 0.490 | <50.0 | 61.400  | <0.01 | <0.005 | 69.50  | 0.05 | 0.0880 | <0.1 | 0.9300 | 60.00   | 1.01 | 0.00 | 30.90 | 6.760  | 0.97 | 4.05 | 1.380 |      | 0.6290 | 50.00  | 0.14 | 0.8600 | 4860.00 | <0.01 | 275.00 | 1.00  | 0.01 | 5.6000  | <0.2 | 9.900  | <0.1 |      |
| V8         | 12/1/2010 | <0.005 | 24.20  | 0.410 | <50.0 | 66.900  | <0.01 | 0.01   | 81.40  | 0.06 | 0.0960 | <0.1 | 0.6300 | 65.00   | 1.18 | 0.01 | 35.00 | 10.500 | 1.03 | 4.20 | 1.510 |      | 0.2150 | 53.00  | 0.13 | 1.0100 | 5170.00 | <0.01 | 328.00 | 0.70  | 0.01 | 6.7100  | <0.2 | 11.000 | <0.1 |      |
| V8 Average |           | 0.0033 | 144.50 | 0.687 | 25.00 | 66.392  | 0.02  | 0.01   | 74.53  | 0.07 | 0.2536 | 0.25 | 1.3858 | 240.58  | 1.15 | 0.01 | 30.34 | 18.358 | 0.94 | 3.73 | 2.108 |      | 0.9923 | 54.08  | 0.20 | 1.0092 | 4870.83 | 0.01  | 295.00 | 2.95  | 0.01 | 5.9192  | 0.40 | 12.908 | 0.21 |      |
| V8 Max     |           | 0.0120 | 870.00 | 2.290 | <50.0 | 104.000 | 0.13  | 0.04   | 103.00 | 0.21 | 1.2900 | 1.20 | 5.0800 | 1230.00 | 1.87 | 0.01 | 45.20 | 73.900 | 1.47 | 5.19 | 5.980 |      | 5.8300 | 102.00 | 0.78 | 2.0500 | 5170.00 | <0.01 | 402.00 | 10.30 | 0.05 | 10.4000 | 2.20 | 25.500 | 1.10 |      |
| V8 Min     |           | <0.005 | 7.30   | 0.360 | <50.0 | 49.700  | <0.01 | <0.005 | 37.70  | 0.04 | 0.0460 | <0.1 | 0.5200 | 30.00   | 0.75 | 0.00 | 14.90 | 5.390  | 0.42 | 2.27 | 1.020 |      | 0.0770 | 22.00  | 0.10 | 0.3300 | 4460.00 | <0.01 | 154.00 | <0.5  | 0.01 | 2.1200  | <0.2 | 7.200  | <0.1 |      |
| V8 N > DL  |           | 1      | 12     | 12    | 0     | 12      | 4     | 3      | 12     | 12   | 12     | 4    | 12     | 12      | 0    | 12   | 12    | 12     | 12   | 12   | 12    |      | 0      | 12     | 12   | 12     | 12      | 12    | 0      | 12    | 7    | 12      | 12   | 4      | 12   | 4    |
| V8 Median  |           | <0.005 | 23.30  | 0.485 | <50.0 | 64.150  | <0.01 | <0.005 | 74.30  | 0.06 | 0.0920 | <0.1 | 0.9050 | 66.50   | 1.11 | 0.01 | 28.90 | 9.635  | 0.92 | 3.85 | 1.825 |      | 0.4225 | 51.50  | 0.15 | 0.8150 | 4895.00 | <0.01 | 294.00 | 0.85  | 0.01 | 5.6050  | <0.2 | 12.000 | <0.1 |      |

NB: Metals reported in mg/L are shaded in grey.

Table D-4: Vangorda Creek Drainage Water Quality  
2010 - Seepage Water - General Parameters

| Station            | Date       | Acid(pH4.5)<br>mg/L | Acid(pH8.3)<br>mg/L | ALK<br>mg/L | ALKPP<br>mg/L | CaCO3-d<br>mg/L | Chloride<br>mg/L | CO3<br>mg/L | COND<br>µmho/cm | CONDF<br>µmho/cm | HCO3<br>mg/L | OH<br>mg/L | ORP<br>mV | pH  | pHF | SO4-d<br>mg/L | TEMP-F<br>°C | TSS<br>mg/L |
|--------------------|------------|---------------------|---------------------|-------------|---------------|-----------------|------------------|-------------|-----------------|------------------|--------------|------------|-----------|-----|-----|---------------|--------------|-------------|
| MOOSE SEEP         | 1/7/2010   | <0.5                | 14                  | 350.00      | <0.5          | 1620            | 1.50             | <0.5        | 2380.0          | 2500.0           | 430.00       | <0.5       | 132       | 7.9 | 7.5 | 1100.0        | 1            | <1.0        |
| MOOSE SEEP         | 2/3/2010   | <0.5                | 13                  | 350.00      | <0.5          | 1640            | 1.60             | <0.5        | 2400.0          | 2260.0           | 430.00       | <0.5       | 91        | 8.0 | 7.5 | 1100.0        | 0            | 6           |
| MOOSE SEEP         | 3/2/2010   | <0.5                | 5                   | 350.00      | <0.5          | 1730            | 0.90             | <0.5        | 2320.0          | 2170.0           | 430.00       | <0.5       | 158       | 8.0 | 7.8 | 1100.0        | 1            | <1.0        |
| MOOSE SEEP         | 4/7/2010   | <0.5                | 17                  | 340.00      | <0.5          | 1570            | 0.90             | <0.5        | 2280.0          | 2350.0           | 410.00       | <0.5       | 326       | 8.3 | 7.7 | 1100.0        | 1            | <1.0        |
| MOOSE SEEP         | 5/1/2010   | <0.5                | 5                   | 330.00      | <0.5          | 1600            | 0.90             | <0.5        | 2240.0          | 1920.0           | 400.00       | <0.5       |           | 8.0 | 8.5 | 1100.0        | 3            | <1.0        |
| MOOSE SEEP         | 5/18/2010  | <0.5                | 4                   | 260.00      | <0.5          | 1310            | 0.90             | <0.5        | 1990.0          | 2028.0           | 320.00       | <0.5       | 210       | 8.0 | 7.9 | 1000.0        | 4            | 2           |
| MOOSE SEEP         | 6/2/2010   | <0.5                | 5                   | 290.00      | 11            | 1280            | 0.90             | 13.00       | 1990.0          | 2045.0           | 330.00       | <0.5       |           | 8.5 | 7.9 | 1000.0        | 6            | 6           |
| MOOSE SEEP         | 6/20/2010  | <0.5                | 8                   | 320.00      | 3             | 1330            | 1.10             | 3.20        | 2080.0          | 2030.0           | 380.00       | <0.5       | 201       | 8.3 | 7.8 | 1000.0        | 5            | <1.0        |
| MOOSE SEEP         | 7/7/2010   | <0.5                | 12                  | 320.00      | <0.5          | 1390            | 1.10             | <0.5        | 2110.0          | 2290.0           | 390.00       | <0.5       | 177       | 8.0 | 7.7 | 1000.0        | 6            | 2           |
| MOOSE SEEP         | 7/22/2010  | <0.5                | 11                  | 340.00      | <0.5          | 1520            | 1.50             | <0.5        | 2220.0          | 1854.0           | 420.00       | <0.5       | 160       | 8.1 | 7.7 | 1100.0        | 6            | <1.0        |
| MOOSE SEEP         | 8/5/2010   | <0.5                | 18                  | 340.00      | <0.5          | 1450            | 0.60             | <0.5        | 2260.0          | 2278.0           | 420.00       | <0.5       | 171       | 8.1 | 7.8 | 1100.0        | 6            | <1.0        |
| MOOSE SEEP         | 8/18/2010  | <0.5                | 16                  | 330.00      | <0.5          | 1470            | 0.80             | <0.5        | 2260.0          | 2164.0           | 410.00       | <0.5       | 177       | 8.2 | 7.7 | 1200.0        | 8            | 2           |
| MOOSE SEEP         | 9/7/2010   | <0.5                | 15                  | 340.00      | <0.5          | 1410            | 1.10             | <0.5        | 2360.0          | 2312.0           | 420.00       | <0.5       | 177       | 8.2 | 7.6 | 1300.0        | 5            | <1.0        |
| MOOSE SEEP         | 9/23/2010  | <0.5                | 17                  | 340.00      | <0.5          | 1510            | 1.00             | <0.5        | 2380.0          | 2006.0           | 420.00       | <0.5       | 144       | 7.9 | 7.7 | 1300.0        | 3            | <1.0        |
| MOOSE SEEP         | 10/7/2010  | <0.5                | 14                  | 350.00      | <0.5          | 1670            | <0.5             | <0.5        | 2350.0          | 2320.0           | 430.00       | <0.5       | 40        | 8.1 | 7.7 | 1300.0        | 2            | <1.0        |
| MOOSE SEEP         | 10/21/2010 | <0.5                | 19                  | 350.00      | <0.5          | 1590            | 1.00             | <0.5        | 2370.0          | 2243.0           | 430.00       | <0.5       | 99        | 8.2 | 7.9 | 1200.0        | 2            | <1.0        |
| MOOSE SEEP         | 11/4/2010  | <0.5                | 8                   | 350.00      | <0.5          | 1680            | <0.5             | <0.5        | 2360.0          | 2313.0           | 420.00       | <0.5       | 39        | 8.2 | 7.8 | 1300.0        | 2            | <1.0        |
| MOOSE SEEP         | 12/2/2010  | <0.5                | 8                   | 350.00      | <0.5          | 1530            | 1.10             | <0.5        | 2310.0          | 1470.0           | 420.00       | <0.5       | 249       | 8.2 | 7.9 | 1200.0        | 0            | 2           |
| MOOSE SEEP Average |            | 0                   | 12                  | 333.33      | 1             | 1517            | 0.97             | 1.12        | 2258.9          | 2141.8           | 406.11       | 0          | 159       | 8.1 | 7.8 | 1138.9        | 3            | 1           |
| MOOSE SEEP Max     |            | <0.5                | 19                  | 350.00      | 11            | 1730            | 1.60             | 13.00       | 2400.0          | 2500.0           | 430.00       | <0.5       | 326       | 8.5 | 8.5 | 1300.0        | 8            | 6           |
| MOOSE SEEP Min     |            | <0.5                | 4                   | 260.00      | <0.5          | 1280            | <0.5             | <0.5        | 1990.0          | 1470.0           | 320.00       | <0.5       | 39        | 7.9 | 7.5 | 1000.0        | 0            | <1.0        |
| MOOSE SEEP N > DL  |            | 0                   | 18                  | 18          | 2             | 18              | 16               | 2           | 18              | 18               | 18           | 0          | 16        | 18  | 18  | 18            | 18           | 6           |
| MOOSE SEEP Median  |            | <0.5                | 12                  | 340.00      | <0.5          | 1525            | 0.95             | <0.5        | 2295.0          | 2206.5           | 420.00       | <0.5       | 166       | 8.1 | 7.8 | 1100.0        | 3            | <1.0        |
| V14                | 6/1/2010   | <0.5                | 6                   | 310.00      | 4             | 2750            | 0.70             | 4.60        | 3610.0          | 3791.0           | 370.00       | <0.5       | 202       | 8.3 | 8.1 | 2800.0        | 17           | 7           |

Table D-4: Vangorda Creek Drainage Water Quality  
2010 - Seepage Water - General Parameters

| Station              | Date       | Acid(pH4.5)<br>mg/L | Acid(pH8.3)<br>mg/L | ALK<br>mg/L | ALKPP<br>mg/L | CaCO3-d<br>mg/L | Chloride<br>mg/L | CO3<br>mg/L | COND<br>µmho/cm | CONDf<br>µmho/cm | HCO3<br>mg/L | OH<br>mg/L | ORP<br>mV | pH  | pHF | SO4-d<br>mg/L | TEMP-F<br>°C | TSS<br>mg/L |
|----------------------|------------|---------------------|---------------------|-------------|---------------|-----------------|------------------|-------------|-----------------|------------------|--------------|------------|-----------|-----|-----|---------------|--------------|-------------|
| V15                  | 1/7/2010   | <0.5                | 53                  | 510.00      | <0.5          | 3180            | 2.00             | <0.5        | 4020.0          | 3840.0           | 620.00       | <0.5       | 180       | 7.5 | 6.6 | 2500.0        | 1            | <1.0        |
| V15                  | 1/21/2010  | <0.5                | 58                  | 520.00      | <0.5          | 3160            | 1.80             | <0.5        | 4030.0          | 3710.0           | 630.00       | <0.5       |           | 7.5 | 6.8 | 2700.0        | 1            | <1.0        |
| V15                  | 2/3/2010   | <0.5                | 49                  | 510.00      | <0.5          | 3010            | 2.10             | <0.5        | 4030.0          | 2954.0           | 620.00       | <0.5       |           | 7.7 | 7.0 | 2500.0        | 0            | <1.0        |
| V15                  | 2/18/2010  | <0.5                | 44                  | 520.00      | <0.5          | 2830            | 1.40             | <0.5        | 4040.0          | 1780.0           | 630.00       | <0.5       | 201       | 7.8 | 7.1 | 2800.0        | 2            | 3           |
| V15                  | 3/2/2010   | <0.5                | 34                  | 550.00      | <0.5          | 3450            | 1.50             | <0.5        | 3990.0          | 3630.0           | 670.00       | <0.5       | 171       | 7.6 | 7.0 | 2000.0        | 2            | <1.0        |
| V15                  | 3/23/2010  | <0.5                | <0.5                | 560.00      | <0.5          | 3270            | 1.90             | <0.5        | 4070.0          | 3590.0           | 680.00       | <0.5       |           | 8.1 | 7.0 | 2500.0        | 1            | <1.0        |
| V15                  | 4/7/2010   | <0.5                | 69                  | 500.00      | <0.5          | 3180            | 1.60             | <0.5        | 3990.0          | 2788.0           | 610.00       | <0.5       | 385       | 8.0 | 7.0 | 1900.0        | 4            | <1.0        |
| V15                  | 4/19/2010  | <0.5                | 39                  | 310.00      | <0.5          | 1950            | 0.60             | <0.5        | 2550.0          | 2800.0           | 370.00       | <0.5       | 70        | 7.9 | 7.2 | 1400.0        | 3            | 2           |
| V15                  | 5/1/2010   | <0.5                | 14                  | 390.00      | <0.5          | 2190            | 1.00             | <0.5        | 2920.0          | 2560.0           | 470.00       | <0.5       |           | 7.8 | 7.8 | 1500.0        | 4            | 2           |
| V15                  | 5/18/2010  | <0.5                | 17                  | 480.00      | <0.5          | 2830            | 1.60             | <0.5        | 3690.0          | 3535.0           | 590.00       | <0.5       | 248       | 8.3 | 7.2 | 2400.0        | 7            | 3           |
| V15                  | 6/2/2010   | <0.5                | 30                  | 530.00      | <0.5          | 2940            | 1.70             | <0.5        | 3910.0          | 3948.0           | 640.00       | <0.5       |           | 8.2 | 6.9 | 2600.0        | 5            | <1.0        |
| V15                  | 6/15/2010  | <0.5                | 46                  | 490.00      | <0.5          | 3250            | 1.30             | <0.5        | 3820.0          | 3249.0           | 600.00       | <0.5       | 248       | 8.2 | 6.9 | 2600.0        | 7            | 2           |
| V15                  | 7/7/2010   | <0.5                | 42                  | 520.00      | <0.5          | 2800            | 1.40             | <0.5        | 3830.0          | 3541.0           | 640.00       | <0.5       | 76        | 7.8 | 7.4 | 2000.0        | 9            | <1.0        |
| V15                  | 7/22/2010  | <0.5                | 45                  | 540.00      | <0.5          | 3160            | 1.70             | <0.5        | 3930.0          | 3101.0           | 660.00       | <0.5       | 178       | 7.7 | 7.2 | 2700.0        | 6            | 2           |
| V15                  | 8/5/2010   | <0.5                | 57                  | 560.00      | <0.5          | 3010            | 1.50             | <0.5        | 3990.0          | 3958.0           | 680.00       | <0.5       | 199       | 7.7 | 7.0 | 2600.0        | 8            | <1.0        |
| V15                  | 8/18/2010  | <0.5                | 53                  | 550.00      | <0.5          | 2910            | 1.20             | <0.5        | 3910.0          | 3527.0           | 670.00       | <0.5       | 130       | 7.8 | 6.9 | 2500.0        | 7            | <1.0        |
| V15                  | 9/7/2010   | <0.5                | 46                  | 530.00      | <0.5          | 2630            | 2.00             | <0.5        | 3820.0          | 3531.0           | 650.00       | <0.5       | 201       | 7.9 | 6.9 | 2200.0        | 7            | <1.0        |
| V15                  | 9/23/2010  | <0.5                | 65                  | 550.00      | <0.5          | 2790            | 2.00             | <0.5        | 3800.0          | 2500.0           | 670.00       | <0.5       | 194       | 7.7 | 6.8 | 2000.0        | 5            | <1.0        |
| V15                  | 10/7/2010  | <0.5                | 52                  | 560.00      | <0.5          | 2950            | 1.10             | <0.5        | 3740.0          | 3435.0           | 680.00       | <0.5       | 75        | 7.8 | 7.5 | 2500.0        | 3            | <1.0        |
| V15                  | 10/21/2010 | <0.5                | 61                  | 550.00      | <0.5          | 2810            | 1.90             | <0.5        | 3750.0          | 3484.0           | 670.00       | <0.5       | 228       | 7.9 | 7.0 | 1900.0        | 1            | <1.0        |
| V15                  | 11/4/2010  | <0.5                | 50                  | 550.00      | <0.5          | 3000            | 1.00             | <0.5        | 3810.0          | 3568.0           | 670.00       | <0.5       |           | 7.8 | 7.2 | 2500.0        | 3            | <1.0        |
| V15                  | 11/18/2010 | <0.5                | 51                  | 540.00      | <0.5          | 3060            | 2.20             | <0.5        | 3880.0          | 2220.0           | 660.00       | <0.5       | 136       | 7.8 | 7.0 | 2900.0        | 1            | <1.0        |
| V15                  | 12/1/2010  | <0.5                | 52                  | 540.00      | <0.5          | 2930            | 1.50             | <0.5        | 3860.0          | 2271.0           | 660.00       | <0.5       | 236       | 7.9 | 7.0 | 2600.0        | 0            | 3           |
| V15                  | 12/16/2010 | <0.5                | 61                  | 560.00      | <0.5          | 3110            | 3.00             | <0.5        | 4290.0          | 4150.0           | 680.00       | <0.5       | 82        | 7.7 | 7.2 | 2700.0        | 2            | <1.0        |
| <b>V15 Average</b>   |            | 0                   | 45                  | 517.50      | 0             | 2933            | 1.63             | 0.25        | 3819.6          | 3236.3           | 630.00       | 0          | 180       | 7.8 | 7.1 | 2354.2        | 4            | 1           |
| <b>V15 Max</b>       |            | <0.5                | 69                  | 560.00      | <0.5          | 3450            | 3.00             | <0.5        | 4290.0          | 4150.0           | 680.00       | <0.5       | 385       | 8.3 | 7.8 | 2900.0        | 9            | 3           |
| <b>V15 Min</b>       |            | <0.5                | <0.5                | 310.00      | <0.5          | 1950            | 0.60             | <0.5        | 2550.0          | 1780.0           | 370.00       | <0.5       | 70        | 7.5 | 6.6 | 1400.0        | 0            | <1.0        |
| <b>V15 N &gt; DL</b> |            | 0                   | 23                  | 24          | 0             | 24              | 24               | 0           | 24              | 24               | 24           | 0          | 18        | 24  | 24  | 24            | 24           | 7           |
| <b>V15 Median</b>    |            | <0.5                | 50                  | 535.00      | <0.5          | 2975            | 1.60             | <0.5        | 3895.0          | 3505.5           | 655.00       | <0.5       | 187       | 7.8 | 7.0 | 2500.0        | 3            | <1.0        |
| <b>V16</b>           | 10/6/2010  | <0.5                | 8                   | 320.00      | <0.5          | 1470            | 0.60             | <0.5        | 2140.0          | 2521.0           | 390.00       | <0.5       | 179       | 8.2 | 6.6 | 1200.0        | 3            | 3           |
| <b>V30</b>           | 6/1/2010   | <0.5                | 963                 | 78.00       | <0.5          | 4730            | 1.40             | <0.5        | 6210.0          | >3999.0          | 95.00        | <0.5       | 75        | 6.2 | 6.1 | 6000.0        | 13           | 41          |
| <b>V30</b>           | 10/6/2010  | <0.5                | 1180                | 78.00       | <0.5          | 5220            | 2.40             | <0.5        | 7200.0          | >3999.0          | 96.00        | <0.5       | 31        | 6.3 | 5.8 | 7200.0        | 2            | 110         |
| <b>V30 Average</b>   |            | 0                   | 1072                | 78.00       | 0             | 4975            | 1.90             | 0.25        | 6705.0          | >3999.0          | 95.50        | 0          | 53        | 6.2 | 5.9 | 6600.0        | 8            | 76          |
| <b>V30 N &gt; DL</b> |            | 0                   | 2                   | 2           | 0             | 2               | 2                | 0           | 2               | 0                | 2            | 0          | 2         | 2   | 2   | 2             | 2            | 2           |
| <b>V33</b>           | 6/1/2010   | <0.5                | 31300               | <0.5        | <0.5          | 36500           | <5.0             | <0.5        | 39800.0         | >3999.0          | <0.5         | <0.5       | 124       | 3.7 | 5.1 | 81000.0       | 11           | 480         |
| <b>V33</b>           | 10/6/2010  | 33                  | 44200               | <0.5        | <0.5          | 41200           | <5.0             | <0.5        | 43700.0         | >3999.0          | <0.5         | <0.5       | 126       | 3.7 | 4.8 | 87000.0       | 2            | 410         |
| <b>V33 Average</b>   |            | 17                  | 37750               | 0.25        | 0             | 38850           | 2.50             | 0.25        | 41750.0         | >3999.0          | 0.25         | 0          | 125       | 3.7 | 5.0 | 84000.0       | 7            | 445         |
| <b>V33 N &gt; DL</b> |            | 1                   | 2                   | 0           | 0             | 2               | 0                | 0           | 2               | 0                | 0            | 0          | 2         | 2   | 2   | 2             | 2            | 2           |





Table D-5: Vangorda Creek Drainage Water Quality 2010 - Seepage Water - Dissolved Metals



Table with columns for Station, Date, and various metals (Ag-d to Zr-d) in µg/L or mg/L. Rows include MOOSE SEEP, V14, V15, V16, V30, V33, and summary rows like Average, Max, Min, N > DL, and Median.

NB: Metals reported in mg/L are shaded in grey.



Table D-6: Vangorda Creek Drainage Water Quality  
2010 - Groundwater - General Parameters

| Station           | Date      | Acid(pH4.5)<br>mg/L | Acid(pH8.3)<br>mg/L | ALK<br>mg/L | ALKPP<br>mg/L | CaCO3-d<br>mg/L | Chloride<br>mg/L | CO3<br>mg/L | COND<br>µmho/cm | CONDF<br>µmho/cm | HCO3<br>mg/L | OH<br>mg/L | pH  | pHF | SO4-d<br>mg/L | TEMP-F<br>°C | TSS<br>mg/L |
|-------------------|-----------|---------------------|---------------------|-------------|---------------|-----------------|------------------|-------------|-----------------|------------------|--------------|------------|-----|-----|---------------|--------------|-------------|
| BH05-9B-R         | 6/12/2010 | <0.5                | 1                   | 150.00      | <0.5          | 196             | 1.30             | <0.5        | 628.0           | 562.0            | 180.00       | <0.5       | 8.2 | 7.9 | 180.0         | 8            | 680         |
| BH05-9B-R         | 9/20/2010 | <0.5                | 3                   | 140.00      | <0.5          | 212             | 1.20             | <0.5        | 624.0           | 625.0            | 180.00       | <0.5       | 8.1 | 7.7 | 180.0         | 7            | 100         |
| BH05-9B-R Average |           | 0                   | 2                   | 145.00      | 0             | 204             | 1.25             | 0.25        | 626.0           | 593.5            | 180.00       | 0          | 8.1 | 7.8 | 180.0         | 8            | 390         |
| BH05-9B-R N > DL  |           | 0                   | 2                   | 2           | 0             | 2               | 2                | 0           | 2               | 2                | 2            | 0          | 2   | 2   | 2             | 2            | 2           |
| P09-GS1A          | 9/17/2010 | <0.5                | 20                  | 220.00      | <0.5          | 761             | 1.70             | <0.5        | 1450.0          | 1430.0           | 270.00       | <0.5       | 7.9 | 6.8 | 640.0         | 6            | 1600        |
| P09-GS1B          | 6/11/2010 |                     |                     |             |               |                 |                  |             |                 |                  |              |            |     |     |               |              |             |
| P09-GS1B          | 9/16/2010 | <0.5                | 28                  | 240.00      | <0.5          | 705             | <0.5             | <0.5        | 1260.0          | 1300.0           | 290.00       | <0.5       | 7.7 | 7.1 | 490.0         | 10           | 5           |
| P09-LCD1          | 6/12/2010 | <0.5                | 15                  | 260.00      | <0.5          | 408             | 0.60             | <0.5        | 823.0           | 776.0            | 320.00       | <0.5       | 8.0 | 7.3 | 190.0         | 4            | 840         |
| P09-LCD1          | 9/20/2010 | <0.5                | 17                  | 270.00      | <0.5          | 441             | <0.5             | <0.5        | 843.0           | 910.0            | 330.00       | <0.5       | 7.9 | 7.2 | 160.0         | 4            | 580         |
| P09-LCD1 Average  |           | 0                   | 16                  | 265.00      | 0             | 425             | 0.43             | 0.25        | 833.0           | 843.0            | 325.00       | 0          | 8.0 | 7.3 | 175.0         | 4            | 710         |
| P09-LCD1 N > DL   |           | 0                   | 2                   | 2           | 0             | 2               | 1                | 0           | 2               | 2                | 2            | 0          | 2   | 2   | 2             | 2            | 2           |
| P09-LCD6          | 6/12/2010 | <0.5                | 17                  | 250.00      | <0.5          | 455             | 0.80             | <0.5        | 878.0           | 832.0            | 300.00       | <0.5       | 8.0 | 7.4 | 240.0         | 7            | 26000       |
| P09-LCD6          | 9/20/2010 | <0.5                | 18                  | 270.00      | <0.5          | 508             | <0.5             | <0.5        | 876.0           | 920.0            | 330.00       | <0.5       | 7.8 | 7.3 | 200.0         | 8            | 430         |
| P09-LCD6 Average  |           | 0                   | 18                  | 260.00      | 0             | 482             | 0.53             | 0.25        | 877.0           | 876.0            | 315.00       | 0          | 7.9 | 7.4 | 220.0         | 8            | 13215       |
| P09-LCD6 N > DL   |           | 0                   | 2                   | 2           | 0             | 2               | 1                | 0           | 2               | 2                | 2            | 0          | 2   | 2   | 2             | 2            | 2           |
| P09-VC1           | 6/12/2010 | <0.5                | 2                   | 120.00      | <0.5          | 156             | <0.5             | <0.5        | 369.0           | 360.0            | 150.00       | <0.5       | 8.1 | 7.8 | 61.0          | 5            | 93          |
| P09-VC1           | 9/20/2010 | <0.5                | 3                   | 140.00      | <0.5          | 178             | <0.5             | <0.5        | 390.0           | 390.0            | 170.00       | <0.5       | 8.0 | 8.1 | 62.0          | 5            | 42          |
| P09-VC1 Average   |           | 0                   | 3                   | 130.00      | 0             | 167             | 0.25             | 0.25        | 379.5           | 375.0            | 160.00       | 0          | 8.1 | 7.9 | 61.5          | 5            | 68          |
| P09-VC1 N > DL    |           | 0                   | 2                   | 2           | 0             | 2               | 0                | 0           | 2               | 2                | 2            | 0          | 2   | 2   | 2             | 2            | 2           |
| P09-VC2           | 9/20/2010 | <0.5                | 6                   | 170.00      | <0.5          | 202             | <0.5             | <0.5        | 404.0           | 420.0            | 210.00       | <0.5       | 7.8 | 7.7 | 40.0          | 4            | 13          |
| P2001-2A          | 6/13/2010 | <0.5                | 39                  | 450.00      | <0.5          | 971             | 1.70             | <0.5        | 1630.0          | 1638.0           | 550.00       | <0.5       | 7.5 | 8.5 | 550.0         | 5            | 3300        |
| P2001-2A          | 9/18/2010 | <0.5                | 35                  | 490.00      | <0.5          | 1030            | 0.90             | <0.5        | 1750.0          | 1684.0           | 590.00       | <0.5       | 7.7 | 6.7 | 580.0         | 6            | 1100        |
| P2001-2A Average  |           | 0                   | 37                  | 470.00      | 0             | 1001            | 1.30             | 0.25        | 1690.0          | 1661.0           | 570.00       | 0          | 7.6 | 7.6 | 565.0         | 5            | 2200        |
| P2001-2A N > DL   |           | 0                   | 2                   | 2           | 0             | 2               | 2                | 0           | 2               | 2                | 2            | 0          | 2   | 2   | 2             | 2            | 2           |
| P2001-2B          | 6/13/2010 | <0.5                | 27                  | 410.00      | <0.5          | 790             | 1.50             | <0.5        | 1430.0          | 1264.0           | 500.00       | <0.5       | 7.8 | 7.4 | 450.0         | 5            | 2200        |
| P2001-2B          | 9/18/2010 | <0.5                | 28                  | 480.00      | <0.5          | 1010            | 0.90             | <0.5        | 1660.0          | 1741.0           | 590.00       | <0.5       | 7.8 | 6.7 | 510.0         | 5            | 220         |
| P2001-2B Average  |           | 0                   | 28                  | 445.00      | 0             | 900             | 1.20             | 0.25        | 1545.0          | 1502.5           | 545.00       | 0          | 7.8 | 7.1 | 480.0         | 5            | 1210        |
| P2001-2B N > DL   |           | 0                   | 2                   | 2           | 0             | 2               | 2                | 0           | 2               | 2                | 2            | 0          | 2   | 2   | 2             | 2            | 2           |
| P2001-3           | 6/19/2010 | <0.5                | 13                  | 420.00      | <0.5          | 487             | 1.00             | <0.5        | 917.0           | 989.0            | 510.00       | <0.5       | 8.2 | 7.3 | 140.0         | 7            | 1500        |
| P2001-3           | 9/15/2010 | <0.5                | 15                  | 440.00      | <0.5          | 536             | <0.5             | <0.5        | 976.0           | 885.0            | 540.00       | <0.5       | 8.1 | 7.2 | 130.0         | 3            | 74          |
| P2001-3 Average   |           | 0                   | 14                  | 430.00      | 0             | 512             | 0.63             | 0.25        | 946.5           | 937.0            | 525.00       | 0          | 8.1 | 7.3 | 135.0         | 5            | 787         |
| P2001-3 N > DL    |           | 0                   | 2                   | 2           | 0             | 2               | 1                | 0           | 2               | 2                | 2            | 0          | 2   | 2   | 2             | 2            | 2           |
| P96-6             | 6/15/2010 | <0.5                | 44                  | 320.00      | <0.5          | 724             | 0.70             | <0.5        | 1170.0          | 1140.0           | 390.00       | <0.5       | 7.6 | 6.4 | 350.0         | 3            | 300         |
| P96-6             | 9/21/2010 | <0.5                | 55                  | 290.00      | <0.5          | 837             | <0.5             | <0.5        | 1350.0          | 1010.0           | 350.00       | <0.5       | 7.3 | 7.1 | 480.0         | 8            | 180         |
| P96-6 Average     |           | 0                   | 49                  | 305.00      | 0             | 781             | 0.48             | 0.25        | 1260.0          | 1096.7           | 370.00       | 0          | 7.4 | 6.6 | 415.0         | 5            | 240         |
| P96-6 N > DL      |           | 0                   | 2                   | 2           | 0             | 2               | 1                | 0           | 2               | 3                | 2            | 0          | 2   | 3   | 2             | 3            | 2           |
| SRK05-5C          | 6/12/2010 | <0.5                | 6                   | 160.00      | <0.5          | 387             | 0.70             | <0.5        | 790.0           | 734.0            | 190.00       | <0.5       | 8.2 | 7.6 | 250.0         | 6            | 22000       |
| SRK05-5C          | 9/20/2010 | <0.5                | 6                   | 170.00      | <0.5          | 274             | <0.5             | <0.5        | 787.0           | 610.0            | 200.00       | <0.5       | 7.8 | 7.9 | 190.0         | 6            | 8400        |
| SRK05-5C Average  |           | 0                   | 6                   | 165.00      | 0             | 331             | 0.48             | 0.25        | 788.5           | 672.0            | 195.00       | 0          | 8.0 | 7.7 | 220.0         | 6            | 15200       |
| SRK05-5C N > DL   |           | 0                   | 2                   | 2           | 0             | 2               | 1                | 0           | 2               | 2                | 2            | 0          | 2   | 2   | 2             | 2            | 2           |

**Table D-6: Vangorda Creek Drainage Water Quality  
2010 - Groundwater - General Parameters**

| Station         | Date       | Acid(pH4.5)<br>mg/L | Acid(pH8.3)<br>mg/L | ALK<br>mg/L | ALKPP<br>mg/L | CaCO3-d<br>mg/L | Chloride<br>mg/L | CO3<br>mg/L | COND<br>µmho/cm | CONDF<br>µmho/cm | HCO3<br>mg/L | OH<br>mg/L | pH  | pHF | SO4-d<br>mg/L | TEMP-F<br>°C | TSS<br>mg/L |
|-----------------|------------|---------------------|---------------------|-------------|---------------|-----------------|------------------|-------------|-----------------|------------------|--------------|------------|-----|-----|---------------|--------------|-------------|
| SRK05-8         | 6/12/2010  | <0.5                | 45                  | 520.00      | <0.5          | 1370            | 1.70             | <0.5        | 2130.0          | 1918.0           | 630.00       | <0.5       | 7.4 | 7.0 | 890.0         | 5            | 790         |
| SRK05-8         | 9/20/2010  | <0.5                | 46                  | 550.00      | <0.5          | 1560            | 1.20             | <0.5        | 2290.0          | 2399.0           | 670.00       | <0.5       | 7.7 | 7.2 | 900.0         | 11           | 2500        |
| SRK05-8 Average |            | 0                   | 46                  | 535.00      | 0             | 1465            | 1.45             | 0.25        | 2210.0          | 2158.5           | 650.00       | 0          | 7.5 | 7.1 | 895.0         | 8            | 1645        |
| SRK05-8 N > DL  |            | 0                   | 2                   | 2           | 0             | 2               | 2                | 0           | 2               | 2                | 2            | 0          | 2   | 2   | 2             | 2            | 2           |
| SRK05-9         | 1/7/2010   | <0.5                | 24                  | 350.00      | <0.5          | 1610            | 1.50             | <0.5        | 2350.0          | 2210.0           | 420.00       | <0.5       | 7.7 | 7.0 | 1100.0        | 1            | 680         |
| SRK05-9         | 1/21/2010  | <0.5                | 17                  | 340.00      | <0.5          | 1720            | 1.20             | <0.5        | 2280.0          | 2180.0           | 420.00       | <0.5       | 7.8 | 7.3 | 1100.0        | 3            | 130         |
| SRK05-9         | 2/4/2010   | <0.5                | 16                  | 340.00      | <0.5          | 1460            | 2.40             | <0.5        | 2290.0          | 2110.0           | 420.00       | <0.5       | 7.9 | 7.3 | 1100.0        | 0            | 710         |
| SRK05-9         | 2/18/2010  | <0.5                | 15                  | 350.00      | <0.5          | 1450            | 1.10             | <0.5        | 2210.0          | 2020.0           | 420.00       | <0.5       | 8.0 | 7.5 | 1100.0        | 2            | 160         |
| SRK05-9         | 3/2/2010   | <0.5                | 8                   | 330.00      | <0.5          | 1510            | 0.60             | <0.5        | 2100.0          | 2020.0           | 400.00       | <0.5       | 7.9 | 7.5 | 940.0         | 3            | 330         |
| SRK05-9         | 3/23/2010  | <0.5                | 5                   | 330.00      | <0.5          | 1530            | 1.10             | <0.5        | 2080.0          | 1900.0           | 400.00       | <0.5       | 8.2 | 7.7 | 950.0         | 2            | 43          |
| SRK05-9         | 4/7/2010   | <0.5                | 22                  | 310.00      | <0.5          | 1360            | 0.70             | <0.5        | 2020.0          | 2030.0           | 380.00       | <0.5       | 8.2 | 7.2 | 950.0         | 5            | 170         |
| SRK05-9         | 4/19/2010  | <0.5                | 27                  | 320.00      | <0.5          | 1420            | <0.5             | <0.5        | 2050.0          | 2130.0           | 390.00       | <0.5       | 8.1 | 7.6 | 1000.0        | 5            | 400         |
| SRK05-9         | 5/1/2010   | <0.5                | 5                   | 300.00      | <0.5          | 1390            | 0.90             | <0.5        | 1980.0          | 1750.0           | 360.00       | <0.5       | 8.0 | 8.2 | 990.0         | 4            | 620         |
| SRK05-9         | 5/18/2010  | <0.5                | 7                   | 270.00      | <0.5          | 1210            | 0.60             | <0.5        | 1880.0          | 1893.0           | 320.00       | <0.5       | 8.3 | 7.6 | 1000.0        | 4            | 1300        |
| SRK05-9         | 6/2/2010   | <0.5                | 8                   | 300.00      | <0.5          | 1310            | 1.40             | <0.5        | 2040.0          | 2190.0           | 360.00       | <0.5       | 8.3 | 7.5 | 1000.0        | 7            | 440         |
| SRK05-9         | 6/20/2010  | <0.5                | 17                  | 330.00      | <0.5          | 1470            | 1.30             | <0.5        | 2200.0          | 2230.0           | 400.00       | <0.5       | 8.1 | 7.5 | 1100.0        | 4            | 400         |
| SRK05-9         | 7/7/2010   | <0.5                | 17                  | 360.00      | <0.5          | 1530            | 0.80             | <0.5        | 2280.0          | 2520.0           | 440.00       | <0.5       | 7.9 | 7.5 | 1100.0        | 5            | 210         |
| SRK05-9         | 7/22/2010  | <0.5                | 18                  | 370.00      | <0.5          | 1800            | 1.40             | <0.5        | 2340.0          | 2021.0           | 450.00       | <0.5       | 7.9 | 7.5 | 1200.0        | 4            | 100         |
| SRK05-9         | 8/5/2010   | <0.5                | 23                  | 380.00      | <0.5          | 1600            | 1.60             | <0.5        | 2370.0          | 2410.0           | 460.00       | <0.5       | 7.8 | 7.4 | 1200.0        | 7            | 200         |
| SRK05-9         | 8/18/2010  | <0.5                | 19                  | 360.00      | <0.5          | 1620            | 0.60             | <0.5        | 2380.0          | 2235.0           | 440.00       | <0.5       | 8.0 | 7.4 | 1300.0        | 7            | 170         |
| SRK05-9         | 9/7/2010   | <0.5                | 24                  | 400.00      | <0.5          | 1700            | 1.20             | <0.5        | 2580.0          | 2503.0           | 490.00       | <0.5       | 8.0 | 7.2 | 1400.0        | 6            | 230         |
| SRK05-9         | 9/23/2010  | <0.5                | 31                  | 370.00      | <0.5          | 1600            | 0.90             | <0.5        | 2440.0          | 2129.0           | 450.00       | <0.5       | 7.9 | 7.1 | 1300.0        | 3            | 920         |
| SRK05-9         | 10/7/2010  | <0.5                | 21                  | 370.00      | <0.5          | 1640            | 0.70             | <0.5        | 2360.0          | 2330.0           | 450.00       | <0.5       | 7.9 | 7.8 | 1200.0        | 3            | 440         |
| SRK05-9         | 10/21/2010 | <0.5                | 24                  | 350.00      | <0.5          | 1500            | 0.90             | <0.5        | 2160.0          | 2200.0           | 430.00       | <0.5       | 8.1 | 7.6 | 1200.0        | 3            | 170         |
| SRK05-9         | 11/4/2010  | <0.5                | 22                  | 340.00      | <0.5          | 1560            | <0.5             | <0.5        | 2300.0          | 2218.0           | 420.00       | <0.5       | 8.2 | 7.5 | 1200.0        | 5            | 360         |
| SRK05-9         | 11/18/2010 | <0.5                | 20                  | 340.00      | <0.5          | 1540            | 1.10             | <0.5        | 2310.0          | 2164.0           | 410.00       | <0.5       | 8.0 | 7.1 | 1200.0        | 2            | 250         |
| SRK05-9         | 12/2/2010  | <0.5                | 19                  | 340.00      | <0.5          | 1490            | 0.80             | <0.5        | 2260.0          | 2270.0           | 420.00       | <0.5       | 8.1 | 7.5 | 1200.0        | 2            | 150         |
| SRK05-9         | 12/16/2010 | <0.5                | 16                  | 340.00      | <0.5          | 1500            | 1.40             | <0.5        | 2230.0          | 2230.0           | 410.00       | <0.5       | 8.1 | 7.9 | 1100.0        | 0            | 610         |
| SRK05-9 Average |            | 0                   | 18                  | 341.25      | 0             | 1522            | 1.03             | 0.25        | 2228.8          | 2162.2           | 415.00       | 0          | 8.0 | 7.5 | 1122.1        | 3            | 383         |
| SRK05-9 Max     |            | <0.5                | 31                  | 400.00      | <0.5          | 1800            | 2.40             | <0.5        | 2580.0          | 2520.0           | 490.00       | <0.5       | 8.3 | 8.2 | 1400.0        | 7            | 1300        |
| SRK05-9 Min     |            | <0.5                | 5                   | 270.00      | <0.5          | 1210            | <0.5             | <0.5        | 1880.0          | 1750.0           | 320.00       | <0.5       | 7.7 | 7.0 | 940.0         | 0            | 43          |
| SRK05-9 N > DL  |            | 0                   | 24                  | 24          | 0             | 24              | 22               | 0           | 24              | 24               | 24           | 0          | 24  | 24  | 24            | 24           | 24          |
| SRK05-9 Median  |            | <0.5                | 18                  | 340.00      | <0.5          | 1520            | 1.00             | <0.5        | 2270.0          | 2185.0           | 420.00       | <0.5       | 8.0 | 7.5 | 1100.0        | 3            | 290         |
| SRK08-P14       | 9/16/2010  | <0.5                | 19                  | 280.00      | <0.5          | 1220            | 1.40             | <0.5        | 1990.0          | 2080.0           | 340.00       | <0.5       | 7.9 | 7.4 | 930.0         | 4            | 2400        |
| SRK08-P15       | 9/16/2010  | <0.5                | 21                  | 360.00      | <0.5          | 1290            | 0.60             | <0.5        | 1930.0          | 2030.0           | 440.00       | <0.5       | 7.9 | 7.7 | 850.0         | 5            | 1200        |
| SRK08-P16       | 9/20/2010  |                     |                     |             |               |                 |                  |             |                 |                  |              |            |     |     |               |              |             |
| V34             | 6/12/2010  | <0.5                | 37                  | 680.00      | <0.5          | 1020            | 1.60             | <0.5        | 1520.0          | 1468.0           | 830.00       | <0.5       | 7.9 | 7.3 | 260.0         | 5            | 230         |
| V34             | 9/18/2010  | <0.5                | 33                  | 740.00      | <0.5          | 1080            | 1.80             | <0.5        | 1670.0          | 1625.0           | 900.00       | <0.5       | 7.6 | 6.9 | 260.0         | 6            | 620         |
| V34 Average     |            | 0                   | 35                  | 710.00      | 0             | 1050            | 1.70             | 0.25        | 1595.0          | 1546.5           | 865.00       | 0          | 7.8 | 7.1 | 260.0         | 5            | 425         |
| V34 N > DL      |            | 0                   | 2                   | 2           | 0             | 2               | 2                | 0           | 2               | 2                | 2            | 0          | 2   | 2   | 2             | 2            | 2           |

Table D-6: Vangorda Creek Drainage Water Quality  
2010 - Groundwater - General Parameters

| Station     | Date      | Acid(pH4.5)<br>mg/L | Acid(pH8.3)<br>mg/L | ALK<br>mg/L | ALKPP<br>mg/L | CaCO3-d<br>mg/L | Chloride<br>mg/L | CO3<br>mg/L | COND<br>µmho/cm | CONDF<br>µmho/cm | HCO3<br>mg/L | OH<br>mg/L | pH  | pHF | SO4-d<br>mg/L | TEMP-F<br>°C | TSS<br>mg/L |
|-------------|-----------|---------------------|---------------------|-------------|---------------|-----------------|------------------|-------------|-----------------|------------------|--------------|------------|-----|-----|---------------|--------------|-------------|
| V35         | 6/12/2010 | <0.5                | 64                  | 630.00      | <0.5          | 2560            | 1.70             | <0.5        | 3390.0          | 3002.0           | 770.00       | <0.5       | 7.5 | 7.0 | 1700.0        | 6            | 54          |
| V35         | 9/18/2010 | <0.5                | 41                  | 550.00      | <0.5          | 1860            | <0.5             | <0.5        | 2760.0          | 2781.0           | 670.00       | <0.5       | 7.8 | 6.9 | 1300.0        | 5            | 58          |
| V35 Average |           | 0                   | 52                  | 590.00      | 0             | 2210            | 0.98             | 0.25        | 3075.0          | 2891.5           | 720.00       | 0          | 7.6 | 6.9 | 1500.0        | 6            | 56          |
| V35 N > DL  |           | 0                   | 2                   | 2           | 0             | 2               | 1                | 0           | 2               | 2                | 2            | 0          | 2   | 2   | 2             | 2            | 2           |
| V36         | 6/12/2010 | <0.5                | 39                  | 460.00      | <0.5          | 1640            | 1.30             | <0.5        | 2500.0          | 2166.0           | 560.00       | <0.5       | 7.5 | 7.0 | 1300.0        | 9            | 120         |
| V36         | 9/18/2010 | <0.5                | 40                  | 500.00      | <0.5          | 1760            | 0.60             | <0.5        | 2720.0          | 2700.0           | 600.00       | <0.5       | 7.6 | 6.6 | 1300.0        | 6            | 42          |
| V36 Average |           | 0                   | 40                  | 480.00      | 0             | 1700            | 0.95             | 0.25        | 2610.0          | 2433.0           | 580.00       | 0          | 7.5 | 6.8 | 1300.0        | 8            | 81          |
| V36 N > DL  |           | 0                   | 2                   | 2           | 0             | 2               | 2                | 0           | 2               | 2                | 2            | 0          | 2   | 2   | 2             | 2            | 2           |
| V37         | 6/13/2010 | <0.5                | 3                   | 440.00      | 14            | 490             | 1.20             | 16.00       | 956.0           | 997.0            | 500.00       | <0.5       | 8.5 | 9.2 | 160.0         | 5            | 70          |
| V37         | 9/18/2010 | <0.5                | 11                  | 440.00      | <0.5          | 542             | <0.5             | <0.5        | 1100.0          | 1085.0           | 540.00       | <0.5       | 8.0 | 7.3 | 170.0         | 7            | 47          |
| V37 Average |           | 0                   | 7                   | 440.00      | 7             | 516             | 0.73             | 8.13        | 1028.0          | 775.5            | 520.00       | 0          | 8.3 | 8.5 | 165.0         | 6            | 59          |
| V37 N > DL  |           | 0                   | 2                   | 2           | 1             | 2               | 1                | 1           | 2               | 4                | 2            | 0          | 2   | 4   | 2             | 4            | 2           |









## Table D-8: Bioassay Results Summary Vangorda Clarification Pond and Discharge to Vangorda Creek - 2010



| Station          | Date      | Percent Mortality |       |       |       | Temp. (°C) |       | D.O. (mg/L) |       | pH      |       | Conductivity<br>(µS/cm) | LC <sub>50</sub> Final Result<br>(%v/v) |
|------------------|-----------|-------------------|-------|-------|-------|------------|-------|-------------|-------|---------|-------|-------------------------|---|
|                  |           | 24 hr             | 48 hr | 72 hr | 96 hr | Initial    | Final | Initial     | Final | Initial | Final |                         |   |
| Clarification P. | 6/13/2010 | 0                 | 0     | 0     | 0     | 14.9       | 15.1  | 9.7         | 9.4   | 9.1     | 7.0   | 2144                    | Pass: 100%                              |
| V2               | 3/2/2010  | 0                 | 0     | 0     | 0     | 14.9       | 14.7  | 10.2        | 9.6   | 7.9     | 8.3   | 2240                    | Pass: 100%                              |
| V2               | 6/20/2010 | 0                 | 0     | 0     | 0     | 15.5       | 15.3  | 9.8         | 9.9   | 8.0     | 8.3   | 2059                    | Pass: 100%                              |
| V2               | 9/7/2010  | 0                 | 0     | 0     | 0     | 15.0       | 15.1  | 9.8         | 9.9   | 8.0     | 8.2   | 2159                    | Pass: 100%                              |
| V2               | 12/2/2010 | 0                 | 0     | 0     | 0     | 14.5       | 15.2  | 10.7        | 9.8   | 7.9     | 8.1   | 2443                    | Pass: 100%                              |
| V25BSP           | 4/27/2010 | 0                 | 0     | 0     | 0     | 14.5       | 14.1  | 10.0        | 9.9   | 7.3     | 7.7   | 659                     | Pass: 100%                              |
| V25BSP           | 6/15/2010 | 0                 | 0     | 0     | 0     | 15.9       | 14.8  | 9.8         | 9.7   | 7.7     | 7.8   | 474                     | Pass: 100%                              |
| V25BSP           | 9/7/2010  | 0                 | 0     | 0     | 0     | 14.7       | 15.1  | 9.9         | 9.7   | 7.5     | 7.6   | 1505                    | Pass: 100%                              |
| V25BSP           | 12/2/2010 | 0                 | 0     | 0     | 0     | 14.2       | 15.1  | 10.7        | 9.7   | 7.1     | 7.6   | 1192                    | Pass: 100%                              |



## Table D-9: Vangorda Creek Drainage 2010 FMC Lab Analysis - Zinc (Total and Dissolved) at V25



| Date      | Time     | Temp. (°C) | pH   | EC (µS/cm) | Zn-T  |       | Zn-T Average | Zn-D  |   | Zn-D Average    | Method of Analysis | Comments   |
|-----------|----------|------------|------|------------|-------|-------|--------------|-------|---|-----------------|--------------------|--|
| 22-Jun-10 | 9:00 AM  | 12.9       | 9.19 | 1872       | 0.545 | -     | <b>0.545</b> | 0.027 | - | <b>0.027</b>    | ICP                | Discharge commenced on Jun 21 at 8:30 pm   |
| 23-Jun-10 | 8:15 AM  | 13.4       | 9.33 | 1892       | 0.542 | -     | <b>0.542</b> | 0.015 | - | <b>0.015</b>    | ICP                |  |
| 24-Jun-10 | 7:11 AM  | 12.9       | 9.23 | 2140       | 0.180 | -     | <b>0.180</b> | <0.01 | - | <b>&lt;0.01</b> | ICP                |  |
| 25-Jun-10 | 9:05 AM  | 13.4       | 9.32 | 1904       | 0.101 | -     | <b>0.101</b> | 0.023 | - | <b>0.023</b>    | ICP                |  |
| 26-Jun-10 | 6:00 AM  | 14.2       | 9.26 |            | 0.255 | -     | <b>0.255</b> | 0.079 | - | <b>0.079</b>    | ICP                |  |
| 27-Jun-10 | 6:00 AM  | 14.2       | 9.25 |            | 0.223 | -     | <b>0.223</b> | <0.01 | - | <b>&lt;0.01</b> | ICP                |  |
| 28-Jun-10 | 6:00 AM  | 14.1       | 9.15 |            | 0.128 | -     | <b>0.128</b> | <0.01 | - | <b>&lt;0.01</b> | ICP                |  |
| 29-Jun-10 | 8:45 AM  | 12.2       | 8.83 | 2065       | 0.102 | -     | <b>0.102</b> | <0.01 | - | <b>&lt;0.01</b> | ICP                |  |
| 30-Jun-10 | 6:00 AM  | 13.1       | 9.16 | 1558       | 0.027 | -     | <b>0.027</b> | <0.01 | - | <b>&lt;0.01</b> | ICP                |  |
| 1-Jul-10  | 11:25 AM | 11.1       | 9.18 | 2006       | 0.087 | -     | <b>0.087</b> | <0.01 | - | <b>&lt;0.01</b> | ICP                |  |
| 2-Jul-10  | 6:00 AM  | 11.5       | 9.14 | 1980       | 0.096 | -     | <b>0.096</b> | <0.01 | - | <b>&lt;0.01</b> | ICP                |  |
| 3-Jul-10  | 6:00 AM  |            |      |            | 0.047 | -     | <b>0.047</b> | <0.01 | - | <b>&lt;0.01</b> | ICP                | No field parameters measured   |
| 4-Jul-10  | 6:00 AM  | 10.6       | 9.06 |            | 0.046 | -     | <b>0.046</b> | <0.01 | - | <b>&lt;0.01</b> | ICP                |  |
| 5-Jul-10  | 6:00 AM  | 10.4       | 9.09 |            | 0.061 | -     | <b>0.061</b> | <0.01 | - | <b>&lt;0.01</b> | ICP                |  |
| 6-Jul-10  | 6:00 AM  | 11.1       | 9.05 |            | 0.086 | -     | <b>0.086</b> | <0.01 | - | <b>&lt;0.01</b> | ICP                |  |
| 6-Jul-10  | 11:22 AM | 11.8       | 9.11 | 2089       | 0.049 | -     | <b>0.049</b> | <0.01 | - | <b>&lt;0.01</b> | ICP                |  |
| 7-Jul-10  | 6:00 AM  | 11.2       | 9.18 | 2380       | 0.043 | -     | <b>0.043</b> | <0.01 | - | <b>&lt;0.01</b> | ICP                |  |
| 8-Jul-10  | 6:00 AM  | 11.3       | 9.00 | 2132       | 0.048 | -     | <b>0.048</b> | <0.01 | - | <b>&lt;0.01</b> | ICP                |  |
| 9-Jul-10  | 1:33 PM  | 13.3       | 9.00 | 2160       | 0.062 | -     | <b>0.062</b> | <0.01 | - | <b>&lt;0.01</b> | ICP                |  |
| 10-Jul-10 | 6:00 AM  | 11.5       | 9.22 | 2013       | 0.073 | -     | <b>0.073</b> | <0.01 | - | <b>&lt;0.01</b> | ICP                |  |
| 11-Jul-10 | 6:00 AM  | 12.5       | 9.06 |            | 0.044 | -     | <b>0.044</b> | <0.01 | - | <b>&lt;0.01</b> | ICP                |  |
| 12-Jul-10 | 6:00 AM  | 10.4       | 9.00 |            | 0.055 | -     | <b>0.055</b> | <0.01 | - | <b>&lt;0.01</b> | ICP                |  |
| 13-Jul-10 | 6:00 AM  | 11.1       | 9.06 |            | 0.042 | -     | <b>0.042</b> | <0.01 | - | <b>&lt;0.01</b> | ICP                |  |
| 13-Jul-10 | 10:12 AM | 12.9       | 8.86 | 2049       | 0.049 | 0.055 | <b>0.052</b> | <0.01 | - | <b>&lt;0.01</b> | ICP                |  |
| 14-Jul-10 | 6:00 AM  | 11.5       | 9.00 |            | 0.046 | -     | <b>0.046</b> | <0.01 | - | <b>&lt;0.01</b> | ICP                |  |
| 15-Jul-10 | 8:20 AM  | 10.6       | 8.92 | 2110       | 0.043 | -     | <b>0.043</b> | <0.01 | - | <b>&lt;0.01</b> | ICP                | Vangorda treatment plant shut down @ 11:15am.  |
| 13-Aug-10 | 9:17 AM  | 14.2       | 8.08 | 2390       | 0.035 | -     | <b>0.035</b> |       |   |                 | ICP                |  |
| 14-Aug-10 | 11:00 AM |            | 7.77 | 2357       | 0.060 | 0.056 | <b>0.058</b> | 0.027 | - | <b>0.027</b>    | ICP                | Field parameters not measured until 2.5 hours after sample collected (therefore temp. not available. |
| 15-Aug-10 | 8:15 AM  | 14.4       | 8.58 | 2010       | 0.088 | -     | <b>0.088</b> | 0.050 | - | <b>0.050</b>    | ICP                |  |



| Date      | Time     | Temp. (°C) | pH   | EC (µS/cm) | Zn-T  |       | Zn-T Average | Zn-D  |   | Zn-D Average    | Method of Analysis | Comments                                      |
|-----------|----------|------------|------|------------|-------|-------|--------------|-------|---|-----------------|--------------------|---|
|           |          |            |      |            |       |       |              |       |   |                 |                    |   |
| 22-Jun-10 | 8:24 AM  | 13.9       | 8.14 | 403        | 0.113 | 0.072 | <b>0.093</b> | 0.030 | - | <b>0.030</b>    | ICP                | Discharge commenced on Jun 21 at 8:30 pm.     |
| 22-Jun-10 | 12:00 PM | 16.6       | 8.25 |            | 0.106 | -     | <b>0.106</b> | 0.024 | - | <b>0.024</b>    | ICP                |   |
| 22-Jun-10 | 6:00 PM  | 18.9       | 8.26 |            | 0.057 | -     | <b>0.057</b> | 0.028 | - | <b>0.028</b>    | ICP                |   |
| 23-Jun-10 | 12:00 AM | 15.1       | 8.04 |            | 0.055 | -     | <b>0.055</b> | 0.031 | - | <b>0.031</b>    | ICP                |   |
| 23-Jun-10 | 6:00 AM  | 13.4       | 8.10 |            | 0.058 | -     | <b>0.058</b> | 0.022 | - | <b>0.022</b>    | ICP                |   |
| 24-Jun-10 | 7:20 AM  | 12.7       | 8.23 | 910        | 0.047 | -     | <b>0.047</b> | 0.035 | - | <b>0.035</b>    | ICP                |   |
| 25-Jun-10 | 9:12 AM  | 12.9       | 8.16 | 1128       | <0.01 | 0.037 | <b>0.021</b> | 0.052 | - | <b>0.052</b>    | ICP                |   |
| 26-Jun-10 | 6:00 AM  | 14.1       | 8.86 |            | 0.037 | -     | <b>0.037</b> | <0.01 | - | <b>&lt;0.01</b> | ICP                |   |
| 27-Jun-10 | 6:00 AM  | 14.6       | 9.03 |            | 0.104 | -     | <b>0.104</b> | 0.087 | - | <b>0.087</b>    | ICP                |   |
| 28-Jun-10 | 6:00 AM  | 15.8       | 8.99 |            | 0.084 | -     | <b>0.084</b> | 0.089 | - | <b>0.089</b>    | ICP                |   |
| 29-Jun-10 | 9:10 AM  | 13.7       | 7.91 | 1814       | 0.084 | 0.083 | <b>0.084</b> | 0.086 | - | <b>0.086</b>    | ICP                |   |
| 30-Jun-10 | 6:00 AM  | 13.8       | 8.57 | 1352       | 0.077 | 0.079 | <b>0.078</b> | 0.079 | - | <b>0.079</b>    | ICP                |   |
| 1-Jul-10  | 11:43 AM | 12.6       | 7.86 | 1796       | 0.083 | -     | <b>0.083</b> | 0.085 | - | <b>0.085</b>    | ICP                |   |
| 2-Jul-10  | 6:00 AM  | 12.5       | 8.19 | 1822       | 0.122 | -     | <b>0.122</b> | 0.066 | - | <b>0.066</b>    | ICP                |   |
| 3-Jul-10  | 6:00 AM  | 13.3       | 8.23 |            | 0.071 | -     | <b>0.071</b> | 0.061 | - | <b>0.061</b>    | ICP                |   |
| 4-Jul-10  | 6:00 AM  | 12.2       | 8.25 |            | 0.063 | -     | <b>0.063</b> | 0.054 | - | <b>0.054</b>    | ICP                |   |
| 5-Jul-10  | 6:00 AM  | 12.1       | 8.18 |            | 0.063 | -     | <b>0.063</b> | 0.047 | - | <b>0.047</b>    | ICP                |   |
| 6-Jul-10  | 6:00 AM  | 12.0       | 8.05 |            | 0.059 | -     | <b>0.059</b> | 0.050 | - | <b>0.050</b>    | ICP                |   |
| 6-Jul-10  | 12:14 PM | 12.2       | 7.28 | 1772       | 0.063 | -     | <b>0.063</b> | 0.054 | - | <b>0.054</b>    | ICP                |   |
| 7-Jul-10  | 6:00 AM  | 11.2       | 9.18 | 2380       | 0.050 | -     | <b>0.050</b> | 0.045 | - | <b>0.045</b>    | ICP                |   |
| 8-Jul-10  | 6:00 AM  | 13.1       | 8.24 | 1845       | 0.051 | -     | <b>0.051</b> | 0.043 | - | <b>0.043</b>    | ICP                |   |
| 9-Jul-10  | 2:03 PM  | 16.4       | 7.81 | 1883       | 0.043 | -     | <b>0.043</b> | 0.045 | - | <b>0.045</b>    | ICP                |   |
| 10-Jul-10 | 6:00 AM  | 13.8       | 8.04 | 1732       | 0.044 | -     | <b>0.044</b> | 0.039 | - | <b>0.039</b>    | ICP                |   |
| 11-Jul-10 | 6:00 AM  | 13.4       | 8.36 |            | 0.065 | -     | <b>0.065</b> | 0.036 | - | <b>0.036</b>    | ICP                |   |
| 12-Jul-10 | 6:00 AM  | 11.7       | 8.68 |            | 0.048 | -     | <b>0.048</b> | 0.050 | - | <b>0.050</b>    | ICP                |   |
| 13-Jul-10 | 6:00 AM  | 12.3       | 8.60 |            | 0.049 | -     | <b>0.049</b> | 0.040 | - | <b>0.040</b>    | ICP                |   |
| 13-Jul-10 | 10:54 AM | 15.1       | 7.93 | 2160       | 0.045 | 0.045 | <b>0.045</b> | 0.037 | - | <b>0.037</b>    | ICP                |   |
| 14-Jul-10 | 6:00 AM  | 12.5       | 8.54 |            | 0.046 | -     | <b>0.046</b> | 0.042 | - | <b>0.042</b>    | ICP                |   |
| 15-Jul-10 | 8:30 AM  | 12.0       | 8.04 | 1935       | 0.041 | -     | <b>0.041</b> | 0.040 | - | <b>0.040</b>    | ICP                | Vangorda treatment plant shut down @ 11:15am. |
| 12-Aug-10 | 3:02 PM  | 15.2       | 7.79 | 1594       | 0.063 | -     | <b>0.063</b> |       |   |                 | ICP                |   |
| 15-Aug-10 | 8:25 AM  | 14.3       | 8.35 | 1573       | 0.053 | -     | <b>0.053</b> | 0.052 | - | <b>0.052</b>    | ICP                |   |









| Station       | Date      | Ag-d   | Al-d | As-d | Ba-d   | B-d   | Be-d  | Bi-d   | Ca-d   | Cd-d | Co-d   | Cr-d | Cu-d   | Fe-d  | K-d  | Li-d  | Mg-d  | Mn-d    | Mo-d | Na-d  | Ni-d    | Pb-d   | Sb-d | S-d  | Se-d   | Si-d    | Sn-d  | Sr-d   | Ti-d | Tl-d | U-d     | V-d  | Zn-d     | Zr-d |
|---------------|-----------|--------|------|------|--------|-------|-------|--------|--------|------|--------|------|--------|-------|------|-------|-------|---------|------|-------|---------|--------|------|------|--------|---------|-------|--------|------|------|---------|------|----------|------|
|               |           | µg/L   | µg/L | µg/L | µg/L   | µg/L  | µg/L  | µg/L   | mg/L   | µg/L | µg/L   | µg/L | µg/L   | µg/L  | mg/L | mg/L  | mg/L  | µg/L    | µg/L | mg/L  | µg/L    | µg/L   | mg/L | µg/L | µg/L   | µg/L    | µg/L  | µg/L   | µg/L | µg/L | µg/L    | µg/L | µg/L     | µg/L |
| GL-1          | 4/29/2010 | <0.005 | 9.20 | 1.10 | 52.000 | <50.0 | <0.01 | <0.005 | 106.00 | 1.22 | 6.4700 | <0.1 | 1.4300 | 8.00  | 2.87 | 0.021 | 62.00 | 189.000 | 2.58 | 8.94  | 101.000 | 0.1010 | 3.18 | 137  | 1.6100 | 2840.00 | 0.04  | 649.00 | <0.5 | 0.49 | 11.5000 | <0.2 | 3100.000 | <0.1 |
|               | 6/15/2010 | <0.005 | 0.70 | 0.89 | 43.900 | <50.0 | <0.01 | <0.005 | 114.00 | 1.65 | 3.3700 | <0.1 | 0.8700 | <1.0  | 2.89 | 0.022 | 63.10 | 66.400  | 2.21 | 9.30  | 108.000 | 0.6660 | 3.32 | 151  | 1.2500 | 2970.00 | <0.01 | 671.00 | <0.5 | 0.55 | 10.7000 | <0.2 | 3710.000 | <0.1 |
|               | 7/13/2010 | <0.005 | 1.20 | 0.92 | 45.100 | <50.0 | <0.01 | <0.005 | 113.00 | 0.69 | 3.5700 | <0.1 | 0.1900 | 5.00  | 2.85 | 0.021 | 65.30 | 52.600  | 2.38 | 9.67  | 101.000 | 0.4050 | 3.09 | 155  | 1.3000 | 2440.00 | <0.01 | 690.00 | <0.5 | 0.67 | 10.1000 | <0.2 | 413.000  | <0.1 |
|               | 8/10/2010 | <0.005 | 3.90 | 1.24 | 45.100 | <50.0 | <0.01 | <0.005 | 104.00 | 0.23 | 3.5200 | <0.1 | 0.4800 | 7.00  | 2.89 | 0.022 | 61.80 | 52.300  | 2.49 | 9.27  | 91.500  | 0.4320 | 2.85 | 152  | 1.3800 | 2010.00 | <0.01 | 637.00 | <0.5 | 0.79 | 9.5700  | 0.40 | 417.000  | <0.1 |
|               | 9/7/2010  | <0.005 | 3.20 | 1.40 | 45.600 | <50.0 | <0.01 | <0.005 | 113.00 | 0.63 | 3.7500 | <0.1 | 0.9600 | 12.00 | 3.10 | 0.022 | 67.10 | 64.800  | 2.42 | 10.30 | 97.200  | 2.1000 | 3.01 | 154  | 1.3300 | 2920.00 | <0.01 | 658.00 | <0.5 | 0.78 | 7.8500  | <0.2 | 1720.000 | <0.1 |
| GL-1 Average  |           | 0.0025 | 3.64 | 1.11 | 46.340 | 25.00 | 0.01  | 0.00   | 110.00 | 0.88 | 4.1360 | 0.05 | 0.7860 | 6.50  | 2.92 | 0.022 | 63.86 | 85.020  | 2.42 | 9.50  | 99.740  | 0.9226 | 3.09 | 150  | 1.3740 | 2636.00 | 0.01  | 661.00 | 0.25 | 0.66 | 9.9440  | 0.16 | 1872.000 | 0.05 |
| GL-1 Max      |           | <0.005 | 9.20 | 1.40 | 52.000 | <50.0 | <0.01 | <0.005 | 114.00 | 1.65 | 6.4700 | <0.1 | 1.4300 | 12.00 | 3.10 | 0.022 | 67.10 | 189.000 | 2.58 | 10.30 | 108.000 | 2.1000 | 3.32 | 155  | 1.6100 | 2970.00 | 0.04  | 690.00 | <0.5 | 0.79 | 11.5000 | 0.40 | 3710.000 | <0.1 |
| GL-1 Min      |           | <0.005 | 0.70 | 0.89 | 43.900 | <50.0 | <0.01 | <0.005 | 104.00 | 0.23 | 3.3700 | <0.1 | 0.1900 | <1.0  | 2.85 | 0.021 | 61.80 | 52.300  | 2.21 | 8.94  | 91.500  | 0.4050 | 2.85 | 137  | 1.2500 | 2010.00 | <0.01 | 637.00 | <0.5 | 0.49 | 7.8500  | <0.2 | 413.000  | <0.1 |
| GL-1 N > DL   |           | 0      | 5    | 5    | 5      | 0     | 0     | 0      | 5      | 5    | 5      | 0    | 5      | 4     | 5    | 5     | 5     | 5       | 5    | 5     | 5       | 5      | 5    | 5    | 5      | 5       | 5     | 1      | 5    | 0    | 5       | 1    | 5        | 0    |
| GL-1 Median   |           | <0.005 | 3.20 | 1.10 | 45.100 | <50.0 | <0.01 | <0.005 | 113.00 | 0.69 | 3.5700 | <0.1 | 0.8700 | 7.00  | 2.89 | 0.022 | 63.10 | 64.800  | 2.42 | 9.30  | 101.000 | 0.6660 | 3.09 | 152  | 1.3300 | 2840.00 | <0.01 | 658.00 | <0.5 | 0.67 | 10.1000 | <0.2 | 1720.000 | <0.1 |
| GL-15         | 4/29/2010 | 0.0190 | 8.50 | 1.06 | 49.600 | <50.0 | <0.01 | <0.005 | 121.00 | 1.63 | 2.7500 | <0.1 | 1.0500 | 4.00  | 3.14 | 0.023 | 68.50 | 59.500  | 2.62 | 9.73  | 129.000 | 0.3210 | 3.74 | 155  | 1.2200 | 2980.00 | <0.01 | 752.00 | <0.5 | 0.38 | 13.7000 | <0.2 | 4520.000 | <0.1 |
|               | 6/15/2010 | <0.005 | 0.90 | 1.12 | 48.400 | <50.0 | <0.01 | <0.005 | 119.00 | 1.71 | 3.5600 | <0.1 | 1.0800 | 2.00  | 3.21 | 0.025 | 72.20 | 85.600  | 2.53 | 10.50 | 131.000 | 0.8050 | 3.80 | 165  | 1.3800 | 3040.00 | <0.01 | 768.00 | <0.5 | 0.43 | 13.1000 | <0.2 | 4790.000 | <0.1 |
|               | 7/13/2010 | <0.005 | 0.60 | 1.21 | 47.800 | <50.0 | <0.01 | <0.005 | 120.00 | 1.78 | 3.8700 | <0.1 | 1.0900 | 5.00  | 3.16 | 0.024 | 73.60 | 89.300  | 2.58 | 10.60 | 136.000 | 0.6290 | 3.89 | 182  | 1.4800 | 3180.00 | <0.01 | 748.00 | <0.5 | 0.43 | 13.0000 | <0.2 | 4940.000 | <0.1 |
|               | 8/10/2010 | 0.0060 | 1.80 | 1.19 | 47.900 | <50.0 | <0.01 | <0.005 | 111.00 | 1.72 | 3.8800 | <0.1 | 0.3700 | 2.00  | 3.03 | 0.024 | 67.50 | 94.400  | 2.59 | 9.82  | 135.000 | 0.6780 | 3.47 | 167  | 1.4900 | 2130.00 | <0.01 | 706.00 | <0.5 | 0.45 | 13.2000 | <0.2 | 4930.000 | <0.1 |
|               | 9/7/2010  | <0.005 | 2.30 | 1.20 | 49.500 | <50.0 | <0.01 | <0.005 | 127.00 | 1.75 | 3.9900 | <0.1 | 0.3100 | 4.00  | 3.32 | 0.025 | 74.80 | 97.200  | 2.64 | 11.20 | 143.000 | 0.5140 | 3.58 | 169  | 1.3300 | 3160.00 | <0.01 | 748.00 | <0.5 | 0.47 | 12.9000 | <0.2 | 5480.000 | <0.1 |
| GL-15 Average |           | 0.0065 | 2.82 | 1.16 | 48.640 | 25.00 | 0.01  | 0.00   | 119.60 | 1.72 | 3.6100 | 0.05 | 0.7800 | 3.40  | 3.17 | 0.024 | 71.32 | 85.200  | 2.59 | 10.37 | 134.800 | 0.5894 | 3.70 | 168  | 1.3800 | 2898.00 | 0.01  | 744.40 | 0.25 | 0.43 | 13.1800 | 0.10 | 4932.000 | 0.05 |
| GL-15 Max     |           | 0.0190 | 8.50 | 1.21 | 49.600 | <50.0 | <0.01 | <0.005 | 127.00 | 1.78 | 3.9900 | <0.1 | 1.0900 | 5.00  | 3.32 | 0.025 | 74.80 | 97.200  | 2.64 | 11.20 | 143.000 | 0.8050 | 3.89 | 182  | 1.4900 | 3180.00 | <0.01 | 768.00 | <0.5 | 0.47 | 13.7000 | <0.2 | 5480.000 | <0.1 |
| GL-15 Min     |           | <0.005 | 0.60 | 1.06 | 47.800 | <50.0 | <0.01 | <0.005 | 111.00 | 1.63 | 2.7500 | <0.1 | 0.3100 | 2.00  | 3.03 | 0.023 | 67.50 | 59.500  | 2.53 | 9.73  | 129.000 | 0.3210 | 3.47 | 155  | 1.2200 | 2130.00 | <0.01 | 706.00 | <0.5 | 0.38 | 12.9000 | <0.2 | 4520.000 | <0.1 |
| GL-15 N > DL  |           | 2      | 5    | 5    | 5      | 0     | 0     | 0      | 5      | 5    | 5      | 0    | 5      | 5     | 5    | 5     | 5     | 5       | 5    | 5     | 5       | 5      | 5    | 5    | 5      | 5       | 5     | 0      | 5    | 0    | 5       | 0    | 5        | 0    |
| GL-15 Median  |           | <0.005 | 1.80 | 1.19 | 48.400 | <50.0 | <0.01 | <0.005 | 120.00 | 1.72 | 3.8700 | <0.1 | 1.0500 | 4.00  | 3.16 | 0.024 | 72.20 | 89.300  | 2.59 | 10.50 | 135.000 | 0.6290 | 3.74 | 167  | 1.3800 | 3040.00 | <0.01 | 748.00 | <0.5 | 0.43 | 13.1000 | <0.2 | 4930.000 | <0.1 |
| GL-3          | 4/29/2010 | <0.005 | 9.90 | 1.09 | 53.600 | <50.0 | <0.01 | <0.005 | 108.00 | 1.17 | 6.5500 | <0.1 | 1.3000 | 7.00  | 2.93 | 0.023 | 62.70 | 199.000 | 2.76 | 9.38  | 110.000 | 0.5510 | 3.45 | 138  | 1.4500 | 2560.00 | <0.01 | 689.00 | <0.5 | 0.56 | 12.2000 | <0.2 | 3230.000 | <0.1 |
|               | 6/15/2010 | <0.005 | 0.80 | 0.90 | 44.900 | <50.0 | <0.01 | <0.005 | 93.40  | 1.62 | 3.3700 | <0.1 | 0.9000 | <1.0  | 2.80 | 0.022 | 62.70 | 66.100  | 2.28 | 9.17  | 109.000 | 0.7120 | 3.32 | 142  | 1.2300 | 2290.00 | <0.01 | 681.00 | <0.5 | 0.57 | 10.8000 | <0.2 | 3690.000 | <0.1 |
|               | 7/13/2010 | <0.005 | 1.40 | 0.91 | 45.200 | <50.0 | <0.01 | <0.005 | 120.00 | 0.84 | 3.5400 | <0.1 | 0.1800 | 5.00  | 2.87 | 0.021 | 65.20 | 53.300  | 2.43 | 9.79  | 102.000 | 0.4160 | 3.14 | 148  | 1.3600 | 2640.00 | <0.01 | 684.00 | <0.5 | 0.68 | 9.8500  | <0.2 | 497.000  | <0.1 |
|               | 8/10/2010 | <0.005 | 3.40 | 1.21 | 46.100 | <50.0 | <0.01 | <0.005 | 108.00 | 0.20 | 3.5700 | <0.1 | 0.4700 | 4.00  | 2.80 | 0.022 | 61.00 | 49.900  | 2.45 | 9.10  | 90.900  | 0.4350 | 2.87 | 142  | 1.3200 | 1860.00 | <0.01 | 638.00 | <0.5 | 0.79 | 9.7500  | 0.40 | 409.000  | <0.1 |
|               | 9/7/2010  | <0.005 | 3.10 | 1.45 | 46.600 | <50.0 | <0.01 | 0.01   | 122.00 | 0.69 | 3.8300 | <0.1 | 0.6500 | 15.00 | 3.07 | 0.022 | 67.40 | 64.700  | 2.41 | 10.40 | 102.000 | 0.6830 | 3.01 | 155  | 1.4300 | 3160.00 | <0.01 | 663.00 | <0.5 | 0.84 | 8.2000  | 0.30 | 1810.000 | <0.1 |
| GL-3 Average  |           | 0.0025 | 3.72 | 1.11 | 47.280 | 25.00 | 0.01  | 0.00   | 110.28 | 0.90 | 4.1720 | 0.05 | 0.7000 | 6.30  | 2.89 | 0.022 | 63.80 | 86.600  | 2.47 | 9.57  | 102.780 | 0.5594 | 3.16 | 145  | 1.3580 | 2502.00 | 0.01  | 671.00 | 0.25 | 0.69 | 10.1600 | 0.20 | 1927.200 | 0.05 |
| GL-3 Max      |           | <0.005 | 9.90 | 1.45 | 53.600 | <50.0 | <0.01 | 0.01   | 122.00 | 1.62 | 6.5500 | <0.1 | 1.3000 | 15.00 | 3.07 | 0.023 | 67.40 | 199.000 | 2.76 | 10.40 | 110.000 | 0.7120 | 3.45 | 155  | 1.4500 | 3160.00 | <0.01 | 689.00 | <0.5 | 0.84 | 12.2000 | 0.40 | 3690.000 | <0.1 |
| GL-3 Min      |           | <0.005 | 0.80 | 0.90 | 44.900 | <50.0 | <0.01 | <0.005 | 93.40  | 0.20 | 3.3700 | <0.1 | 0.1800 | <1.0  | 2.80 | 0.021 | 61.00 | 49.900  | 2.28 | 9.10  | 90.900  | 0.4160 | 2.87 | 138  | 1.2300 | 1860.00 | <0.01 | 638.00 | <0.5 | 0.56 | 8.2000  | <0.2 | 409.000  | <0.1 |
| GL-3 N > DL   |           | 0      | 5    | 5    | 5      | 0     | 0     | 1      | 5      | 5    | 5      | 0    | 5      | 4     | 5    | 5     | 5     | 5       | 5    | 5     | 5       | 5      | 5    | 5    | 5      | 5       | 5     | 0      | 5    | 0    | 5       | 2    | 5        | 0    |
| GL-3 Median   |           | <0.005 | 3.10 | 1.09 | 46.100 | <50.0 | <0.01 | <0.005 | 108.00 | 0.84 | 3.5700 | <0.1 | 0.6500 | 5.00  | 2.87 | 0.022 | 62.70 | 64.700  | 2.43 | 9.38  | 102.000 | 0.5510 | 3.14 | 142  | 1.3600 | 2560.00 | <0.01 | 681.00 | <0.5 | 0.68 | 9.8500  | <0.2 | 1810.000 | <0.1 |
| GL-30         | 4/29/2010 | <0.005 | 7.80 | 1.07 | 49.700 | <50.0 | <0.01 | <0.00  |        |      |        |      |        |       |      |       |       |         |      |       |         |        |      |      |        |         |       |        |      |      |         |      |          |      |

Table D-12: Vangorda Creek Drainage Water Quality  
2010 - Pit Lakes - Dissolved Metals

| Station       | Date      | Ag-d   | Al-d    | As-d | Ba-d   | B-d      | Be-d | Bi-d | Ca-d   | Cd-d   | Co-d     | Cr-d | Cu-d     | Fe-d     | K-d  | Li-d  | Mg-d   | Mn-d      | Mo-d  | Na-d | Ni-d     | Pb-d     | Sb-d | S-d  | Se-d   | Si-d    | Sn-d | Sr-d    | Ti-d  | Tl-d | U-d    | V-d  | Zn-d       | Zr-d |   |   |
|---------------|-----------|--------|---------|------|--------|----------|------|------|--------|--------|----------|------|----------|----------|------|-------|--------|-----------|-------|------|----------|----------|------|------|--------|---------|------|---------|-------|------|--------|------|------------|------|---|---|
|               |           | µg/L   | µg/L    | µg/L | µg/L   | µg/L     | µg/L | µg/L | mg/L   | µg/L   | µg/L     | µg/L | µg/L     | µg/L     | mg/L | mg/L  | mg/L   | µg/L      | µg/L  | mg/L | µg/L     | µg/L     | mg/L | µg/L | µg/L   | µg/L    | µg/L | µg/L    | µg/L  | µg/L | µg/L   | µg/L | µg/L       | µg/L |   |   |
|               | 6/16/2010 | 0.2000 | 646.00  | 0.60 | 21.500 | <1000.0  | <0.2 | <0.1 | 246.00 | 159.00 | 888.0000 | <2.0 | 310.0000 | 42000.00 | 3.00 | 0.055 | 150.00 | 63000.000 | <1.0  | 5.00 | 735.0000 | 63.5000  | <0.4 | 545  | <0.8   | 3880.00 | <0.2 | 1310.00 | <10.0 | 1.91 | 2.0600 | <4.0 | 223000.000 | <2.0 |   |   |
|               | 7/14/2010 | 0.3000 | 357.00  | 0.80 | 19.100 | <1000.0  | <0.2 | <0.1 | 250.00 | 140.00 | 853.0000 | <2.0 | 243.0000 | 44100.00 | 3.00 | 0.054 | 137.00 | 62000.000 | <1.0  | 5.00 | 708.0000 | 48.4000  | <0.4 | 639  | <0.8   | 4420.00 | <0.2 | 1250.00 | 15.00 | 1.81 | 1.3200 | <4.0 | 200000.000 | <2.0 |   |   |
|               | 8/11/2010 | 0.2000 | 303.00  | 1.70 | 18.900 | <1000.0  | 0.30 | <0.1 | 252.00 | 144.00 | 895.0000 | <2.0 | 240.0000 | 47800.00 | 3.00 | 0.055 | 128.00 | 62700.000 | <1.0  | 5.00 | 743.0000 | 55.0000  | <0.4 | 525  | <0.8   | 3190.00 | <0.2 | 1250.00 | <10.0 | 2.00 | 1.4400 | <4.0 | 209000.000 | <2.0 |   |   |
|               | 9/7/2010  | <0.1   | 168.00  | <0.4 | 16.900 | <1000.0  | <0.2 | <0.1 | 254.00 | 135.00 | 861.0000 | <2.0 | 206.0000 | 38200.00 | 3.00 | 0.037 | 141.00 | 62600.000 | <1.0  | 5.00 | 719.0000 | 6.3000   | <0.4 | 576  | <0.8   | 4350.00 | <0.2 | 1190.00 | <10.0 | 1.92 | 1.2800 | <4.0 | 222000.000 | <2.0 |   |   |
| VL-15 Average |           | 0.2100 | 451.80  | 0.90 | 20.440 | 500.00   | 0.18 | 0.05 | 258.40 | 148.00 | 883.8000 | 1.00 | 274.0000 | 42880.00 | 3.00 | 0.051 | 140.40 | 62740.000 | 0.50  | 5.00 | 733.8000 | 55.4400  | 0.20 | 582  | 0.4000 | 4206.00 | 0.10 | 1262.00 | 8.20  | 1.89 | 1.7840 | 2.00 | 212000.000 | 1.00 |   |   |
| VL-15 Max     |           | 0.3000 | 785.00  | 1.70 | 25.800 | <1,000.0 | 0.30 | <0.1 | 290.00 | 162.00 | 922.0000 | <2.0 | 371.0000 | 47800.00 | 3.00 | 0.056 | 150.00 | 63400.000 | <1.0  | 5.00 | 764.0000 | 104.0000 | <0.4 | 639  | <0.8   | 5190.00 | <0.2 | 1310.00 | 15.00 | 2.00 | 2.8200 | <4.0 | 223000.000 | <2.0 |   |   |
| VL-15 Min     |           | <0.1   | 168.00  | <0.4 | 16.900 | <1,000.0 | <0.2 | <0.1 | 246.00 | 135.00 | 853.0000 | <2.0 | 206.0000 | 38200.00 | 3.00 | 0.037 | 128.00 | 62000.000 | <1.0  | 5.00 | 708.0000 | 6.3000   | <0.4 | 525  | <0.8   | 3190.00 | <0.2 | 1190.00 | <10.0 | 1.81 | 1.2800 | <4.0 | 200000.000 | <2.0 |   |   |
| VL-15 N > DL  |           | 4      | 5       | 4    | 5      | 0        | 2    | 0    | 5      | 5      | 5        | 0    | 5        | 5        | 5    | 5     | 5      | 5         | 0     | 5    | 5        | 5        | 0    | 5    | 0      | 5       | 0    | 5       | 0     | 5    | 2      | 5    | 5          | 0    | 5 | 0 |
| VL-15 Median  |           | 0.2000 | 357.00  | 0.80 | 19.100 | <1000.0  | <0.2 | <0.1 | 252.00 | 144.00 | 888.0000 | <2.0 | 243.0000 | 42300.00 | 3.00 | 0.055 | 141.00 | 62700.000 | <1.0  | 5.00 | 735.0000 | 55.0000  | <0.4 | 576  | <0.8   | 4350.00 | <0.2 | 1250.00 | <10.0 | 1.91 | 1.4400 | <4.0 | 209000.000 | <2.0 |   |   |
| VL-3          | 4/29/2010 | 0.4000 | 1760.00 | 3.60 | 23.200 | <1000.0  | 0.50 | <0.1 | 263.00 | 136.00 | 777.0000 | <2.0 | 605.0000 | 57600.00 | 3.00 | 0.070 | 121.00 | 47500.000 | <1.0  | 5.00 | 656.0000 | 306.0000 | <0.4 | 560  | <0.8   | 5390.00 | <0.2 | 1220.00 | 12.00 | 2.03 | 5.2200 | <4.0 | 175000.000 | <2.0 |   |   |
|               | 6/16/2010 | 0.2000 | 2420.00 | 1.70 | 21.800 | <1000.0  | 0.50 | <0.1 | 209.00 | 145.00 | 783.0000 | <2.0 | 885.0000 | 50400.00 | 3.00 | 0.051 | 128.00 | 52200.000 | <1.0  | 5.00 | 637.0000 | 339.0000 | <0.4 | 506  | <0.8   | 3940.00 | <0.2 | 1160.00 | <10.0 | 1.81 | 5.7900 | <4.0 | 196000.000 | <2.0 |   |   |
|               | 7/14/2010 | 0.3000 | 1720.00 | 1.00 | 21.800 | <1000.0  | 0.40 | <0.1 | 228.00 | 148.00 | 812.0000 | <2.0 | 585.0000 | 40200.00 | 3.00 | 0.051 | 130.00 | 57400.000 | <1.0  | 5.00 | 657.0000 | 251.0000 | <0.4 | 576  | <0.8   | 4260.00 | 0.30 | 1190.00 | <10.0 | 1.87 | 4.3900 | <4.0 | 192000.000 | <2.0 |   |   |
|               | 8/11/2010 | 0.3000 | 1640.00 | 1.60 | 21.500 | <1000.0  | 0.50 | <0.1 | 221.00 | 147.00 | 854.0000 | <2.0 | 571.0000 | 42800.00 | 3.00 | 0.054 | 126.00 | 58800.000 | <1.0  | 4.00 | 724.0000 | 253.0000 | <0.4 | 507  | <0.8   | 2860.00 | <0.2 | 1140.00 | <10.0 | 2.04 | 4.8500 | <4.0 | 202000.000 | <2.0 |   |   |
|               | 9/7/2010  | <0.1   | 1610.00 | 2.60 | 18.100 | <1000.0  | 0.40 | <0.1 | 224.00 | 131.00 | 698.0000 | <2.0 | 511.0000 | 51800.00 | 2.00 | 0.035 | 116.00 | 47900.000 | <1.0  | 4.00 | 561.0000 | 313.0000 | <0.4 | 452  | <0.8   | 4630.00 | <0.2 | 1060.00 | <10.0 | 1.86 | 4.9600 | <4.0 | 176000.000 | <2.0 |   |   |
| VL-3 Average  |           | 0.2500 | 1830.00 | 2.10 | 21.280 | 500.00   | 0.46 | 0.05 | 229.00 | 141.40 | 784.8000 | 1.00 | 631.4000 | 48560.00 | 2.80 | 0.052 | 124.20 | 52760.000 | 0.50  | 4.60 | 647.0000 | 292.4000 | 0.20 | 520  | 0.4000 | 4216.00 | 0.14 | 1154.00 | 6.40  | 1.92 | 5.0420 | 2.00 | 188200.000 | 1.00 |   |   |
| VL-3 Max      |           | 0.4000 | 2420.00 | 3.60 | 23.200 | <1,000.0 | 0.50 | <0.1 | 263.00 | 148.00 | 854.0000 | <2.0 | 885.0000 | 57600.00 | 3.00 | 0.070 | 130.00 | 58800.000 | <1.0  | 5.00 | 724.0000 | 339.0000 | <0.4 | 576  | <0.8   | 5390.00 | 0.30 | 1220.00 | 12.00 | 2.04 | 5.7900 | <4.0 | 202000.000 | <2.0 |   |   |
| VL-3 Min      |           | <0.1   | 1610.00 | 1.00 | 18.100 | <1,000.0 | 0.40 | <0.1 | 209.00 | 131.00 | 698.0000 | <2.0 | 511.0000 | 40200.00 | 2.00 | 0.035 | 116.00 | 47500.000 | <1.0  | 4.00 | 561.0000 | 251.0000 | <0.4 | 452  | <0.8   | 2860.00 | <0.2 | 1060.00 | <10.0 | 1.81 | 4.3900 | <4.0 | 175000.000 | <2.0 |   |   |
| VL-3 N > DL   |           | 4      | 5       | 5    | 5      | 0        | 5    | 0    | 5      | 5      | 5        | 0    | 5        | 5        | 5    | 5     | 5      | 5         | 0     | 5    | 5        | 5        | 0    | 5    | 0      | 5       | 0    | 5       | 1     | 5    | 1      | 5    | 5          | 0    | 5 | 0 |
| VL-3 Median   |           | 0.3000 | 1720.00 | 1.70 | 21.800 | <1000.0  | 0.50 | <0.1 | 224.00 | 145.00 | 783.0000 | <2.0 | 585.0000 | 50400.00 | 3.00 | 0.051 | 126.00 | 52200.000 | <1.0  | 5.00 | 656.0000 | 306.0000 | <0.4 | 507  | <0.8   | 4260.00 | <0.2 | 1160.00 | <10.0 | 1.87 | 4.9600 | <4.0 | 192000.000 | <2.0 |   |   |
| VL-30         | 4/29/2010 | 0.2000 | 311.00  | 1.20 | 20.700 | <1000.0  | <0.2 | <0.1 | 278.00 | 144.00 | 876.0000 | <2.0 | 240.0000 | 41900.00 | 3.00 | 0.050 | 140.00 | 60400.000 | <1.0  | 5.00 | 722.0000 | 46.8000  | 4.80 | 617  | <0.8   | 4810.00 | <0.2 | 1210.00 | 12.00 | 1.84 | 1.3000 | <4.0 | 197000.000 | <2.0 |   |   |
|               | 6/16/2010 | 0.2000 | 326.00  | 0.60 | 21.100 | <1000.0  | <0.2 | <0.1 | 324.00 | 155.00 | 939.0000 | <2.0 | 254.0000 | 54400.00 | 4.00 | 0.060 | 158.00 | 66900.000 | <1.0  | 5.00 | 761.0000 | 48.7000  | <0.4 | 533  | <0.8   | 5270.00 | <0.2 | 1370.00 | <10.0 | 1.95 | 1.3300 | <4.0 | 232000.000 | <2.0 |   |   |
|               | 7/14/2010 | 0.3000 | 340.00  | 1.10 | 19.200 | <1000.0  | <0.2 | <0.1 | 252.00 | 143.00 | 872.0000 | <2.0 | 235.0000 | 45500.00 | 3.00 | 0.054 | 139.00 | 62800.000 | <1.0  | 5.00 | 720.0000 | 52.7000  | <0.4 | 633  | <0.8   | 4430.00 | 0.30 | 1270.00 | 17.00 | 1.84 | 1.3100 | <4.0 | 204000.000 | <2.0 |   |   |
|               | 8/11/2010 | 0.2000 | 291.00  | 1.30 | 18.100 | <1000.0  | <0.2 | <0.1 | 245.00 | 139.00 | 873.0000 | <2.0 | 236.0000 | 47300.00 | 3.00 | 0.055 | 127.00 | 61600.000 | <1.0  | 4.00 | 727.0000 | 57.1000  | <0.4 | 557  | <0.8   | 3350.00 | <0.2 | 1210.00 | <10.0 | 1.92 | 1.3000 | <4.0 | 208000.000 | <2.0 |   |   |
|               | 9/7/2010  | 0.3000 | 227.00  | 0.80 | 15.200 | <1000.0  | <0.2 | <0.1 | 257.00 | 134.00 | 876.0000 | <2.0 | 213.0000 | 46600.00 | 3.00 | 0.036 | 139.00 | 63600.000 | <1.0  | 5.00 | 707.0000 | 31.4000  | <0.4 | 597  | <0.8   | 4450.00 | <0.2 | 1170.00 | <10.0 | 1.69 | 1.2000 | <4.0 | 211000.000 | <2.0 |   |   |
| VL-30 Average |           | 0.2400 | 299.00  | 1.00 | 18.860 | 500.00   | 0.10 | 0.05 | 271.20 | 143.00 | 887.2000 | 1.00 | 235.6000 | 47140.00 | 3.20 | 0.051 | 140.60 | 63060.000 | 0.50  | 4.80 | 727.4000 | 47.3400  | 1.12 | 587  | 0.4000 | 4462.00 | 0.14 | 1246.00 | 8.80  | 1.85 | 1.2880 | 2.00 | 210400.000 | 1.00 |   |   |
| VL-30 Max     |           | 0.3000 | 340.00  | 1.30 | 21.100 | <1,000.0 | <0.2 | <0.1 | 324.00 | 155.00 | 939.0000 | <2.0 | 254.0000 | 54400.00 | 4.00 | 0.060 | 158.00 | 66900.000 | <1.0  | 5.00 | 761.0000 | 57.1000  | 4.80 | 633  | <0.8   | 5270.00 | 0.30 | 1370.00 | 17.00 | 1.95 | 1.3300 | <4.0 | 232000.000 | <2.0 |   |   |
| VL-30 Min     |           | 0.2000 | 227.00  | 0.60 | 15.200 | <1,000.0 | <0.2 | <0.1 | 245.00 | 134.00 | 872.0000 | <2.0 | 213.0000 | 41900.00 | 3.00 | 0.036 | 127.00 | 60400.000 | <1.0  | 4.00 | 707.0000 | 31.4000  | <0.4 | 533  | <0.8   | 3350.00 | <0.2 | 1170.00 | <10.0 | 1.69 | 1.2000 | <4.0 | 197000.000 | <2.0 |   |   |
| VL-30 N > DL  |           | 5      | 5       | 5    | 5      | 0        | 0    | 0    | 5      | 5      | 5        | 0    | 5        | 5        | 5    | 5     | 5      | 5         | 0     | 5    | 5        | 5        | 1    | 5    | 0      | 5       | 0    | 5       | 1     | 5    | 2      | 5    | 5          | 0    | 5 | 0 |
| VL-30 Median  |           | 0.2000 | 311.00  | 1.10 | 19.200 | <1000.0  | <0.2 | <0.1 | 257.00 | 143.00 | 876.0000 | <2.0 | 236.0000 | 46600.00 | 3.00 | 0.054 | 139.00 | 62800.000 | <1.0  | 5.00 | 722.0000 | 48.7000  | <0.4 | 597  | <0.8   | 4450.00 | <0.2 | 1210.00 | <10.0 | 1.84 | 1.3000 | <4.0 | 208000.000 | <2.0 |   |   |
| VL-40         | 4/29/2010 | 0.5000 | 305.00  | 1.40 | 18.900 | <1000.0  | <0.2 | <0.1 | 262.00 | 140.00 | 846.0000 | <2.0 | 236.0000 | 43000.00 | 3.00 | 0.042 | 135.00 | 57600.000 | 16.00 | 5.00 | 701.0000 | 45.4000  | 0.50 | 569  | 1.0000 | 4110.00 | <0.2 | 1190.00 | <10.0 | 1.55 | 1.2600 | <4.0 | 192000.000 | <2.0 |   |   |
|               | 6/16/2010 | 0.2000 | 317.00  | 0.80 | 19.700 | <1000.0  | <0.2 | <0.1 | 288.00 | 150.00 | 945.0000 | <2.0 | 253.0000 | 48700.00 | 3.00 | 0.056 | 158.00 | 67600.000 | <1.0  | 5.00 | 777.0000 | 47.5000  | <0.4 | 573  | <0.8   | 4730.00 | <0.2 | 1350.00 | <10.0 | 1.84 | 1.3700 | <4.0 | 234000.000 | <2.0 |   |   |
|               | 7/14/2010 | 0.2000 | 336.00  | 1.40 | 18.800 | <1000.0  | <0.2 | <0.1 | 257.00 | 142.00 | 872.0000 | <2.0 |          |          |      |       |        |           |       |      |          |          |      |      |        |         |      |         |       |      |        |      |            |      |   |   |

Table D-13: Vangorda Creek Drainage Water Quality  
2010 - Pit Lakes - Total Metals

| Station       | Date      | Ag     | Al    | As    | B     | Ba     | Be    | Bi     | Ca     | Cd   | Co     | Cr   | Cu     | Fe     | K    | Li   | Mg    | Mn      | Mo   | Na    | Ni      | P      | Pb     | S       | Sb   | Se     | Si      | Sn    | Sr     | Ti   | Tl   | U       | V    | Zn       | Zr   | Zr-d |   |
|---------------|-----------|--------|-------|-------|-------|--------|-------|--------|--------|------|--------|------|--------|--------|------|------|-------|---------|------|-------|---------|--------|--------|---------|------|--------|---------|-------|--------|------|------|---------|------|----------|------|------|---|
|               |           | µg/L   | µg/L  | µg/L  | µg/L  | µg/L   | µg/L  | µg/L   | mg/L   | µg/L | µg/L   | µg/L | µg/L   | µg/L   | mg/L | mg/L | mg/L  | µg/L    | µg/L | mg/L  | µg/L    | µg/L   | µg/L   | µg/L    | µg/L | µg/L   | µg/L    | µg/L  | µg/L   | µg/L | µg/L | µg/L    | µg/L | µg/L     | µg/L |      |   |
| GL-1          | 4/29/2010 | <0.005 | 38.90 | 1.300 | <50.0 | 50.200 | <0.01 | <0.005 | 105.00 | 1.24 | 6.5400 | 1.10 | 1.7600 | 107.00 | 2.78 | 0.02 | 62.00 | 190.000 | 2.53 | 8.75  | 100.000 | <0.005 | 2.6800 | 136.00  | 3.12 | 1.5800 | 2820.00 | 0.02  | 634.00 | 1.10 | 0.44 | 11.2000 | 0.30 | 3130.000 | <0.1 | <0.1 |   |
|               | 6/15/2010 | 0.0060 | 25.80 | 1.180 | <50.0 | 45.300 | <0.01 | <0.005 | 98.30  | 1.73 | 3.3900 | <0.1 | 1.7300 | 67.00  | 2.99 | 0.02 | 65.40 | 77.300  | 2.24 | 9.64  | 110.000 | <0.005 | 1.7100 | 155.00  | 3.35 | 1.3100 | 2580.00 | 0.02  | 683.00 | 1.10 | 0.54 | 10.7000 | <0.2 | 3940.000 | <0.1 | <0.1 |   |
|               | 7/13/2010 | <0.005 | 13.60 | 1.080 | <50.0 | 45.200 | <0.01 | <0.005 | 102.00 | 1.30 | 3.7200 | <0.1 | 1.4000 | 56.00  | 2.90 | 0.02 | 66.50 | 58.300  | 2.24 | 9.62  | 105.000 | 0.02   | 1.0400 | 148.00  | 2.99 | 1.3000 | 2520.00 | <0.01 | 684.00 | <0.5 | 0.67 | 9.9100  | <0.2 | 1160.000 | <0.1 | <0.1 |   |
|               | 8/10/2010 | <0.005 | 18.20 | 1.450 | <50.0 | 47.100 | <0.01 | <0.005 | 114.00 | 0.75 | 3.6500 | <0.1 | 1.0700 | 92.00  | 2.91 | 0.02 | 66.60 | 61.000  | 2.53 | 9.36  | 95.100  | <0.005 | 1.4100 | 147.00  | 3.18 | 1.3400 | 2690.00 | <0.01 | 706.00 | 3.50 | 0.86 | 10.2000 | <0.2 | 826.000  | <0.1 | <0.1 |   |
|               | 9/7/2010  | <0.005 | 29.20 | 1.840 | <50.0 | 47.600 | <0.01 | <0.005 | 113.00 | 0.99 | 3.8200 | <0.1 | 1.2400 | 132.00 | 3.16 | 0.02 | 69.80 | 71.200  | 2.50 | 10.30 | 96.200  | <0.005 | 1.9300 | 162.00  | 3.02 | 1.3500 | 2800.00 | <0.01 | 701.00 | 0.90 | 0.85 | 8.5800  | <0.2 | 2050.000 | <0.1 | <0.1 |   |
| GL-1 Average  |           | 0.0032 | 25.14 | 1.370 | 25.00 | 47.080 | 0.01  | 0.00   | 106.46 | 1.20 | 4.2240 | 0.26 | 1.4400 | 90.80  | 2.95 | 0.02 | 66.06 | 91.560  | 2.41 | 9.53  | 101.260 | 0.01   | 1.7540 | 149.60  | 3.13 | 1.3760 | 2682.00 | 0.01  | 681.60 | 1.37 | 0.67 | 10.1180 | 0.14 | 2221.200 | 0.05 | 0.05 |   |
| GL-1 Max      |           | 0.0060 | 38.90 | 1.840 | <50.0 | 50.200 | <0.01 | <0.005 | 114.00 | 1.73 | 6.5400 | 1.10 | 1.7600 | 132.00 | 3.16 | 0.02 | 69.80 | 190.000 | 2.53 | 10.30 | 110.000 | 0.02   | 2.6800 | 162.00  | 3.35 | 1.5800 | 2820.00 | 0.02  | 706.00 | 3.50 | 0.86 | 11.2000 | 0.30 | 3940.000 | <0.1 | <0.1 |   |
| GL-1 Min      |           | <0.005 | 13.60 | 1.080 | <50.0 | 45.200 | <0.01 | <0.005 | 98.30  | 0.75 | 3.3900 | <0.1 | 1.0700 | 56.00  | 2.78 | 0.02 | 62.00 | 58.300  | 2.24 | 8.75  | 95.100  | <0.005 | 1.0400 | 136.00  | 2.99 | 1.3000 | 2520.00 | <0.01 | 634.00 | <0.5 | 0.44 | 8.5800  | <0.2 | 826.000  | <0.1 | <0.1 |   |
| GL-1 N > DL   |           | 1      | 5     | 5     | 0     | 5      | 0     | 0      | 5      | 5    | 5      | 1    | 5      | 5      | 5    | 5    | 5     | 5       | 5    | 5     | 5       | 1      | 5      | 5       | 5    | 5      | 5       | 5     | 2      | 5    | 4    | 5       | 5    | 1        | 5    | 0    | 0 |
| GL-1 Median   |           | <0.005 | 25.80 | 1.300 | <50.0 | 47.100 | <0.01 | <0.005 | 105.00 | 1.24 | 3.7200 | <0.1 | 1.4000 | 92.00  | 2.91 | 0.02 | 66.50 | 71.200  | 2.50 | 9.62  | 100.000 | <0.005 | 1.7100 | 148.00  | 3.12 | 1.3400 | 2690.00 | <0.01 | 684.00 | 1.10 | 0.67 | 10.2000 | <0.2 | 2050.000 | <0.1 | <0.1 |   |
| GL-15         | 4/29/2010 | 0.0070 | 68.80 | 1.250 | <50.0 | 50.500 | <0.01 | <0.005 | 120.00 | 1.67 | 2.8300 | 0.20 | 1.2300 | 106.00 | 3.00 | 0.02 | 66.60 | 61.000  | 2.63 | 9.40  | 130.000 | <0.005 | 0.6220 | 149.00  | 3.65 | 1.3000 | 2780.00 | <0.01 | 777.00 | 2.80 | 0.40 | 13.7000 | 0.30 | 4570.000 | <0.1 | <0.1 |   |
|               | 6/15/2010 | <0.005 | 21.30 | 1.310 | <50.0 | 49.400 | <0.01 | <0.005 | 118.00 | 1.79 | 3.5300 | <0.1 | 1.1900 | 43.00  | 3.23 | 0.02 | 71.60 | 85.800  | 2.50 | 10.40 | 128.000 | <0.005 | 1.3600 | 168.00  | 3.72 | 1.3900 | 3040.00 | <0.01 | 771.00 | 0.90 | 0.42 | 12.8000 | <0.2 | 4680.000 | <0.1 | <0.1 |   |
|               | 7/13/2010 | <0.005 | 11.20 | 1.320 | <50.0 | 49.600 | <0.01 | <0.005 | 109.00 | 1.81 | 3.6600 | <0.1 | 1.3900 | 34.00  | 3.18 | 0.02 | 72.00 | 88.500  | 2.46 | 10.30 | 134.000 | <0.005 | 1.3700 | 165.00  | 3.74 | 1.3100 | 2970.00 | <0.01 | 769.00 | <0.5 | 0.45 | 13.4000 | <0.2 | 4800.000 | <0.1 | <0.1 |   |
|               | 8/10/2010 | <0.005 | 10.90 | 1.390 | <50.0 | 48.800 | <0.01 | <0.005 | 125.00 | 1.84 | 4.0600 | <0.1 | 0.7900 | 38.00  | 3.14 | 0.02 | 70.70 | 94.100  | 2.68 | 9.85  | 140.000 | <0.005 | 1.5800 | 2340.00 | 3.76 | 1.3800 | 2980.00 | <0.01 | 810.00 | <0.5 | 0.48 | 14.6000 | <0.2 | 5090.000 | <0.1 | <0.1 |   |
|               | 9/7/2010  | <0.005 | 12.30 | 1.390 | <50.0 | 49.700 | <0.01 | <0.005 | 128.00 | 1.99 | 4.0200 | <0.1 | 0.5500 | 47.00  | 3.29 | 0.02 | 73.30 | 95.500  | 2.66 | 10.60 | 133.000 | <0.005 | 1.2700 | 173.00  | 4.30 | 1.4100 | 3030.00 | <0.01 | 771.00 | <0.5 | 0.49 | 14.0000 | <0.2 | 5090.000 | <0.1 | <0.1 |   |
| GL-15 Average |           | 0.0034 | 24.90 | 1.332 | 25.00 | 49.600 | 0.01  | 0.00   | 120.00 | 1.82 | 3.6200 | 0.08 | 1.0300 | 53.60  | 3.17 | 0.02 | 70.84 | 84.980  | 2.59 | 10.11 | 133.000 | 0.00   | 1.2404 | 599.00  | 3.83 | 1.3580 | 2960.00 | 0.01  | 779.60 | 0.89 | 0.45 | 13.7000 | 0.14 | 4846.000 | 0.05 | 0.05 |   |
| GL-15 Max     |           | 0.0070 | 68.80 | 1.390 | <50.0 | 50.500 | <0.01 | <0.005 | 128.00 | 1.99 | 4.0600 | 0.20 | 1.3900 | 106.00 | 3.29 | 0.02 | 73.30 | 95.500  | 2.68 | 10.60 | 140.000 | <0.005 | 1.5800 | 2340.00 | 4.30 | 1.4100 | 3040.00 | <0.01 | 810.00 | 2.80 | 0.49 | 14.6000 | 0.30 | 5090.000 | <0.1 | <0.1 |   |
| GL-15 Min     |           | <0.005 | 10.90 | 1.250 | <50.0 | 48.800 | <0.01 | <0.005 | 109.00 | 1.67 | 2.8300 | <0.1 | 0.5500 | 34.00  | 3.00 | 0.02 | 66.60 | 61.000  | 2.46 | 9.40  | 128.000 | <0.005 | 0.6220 | 149.00  | 3.65 | 1.3000 | 2780.00 | <0.01 | 769.00 | <0.5 | 0.40 | 12.8000 | <0.2 | 4570.000 | <0.1 | <0.1 |   |
| GL-15 N > DL  |           | 1      | 5     | 5     | 0     | 5      | 0     | 0      | 5      | 5    | 5      | 1    | 5      | 5      | 5    | 5    | 5     | 5       | 5    | 5     | 5       | 0      | 5      | 5       | 5    | 5      | 5       | 0     | 5      | 2    | 5    | 5       | 1    | 5        | 0    | 0    |   |
| GL-15 Median  |           | <0.005 | 12.30 | 1.320 | <50.0 | 49.600 | <0.01 | <0.005 | 120.00 | 1.81 | 3.6600 | <0.1 | 1.1900 | 43.00  | 3.18 | 0.02 | 71.60 | 88.500  | 2.63 | 10.30 | 133.000 | <0.005 | 1.3600 | 168.00  | 3.74 | 1.3800 | 2980.00 | <0.01 | 771.00 | <0.5 | 0.45 | 13.7000 | <0.2 | 4800.000 | <0.1 | <0.1 |   |
| GL-3          | 4/29/2010 | <0.005 | 24.50 | 1.220 | <50.0 | 54.700 | <0.01 | <0.005 | 111.00 | 1.20 | 6.7100 | <0.1 | 1.4000 | 65.00  | 2.93 | 0.02 | 65.10 | 209.000 | 2.80 | 9.59  | 109.000 | <0.005 | 1.5200 | 141.00  | 3.47 | 1.5900 | 2880.00 | <0.01 | 721.00 | 0.70 | 0.56 | 12.5000 | 0.30 | 3330.000 | <0.1 | <0.1 |   |
|               | 6/15/2010 | <0.005 | 20.90 | 1.220 | <50.0 | 44.300 | <0.01 | <0.005 | 108.00 | 1.66 | 3.5700 | <0.1 | 1.4000 | 60.00  | 2.97 | 0.02 | 65.20 | 76.900  | 2.05 | 9.53  | 112.000 | <0.005 | 1.6000 | 151.00  | 3.28 | 1.2800 | 2830.00 | <0.01 | 671.00 | 0.60 | 0.54 | 10.4000 | <0.2 | 4130.000 | <0.1 | <0.1 |   |
|               | 7/13/2010 | <0.005 | 16.00 | 1.060 | <50.0 | 45.600 | <0.01 | <0.005 | 99.60  | 1.37 | 3.6400 | <0.1 | 0.9500 | 53.00  | 2.88 | 0.02 | 65.90 | 57.900  | 2.22 | 9.49  | 105.000 | 0.03   | 1.0400 | 147.00  | 3.03 | 1.2300 | 2520.00 | <0.01 | 676.00 | 0.60 | 0.66 | 9.8600  | <0.2 | 1280.000 | <0.1 | <0.1 |   |
|               | 8/10/2010 | <0.005 | 19.00 | 1.410 | <50.0 | 51.100 | <0.01 | <0.005 | 110.00 | 0.73 | 3.5800 | <0.1 | 1.0400 | 86.00  | 2.84 | 0.02 | 64.20 | 58.900  | 2.61 | 9.22  | 93.700  | <0.005 | 1.4800 | 143.00  | 3.36 | 1.2800 | 2540.00 | <0.01 | 763.00 | <0.5 | 0.90 | 10.9000 | <0.2 | 814.000  | <0.1 | <0.1 |   |
|               | 9/7/2010  | 0.0060 | 28.40 | 1.870 | <50.0 | 48.700 | <0.01 | <0.005 | 111.00 | 0.96 | 3.8200 | <0.1 | 1.2700 | 131.00 | 3.07 | 0.02 | 67.50 | 70.500  | 2.48 | 10.10 | 97.500  | <0.005 | 1.8900 | 159.00  | 3.69 | 1.3000 | 2550.00 | <0.01 | 701.00 | 1.20 | 0.84 | 8.6300  | <0.2 | 1950.000 | <0.1 | <0.1 |   |
| GL-3 Average  |           | 0.0032 | 21.76 | 1.356 | 25.00 | 48.880 | 0.01  | 0.00   | 107.92 | 1.18 | 4.2640 | 0.05 | 1.2120 | 79.00  | 2.94 | 0.02 | 65.58 | 94.640  | 2.43 | 9.59  | 103.440 | 0.01   | 1.5060 | 148.20  | 3.37 | 1.3360 | 2664.00 | 0.01  | 706.40 | 0.67 | 0.70 | 10.4580 | 0.14 | 2300.800 | 0.05 | 0.05 |   |
| GL-3 Max      |           | 0.0060 | 28.40 | 1.870 | <50.0 | 54.700 | <0.01 | <0.005 | 111.00 | 1.66 | 6.7100 | <0.1 | 1.4000 | 131.00 | 3.07 | 0.02 | 67.50 | 209.000 | 2.80 | 10.10 | 112.000 | 0.03   | 1.8900 | 159.00  | 3.69 | 1.5900 | 2880.00 | <0.01 | 763.00 | 1.20 | 0.90 | 12.5000 | 0.30 | 4130.000 | <0.1 | <0.1 |   |
| GL-3 Min      |           | <0.005 | 16.00 | 1.060 | <50.0 | 44.300 | <0.01 | <0.005 | 99.60  | 0.73 | 3.5700 | <0.1 | 0.9500 | 53.00  | 2.84 | 0.02 | 64.20 | 57.900  | 2.05 | 9.22  | 93.700  | <0.005 | 1.0400 | 141.00  | 3.03 | 1.2300 | 2520.00 | <0.01 | 671.00 | <0.5 | 0.54 | 8.6300  | <0.2 | 814.000  | <0.1 | <0.1 |   |
| GL-3 N > DL   |           |        |       |       |       |        |       |        |        |      |        |      |        |        |      |      |       |         |      |       |         |        |        |         |      |        |         |       |        |      |      |         |      |          |      |      |   |

**Table D-13: Vangorda Creek Drainage Water Quality  
2010 - Pit Lakes - Total Metals**

| Station       | Date      | Ag     | Al      | As    | B        | Ba     | Be   | Bi   | Ca     | Cd     | Co       | Cr   | Cu       | Fe       | K    | Li   | Mg     | Mn        | Mo   | Na   | Ni      | P      | Pb       | S      | Sb   | Se     | Si      | Sn   | Sr      | Ti     | Tl   | U      | V    | Zn         | Zr   | Zr-d |      |      |      |
|---------------|-----------|--------|---------|-------|----------|--------|------|------|--------|--------|----------|------|----------|----------|------|------|--------|-----------|------|------|---------|--------|----------|--------|------|--------|---------|------|---------|--------|------|--------|------|------------|------|------|------|------|------|
|               |           | µg/L   | µg/L    | µg/L  | µg/L     | µg/L   | µg/L | µg/L | mg/L   | µg/L   | µg/L     | µg/L | µg/L     | µg/L     | mg/L | mg/L | mg/L   | µg/L      | µg/L | mg/L | µg/L    | mg/L   | µg/L     | mg/L   | µg/L | µg/L   | µg/L    | µg/L | µg/L    | µg/L   | µg/L | µg/L   | µg/L | µg/L       | µg/L | µg/L | µg/L | µg/L | µg/L |
| VL-15 Max     |           | 0.3000 | 700.00  | 3.800 | <1,000.0 | 22.600 | <0.2 | <0.1 | 262.00 | 155.00 | 870.0000 | <2.0 | 334.0000 | 46700.00 | 3.00 | 0.06 | 145.00 | 64000.000 | <1.0 | 5.00 | 714.000 | <0.005 | 98.0000  | 615.00 | <0.4 | <0.8   | 4780.00 | 0.30 | 1280.00 | 174.00 | 1.95 | 2.5100 | 9.00 | 217000.000 | <2.0 | <2.0 |      |      |      |
| VL-15 Min     |           | <0.1   | 212.00  | <0.4  | <1,000.0 | 16.900 | <0.2 | <0.1 | 237.00 | 138.00 | 768.0000 | <2.0 | 182.0000 | 40600.00 | 3.00 | 0.04 | 128.00 | 55300.000 | <1.0 | 4.00 | 622.000 | <0.005 | 27.7000  | 518.00 | <0.4 | <0.8   | 3860.00 | <0.2 | 1190.00 | <10.0  | 1.82 | 1.2500 | <4.0 | 187000.000 | <2.0 | <2.0 |      |      |      |
| VL-15 N > DL  |           | 2      | 5       | 4     | 0        | 5      | 0    | 0    | 5      | 5      | 5        | 5    | 5        | 5        | 5    | 5    | 5      | 5         | 5    | 5    | 5       | 5      | 5        | 5      | 5    | 5      | 5       | 5    | 5       | 5      | 5    | 5      | 5    | 5          | 5    | 5    | 5    | 5    |      |
| VL-15 Median  |           | <0.1   | 355.00  | 1.300 | <1000.0  | 20.000 | <0.2 | <0.1 | 254.00 | 147.00 | 830.0000 | <2.0 | 253.0000 | 41900.00 | 3.00 | 0.06 | 133.00 | 58700.000 | <1.0 | 5.00 | 686.000 | <0.005 | 52.4000  | 581.00 | <0.4 | <0.8   | 4480.00 | <0.2 | 1250.00 | <10.0  | 1.90 | 1.5700 | <4.0 | 202000.000 | <2.0 | <2.0 |      |      |      |
| VL-3          | 4/29/2010 | <0.1   | 1660.00 | 4.800 | <1000.0  | 21.300 | 0.40 | <0.1 | 232.00 | 129.00 | 703.0000 | <2.0 | 548.0000 | 58400.00 | 3.00 | 0.04 | 109.00 | 43500.000 | <1.0 | 5.00 | 587.000 | <0.005 | 293.0000 | 524.00 | <0.4 | <0.8   | 5110.00 | 0.40 | 1170.00 | <10.0  | 1.59 | 4.7600 | <4.0 | 172000.000 | <2.0 | <2.0 |      |      |      |
|               | 6/16/2010 | 0.2000 | 2390.00 | 2.400 | <1000.0  | 24.400 | 0.50 | <0.1 | 213.00 | 155.00 | 808.0000 | <2.0 | 910.0000 | 52400.00 | 3.00 | 0.06 | 133.00 | 53800.000 | <1.0 | 5.00 | 655.000 | <0.005 | 353.0000 | 502.00 | <0.4 | <0.8   | 3980.00 | <0.2 | 1210.00 | <10.0  | 1.94 | 5.4200 | <4.0 | 203000.000 | <2.0 | <2.0 |      |      |      |
|               | 7/14/2010 | 0.3000 | 1660.00 | 2.500 | <1000.0  | 22.300 | 0.40 | <0.1 | 213.00 | 149.00 | 825.0000 | <2.0 | 603.0000 | 37900.00 | 3.00 | 0.05 | 132.00 | 58900.000 | <1.0 | 5.00 | 685.000 | <0.005 | 256.0000 | 615.00 | <0.4 | <0.8   | 4630.00 | <0.2 | 1170.00 | 14.00  | 1.98 | 5.1600 | <4.0 | 190000.000 | <2.0 | <2.0 |      |      |      |
|               | 8/11/2010 | <0.1   | 1490.00 | 0.600 | <1000.0  | 21.800 | 0.30 | <0.1 | 233.00 | 156.00 | 786.0000 | <2.0 | 524.0000 | 42100.00 | 3.00 | 0.06 | 123.00 | 54900.000 | <1.0 | 4.00 | 639.000 | <0.005 | 239.0000 | 552.00 | <0.4 | <0.8   | 4600.00 | <0.2 | 1210.00 | <10.0  | 2.09 | 4.5400 | <4.0 | 196000.000 | <2.0 | <2.0 |      |      |      |
|               | 9/7/2010  | <0.1   | 1490.00 | 2.500 | <1000.0  | 20.100 | 0.30 | <0.1 | 220.00 | 136.00 | 693.0000 | <2.0 | 482.0000 | 51500.00 | 3.00 | 0.05 | 114.00 | 47700.000 | <1.0 | 4.00 | 548.000 | <0.005 | 323.0000 | 490.00 | <0.4 | <0.8   | 4410.00 | 0.30 | 1090.00 | 64.00  | 1.94 | 4.9000 | <4.0 | 165000.000 | <2.0 | <2.0 |      |      |      |
| VL-3 Average  |           | 0.1300 | 1738.00 | 2.560 | 500.00   | 21.980 | 0.38 | 0.05 | 222.20 | 145.00 | 763.0000 | 1.00 | 613.4000 | 48460.00 | 3.00 | 0.05 | 122.20 | 51760.000 | 0.50 | 4.60 | 622.800 | 0.00   | 292.8000 | 536.60 | 0.20 | 0.4000 | 4546.00 | 0.20 | 1170.00 | 18.60  | 1.91 | 4.9560 | 2.00 | 185200.000 | 1.00 | 1.00 |      |      |      |
| VL-3 Max      |           | 0.3000 | 2390.00 | 4.800 | <1,000.0 | 24.400 | 0.50 | <0.1 | 233.00 | 156.00 | 825.0000 | <2.0 | 910.0000 | 58400.00 | 3.00 | 0.06 | 133.00 | 58900.000 | <1.0 | 5.00 | 685.000 | <0.005 | 353.0000 | 615.00 | <0.4 | <0.8   | 5110.00 | 0.40 | 1210.00 | 64.00  | 2.09 | 5.4200 | <4.0 | 203000.000 | <2.0 | <2.0 |      |      |      |
| VL-3 Min      |           | <0.1   | 1490.00 | 0.600 | <1,000.0 | 20.100 | 0.30 | <0.1 | 213.00 | 129.00 | 693.0000 | <2.0 | 482.0000 | 37900.00 | 3.00 | 0.04 | 109.00 | 43500.000 | <1.0 | 4.00 | 548.000 | <0.005 | 239.0000 | 490.00 | <0.4 | <0.8   | 3980.00 | <0.2 | 1090.00 | <10.0  | 1.59 | 4.5400 | <4.0 | 165000.000 | <2.0 | <2.0 |      |      |      |
| VL-3 N > DL   |           | 2      | 5       | 5     | 0        | 5      | 5    | 0    | 5      | 5      | 5        | 5    | 5        | 5        | 5    | 5    | 5      | 5         | 5    | 5    | 5       | 5      | 5        | 5      | 5    | 5      | 5       | 5    | 5       | 5      | 5    | 5      | 5    | 5          | 5    | 5    | 5    |      |      |
| VL-3 Median   |           | <0.1   | 1660.00 | 2.500 | <1000.0  | 21.800 | 0.40 | <0.1 | 220.00 | 149.00 | 786.0000 | <2.0 | 548.0000 | 51500.00 | 3.00 | 0.05 | 123.00 | 53800.000 | <1.0 | 5.00 | 639.000 | <0.005 | 293.0000 | 524.00 | <0.4 | <0.8   | 4600.00 | <0.2 | 1170.00 | <10.0  | 1.94 | 4.9000 | <4.0 | 190000.000 | <2.0 | <2.0 |      |      |      |
| VL-30         | 4/29/2010 | <0.1   | 317.00  | 2.000 | <1000.0  | 20.300 | <0.2 | <0.1 | 261.00 | 146.00 | 835.0000 | <2.0 | 231.0000 | 42200.00 | 3.00 | 0.05 | 134.00 | 59000.000 | <1.0 | 5.00 | 693.000 | <0.005 | 52.0000  | 593.00 | <0.4 | <0.8   | 4720.00 | <0.2 | 1240.00 | <10.0  | 1.68 | 1.3600 | <4.0 | 204000.000 | <2.0 | <2.0 |      |      |      |
|               | 6/16/2010 | 0.2000 | 313.00  | 1.000 | <1000.0  | 20.300 | <0.2 | <0.1 | 279.00 | 154.00 | 885.0000 | <2.0 | 245.0000 | 47400.00 | 3.00 | 0.06 | 151.00 | 63400.000 | <1.0 | 5.00 | 723.000 | <0.005 | 51.8000  | 571.00 | <0.4 | <0.8   | 4700.00 | <0.2 | 1320.00 | <10.0  | 1.87 | 1.1000 | <4.0 | 221000.000 | <2.0 | <2.0 |      |      |      |
|               | 7/14/2010 | 0.2000 | 342.00  | 1.600 | <1000.0  | 18.900 | <0.2 | <0.1 | 227.00 | 140.00 | 873.0000 | <2.0 | 247.0000 | 40300.00 | 3.00 | 0.06 | 141.00 | 64500.000 | <1.0 | 5.00 | 729.000 | <0.005 | 55.0000  | 637.00 | <0.4 | <0.8   | 4420.00 | <0.2 | 1250.00 | 23.00  | 1.88 | 1.4200 | <4.0 | 201000.000 | <2.0 | <2.0 |      |      |      |
|               | 8/11/2010 | <0.1   | 285.00  | <0.4  | <1000.0  | 18.900 | <0.2 | <0.1 | 256.00 | 145.00 | 831.0000 | <2.0 | 212.0000 | 47000.00 | 3.00 | 0.06 | 131.00 | 58100.000 | <1.0 | 4.00 | 681.000 | <0.005 | 54.3000  | 602.00 | <0.4 | <0.8   | 4450.00 | <0.2 | 1300.00 | <10.0  | 1.95 | 1.2200 | <4.0 | 201000.000 | <2.0 | <2.0 |      |      |      |
|               | 9/7/2010  | <0.1   | 225.00  | 1.100 | <1000.0  | 17.300 | <0.2 | <0.1 | 255.00 | 141.00 | 840.0000 | <2.0 | 193.0000 | 46600.00 | 3.00 | 0.05 | 132.00 | 59700.000 | <1.0 | 5.00 | 686.000 | <0.005 | 39.0000  | 579.00 | <0.4 | <0.8   | 4340.00 | <0.2 | 1240.00 | 55.00  | 1.99 | 1.3300 | <4.0 | 193000.000 | <2.0 | <2.0 |      |      |      |
| VL-30 Average |           | 0.1100 | 296.40  | 1.180 | 500.00   | 19.140 | 0.10 | 0.05 | 255.60 | 145.20 | 852.8000 | 1.00 | 225.6000 | 44700.00 | 3.00 | 0.05 | 137.80 | 60940.000 | 0.50 | 4.80 | 702.400 | 0.00   | 50.4200  | 596.40 | 0.20 | 0.4000 | 4526.00 | 0.10 | 1270.00 | 18.60  | 1.87 | 1.2860 | 2.00 | 204000.000 | 1.00 | 1.00 |      |      |      |
| VL-30 Max     |           | 0.2000 | 342.00  | 2.000 | <1,000.0 | 20.300 | <0.2 | <0.1 | 279.00 | 154.00 | 885.0000 | <2.0 | 247.0000 | 47400.00 | 3.00 | 0.06 | 151.00 | 64500.000 | <1.0 | 5.00 | 729.000 | <0.005 | 55.0000  | 637.00 | <0.4 | <0.8   | 4720.00 | <0.2 | 1320.00 | 55.00  | 1.99 | 1.4200 | <4.0 | 221000.000 | <2.0 | <2.0 |      |      |      |
| VL-30 Min     |           | <0.1   | 225.00  | <0.4  | <1,000.0 | 17.300 | <0.2 | <0.1 | 227.00 | 140.00 | 831.0000 | <2.0 | 193.0000 | 40300.00 | 3.00 | 0.05 | 131.00 | 58100.000 | <1.0 | 4.00 | 681.000 | <0.005 | 39.0000  | 571.00 | <0.4 | <0.8   | 4340.00 | <0.2 | 1240.00 | <10.0  | 1.68 | 1.1000 | <4.0 | 193000.000 | <2.0 | <2.0 |      |      |      |
| VL-30 N > DL  |           | 2      | 5       | 4     | 0        | 5      | 0    | 0    | 5      | 5      | 5        | 5    | 5        | 5        | 5    | 5    | 5      | 5         | 5    | 5    | 5       | 5      | 5        | 5      | 5    | 5      | 5       | 5    | 5       | 5      | 5    | 5      | 5    | 5          | 5    | 5    | 5    |      |      |
| VL-30 Median  |           | <0.1   | 313.00  | 1.100 | <1000.0  | 18.900 | <0.2 | <0.1 | 256.00 | 145.00 | 840.0000 | <2.0 | 231.0000 | 46600.00 | 3.00 | 0.06 | 134.00 | 59700.000 | <1.0 | 5.00 | 693.000 | <0.005 | 52.0000  | 593.00 | <0.4 | <0.8   | 4450.00 | <0.2 | 1250.00 | <10.0  | 1.88 | 1.3300 | <4.0 | 201000.000 | <2.0 | <2.0 |      |      |      |
| VL-40         | 4/29/2010 | <0.1   | 307.00  | 3.000 | <1000.0  | 20.400 | <0.2 | <0.1 | 261.00 | 148.00 | 843.0000 | <2.0 | 235.0000 | 42900.00 | 3.00 | 0.05 | 136.00 | 59500.000 | <1.0 | 5.00 | 700.000 | <0.005 | 51.1000  | 607.00 | <0.4 | <0.8   | 4750.00 | <0.2 | 1220.00 | <10.0  | 1.70 | 1.2700 | <4.0 | 205000.000 | <2.0 | <2.0 |      |      |      |
|               | 6/16/2010 | 0.2000 | 304.00  | 1.500 | <1000.0  | 19.700 | <0.2 | <0.1 | 276.00 | 150.00 | 856.0000 | <2.0 | 236.0000 | 47300.00 | 3.00 | 0.06 | 145.00 | 62200.000 | <1.0 | 5.00 | 706.000 | <0.005 | 50.6000  | 539.00 | <0.4 | <0.8   | 4690.00 | <0.2 | 1270.00 | <10.0  | 1.73 | 1.2300 | <4.0 | 216000.000 | <2.0 | <2.0 |      |      |      |
|               | 7/14/2010 | 0.2000 | 345.00  | 2.300 | <1000.0  | 18.800 | <0.2 | <0.1 | 249.00 | 142.00 | 879.0000 | <2.0 | 241.0000 | 44300.00 | 3.00 | 0.06 | 143.00 | 65100.000 | <1.0 | 5.00 | 747.000 | <0.005 | 54.8000  | 651.00 | <0.4 | <0.8   | 4800.00 | <0.2 | 1270.00 | 16.00  | 1.81 | 1.4600 | <4.0 | 202000.000 | <2.0 | <2.0 |      |      |      |
|               | 8/11/2010 | <0.1   | 329.00  | 6.000 | <1000.0  | 22.500 | <0.2 | <0.1 | 259.00 | 144.00 | 825.0000 | <2.0 | 211.0000 | 49800.00 | 3.00 | 0.06 | 131.00 | 58200.000 | <1.0 | 4.00 | 679.000 | <0.005 | 72.7000  | 589.00 | <0.4 | <0.8   | 4590.00 | <0.2 | 1310.00 | <10.0  | 1.98 | 1.3600 | <4.0 | 201000.000 | <2.0 | <2.0 |      |      |      |
|               | 9/7/2010  | <0.1   | 239.00  | 1.400 | <1000.0  | 17.400 | <0.2 | <0.1 | 286.00 | 138.00 | 848.0000 | <2.0 | 193.0000 | 50800.00 | 3.00 | 0.06 | 143.00 | 63400.000 | <1.0 | 6.00 | 696.000 | <0.005 | 39.1000  | 668.00 | <0.4 | <0.8   | 5180.00 | <0.2 | 1250.00 | 60.00  | 2.03 | 1.1700 | <4.0 | 206000.000 | <2.0 | <2.0 |      |      |      |
| VL-40 Average |           | 0.1100 | 304.80  | 2.840 | 500.00   | 19.760 | 0.10 | 0.05 | 266.20 | 144.40 | 850.2000 | 1.00 | 223.2000 | 47020.00 | 3.00 | 0.05 | 139.60 | 61680.000 | 0.50 | 5.00 | 705.600 | 0.00   | 53.6     |        |      |        |         |      |         |        |      |        |      |            |      |      |      |      |      |

Table D-14: Vangorda Creek Drainage Water Quality  
2010 QA/QC Field and Lab Blanks - General Parameters

| Station    | Date      | Sample Type                 | Acid(pH4.5)<br>mg/L | Acid(pH8.3)<br>mg/L | ALK<br>mg/L | ALKPP<br>mg/L | CaCO3<br>mg/L | CaCO3-d<br>mg/L | Cl-d<br>mg/L | CO3<br>mg/L | Colour<br>TCU | COND<br>µmho/cm   |
|------------|-----------|-----------------------------|---------------------|---------------------|-------------|---------------|---------------|-----------------|--------------|-------------|---------------|---|
| V2         | 1/7/2010  | FIELD BLANK                 |                     |                     | <0.5        | <0.5          | <0.5          | <0.5            | <0.5         | <0.5        |               | 2.0   |
|            |           | Maxxam Deionized Water      | <0.5                | <0.5                | <0.5        | <0.5          | <0.5          | <0.5            | <0.5         | <0.5        | <0.5          | <1.0  |
|            |           | Times greater than DI water | 0                   | 0                   | 1           | 1             | 1             | 1               | 1            | 1           | 0             | 2   |
|            |           | Comments                    |                     |                     |             |               |               |                 |              |             |               |   |
|            |           | Action                      |                     |                     |             |               |               |                 |              |             |               |   |
|            |           | Result                      |                     |                     |             |               |               |                 |              |             |               |   |
| MOOSE SEEP | 2/3/2010  | FIELD BLANK                 | <0.5                | <0.5                | 0.70        | <0.5          |               | <0.5            | <0.5         | <0.5        |               | 2.0   |
|            |           | Maxxam Deionized Water      | <0.5                | <0.5                | <0.5        | <0.5          | <0.5          | <0.5            | <0.5         | <0.5        | <0.5          | <1.0  |
|            |           | Times greater than DI water | 1                   | 1                   | 1.4         | 1             | 0             | 1               | 1            | 1           | 0             | 2   |
|            |           | Comments                    |                     |                     |             |               |               |                 |              |             |               |   |
|            |           | Action                      |                     |                     |             |               |               |                 |              |             |               |   |
|            |           | Result                      |                     |                     |             |               |               |                 |              |             |               |   |
| V22        | 3/4/2010  | LAB BLANK                   |                     |                     | <0.5        | <0.5          | <0.5          | <0.5            | <0.5         | <0.5        |               | <1.0  |
|            |           | Denison Deionized Water     | <0.5                | <0.5                | <0.5        | <0.5          | <0.5          | <0.5            | <0.5         | <0.5        | <0.5          | <1.0  |
|            |           | Times greater than DI water | 0                   | 0                   | 1           | 1             | 1             | 1               | 1            | 1           | 0             | 1   |
|            |           | Comments                    |                     |                     |             |               |               |                 |              |             |               |   |
|            |           | Action                      |                     |                     |             |               |               |                 |              |             |               |   |
|            |           | Result                      |                     |                     |             |               |               |                 |              |             |               |   |
| V22        | 3/4/2010  | LAB BLANK                   |                     |                     | 1.10        | <0.5          | <0.5          | <0.5            | <0.5         | <0.5        |               | <1.0  |
|            |           | Maxxam Deionized Water      | <0.5                | <0.5                | <0.5        | <0.5          | <0.5          | <0.5            | <0.5         | <0.5        | <0.5          | <1.0  |
|            |           | Times greater than DI water | 0                   | 0                   | 2.2         | 1             | 1             | 1               | 1            | 1           | 0             | 1   |
|            |           | Comments                    |                     |                     |             |               |               |                 |              |             |               |   |
|            |           | Action                      |                     |                     |             |               |               |                 |              |             |               |   |
|            |           | Result                      |                     |                     |             |               |               |                 |              |             |               |   |
| V22        | 3/4/2010  | FIELD BLANK                 |                     |                     | <0.5        | <0.5          | <0.5          | <0.5            | <0.5         | <0.5        |               | <1.0  |
|            |           | Denison Deionized Water     | <0.5                | <0.5                | <0.5        | <0.5          | <0.5          | <0.5            | <0.5         | <0.5        | <0.5          | <1.0  |
|            |           | Times greater than DI water | 0                   | 0                   | 1           | 1             | 1             | 1               | 1            | 1           | 0             | 1   |
|            |           | Comments                    |                     |                     |             |               |               |                 |              |             |               |   |
|            |           | Action                      |                     |                     |             |               |               |                 |              |             |               |   |
|            |           | Result                      |                     |                     |             |               |               |                 |              |             |               |   |
| V22        | 3/4/2010  | FIELD BLANK                 |                     |                     | 0.60        | <0.5          | <0.5          | <0.5            | <0.5         | <0.5        |               | <1.0  |
|            |           | Maxxam Deionized Water      | <0.5                | <0.5                | <0.5        | <0.5          | <0.5          | <0.5            | <0.5         | <0.5        | <0.5          | <1.0  |
|            |           | Times greater than DI water | 0                   | 0                   | 1.2         | 1             | 1             | 1               | 1            | 1           | 0             | 1   |
|            |           | Comments                    |                     |                     |             |               |               |                 |              |             |               |   |
|            |           | Action                      |                     |                     |             |               |               |                 |              |             |               |   |
|            |           | Result                      |                     |                     |             |               |               |                 |              |             |               |   |
| V2A        | 4/7/2010  | FIELD BLANK                 |                     |                     | <0.5        | <0.5          | <0.5          | <0.5            | <0.5         | <0.5        |               | <1.0  |
|            |           | Deionized Water             | <0.5                | <0.5                | <0.5        | <0.5          | <0.5          | <0.5            | <0.5         | <0.5        | <0.5          | <1.0  |
|            |           | Times greater than DI water | 0                   | 0                   | 1           | 1             | 1             | 1               | 1            | 1           | 0             | 1   |
|            |           | Comments                    |                     |                     |             |               |               |                 |              |             |               |   |
|            |           | Action                      |                     |                     |             |               |               |                 |              |             |               |   |
|            |           | Result                      |                     |                     |             |               |               |                 |              |             |               |   |
| V1         | 5/12/2010 | FIELD BLANK                 |                     |                     | <0.5        | <0.5          | <0.5          | <0.5            | <0.5         | <0.5        |               | 6.0   |
|            |           | Deionized Water             | <0.5                | <0.5                | <0.5        | <0.5          | <0.5          | <0.5            | <0.5         | <0.5        | <0.5          | <1.0  |
|            |           | Times greater than DI water | 0                   | 0                   | 1           | 1             | 1             | 1               | 1            | 1           | 0             | 6   |
|            |           | Comments                    |                     |                     |             |               |               |                 |              |             |               | Conductivity value > PQL and correctly entered into emLine. |
|            |           | Action                      |                     |                     |             |               |               |                 |              |             |               | Let Value Stand   |
|            |           | Result                      |                     |                     |             |               |               |                 |              |             |               | High blank value remains.                                   |




Blank value < PQL  
 Blank value is a detection limit higher than that of DI water  
 Blank value > PQL and < retest limit  
 Blank value > retest limit (20X DI Water Detection Limit, or >1 pH unit difference from DI Water)

Table D-14: Vangorda Creek Drainage Water Quality  
2010 QA/QC Field and Lab Blanks - General Parameters

| Station       | Date       | Sample Type                 | Acid(pH4.5)<br>mg/L   | Acid(pH8.3)<br>mg/L   | ALK<br>mg/L   | ALKPP<br>mg/L   | CaCO3<br>mg/L   | CaCO3-d<br>mg/L   | Cl-d<br>mg/L  | CO3<br>mg/L   | Colour<br>TCU   | COND<br>µmho/cm   |
|---------------|------------|-----------------------------|---|---|---|---|---|---|---|---|---|---|
| V15           | 5/18/2010  | FIELD BLANK                 | <0.5  | 1   | 1.20  | <0.5  |   | <0.5  | <0.5  | <0.5  |   | <1.0  |
|               |            | Deionized Water             | <0.5  | <0.5  | <0.5  | <0.5  | <0.5  | <0.5  | <0.5  | <0.5  | <0.5  | <1.0  |
|               |            | Times greater than DI water | 1   | 1.4   | 2.4   | 1   | 0   | 1   | 1   | 1   | 0   | 1   |
|               |            | Comments                    |   |   |   |   |   |   |   |   |   |   |
|               |            | Action                      |   |   |   |   |   |   |   |   |   |   |
|               |            | Result                      |   |   |   |   |   |   |   |   |   |   |
| V15           | 15/06/2010 | FIELD BLANK                 | <0.5  | 21  | 5.90  | <0.5  |   | 120   |   | <0.5  |   | 320.0   |
|               |            | Deionized Water             | <0.5  | <0.5  | <0.5  | <0.5  | <0.5  | <0.5  | <0.5  | <0.5  | <0.5  | <1.0  |
|               |            | Times greater than DI water | 1   | 42.8  | 11.8  | 1   | 0   | 240   | 0   | 1   | 0   | 320   |
|               |            | Comments                    | Data incorrectly entered into emLine. A30 duplicate data entered into emLine as V15 blank data. | Data incorrectly entered into emLine. A30 duplicate data entered into emLine as V15 blank data. | Data incorrectly entered into emLine. A30 duplicate data entered into emLine as V15 blank data. | Data incorrectly entered into emLine. A30 duplicate data entered into emLine as V15 blank data. | Data incorrectly entered into emLine. A30 duplicate data entered into emLine as V15 blank data. | Data incorrectly entered into emLine. A30 duplicate data entered into emLine as V15 blank data. | Data incorrectly entered into emLine. A30 duplicate data entered into emLine as V15 blank data. | Data incorrectly entered into emLine. A30 duplicate data entered into emLine as V15 blank data. | Data incorrectly entered into emLine. A30 duplicate data entered into emLine as V15 blank data. | Data incorrectly entered into emLine. A30 duplicate data entered into emLine as V15 blank data. |
|               |            | Action                      | Change Value  | Change Value  | Change Value  | Change Value  | Change Value  | Change Value  | Change Value  | Change Value  | Change Value  | Change Value  |
|               |            | Result                      | Value changed, see results below.   | Value changed, see results below.   | Value changed, see results below.   | Value changed, see results below.   | Value changed, see results below.   | Value changed, see results below.   | Value changed, see results below.   | Value changed, see results below.   | Value changed, see results below.   | Value changed, see results below.   |
| V15 Corrected | 15/06/2010 | FIELD BLANK                 | <0.5  | <0.5  | 0.60  | <0.5  |   | <0.5  |   | <0.5  |   | <1  |
|               |            | Deionized Water             | <0.5  | <0.5  | <0.5  | <0.5  | <0.5  | <0.5  | <0.5  | <0.5  | <0.5  | <1.0  |
|               |            | Times greater than DI water | 1   | 1   | 1.2   | 1   | 0   | 1   | 0   | 1   | 0   | 1   |
|               |            | Comments                    |   |   |   |   |   |   |   |   |   |   |
|               |            | Action                      |   |   |   |   |   |   |   |   |   |   |
|               |            | Result                      |   |   |   |   |   |   |   |   |   |   |
| V8            | 17/06/2010 | FIELD BLANK                 |   |   | 0.80  | <0.5  | <0.5  | <0.5  |   | <0.5  |   | 2.0   |
|               |            | Deionized Water             | <0.5  | <0.5  | <0.5  | <0.5  | <0.5  | <0.5  | <0.5  | <0.5  | <0.5  | <1.0  |
|               |            | Times greater than DI water | 0   | 0   | 1.6   | 1   | 1   | 1   | 0   | 1   | 0   | 2   |
|               |            | Comments                    |   |   |   |   |   |   |   |   |   |   |
|               |            | Action                      |   |   |   |   |   |   |   |   |   |   |
|               |            | Result                      |   |   |   |   |   |   |   |   |   |   |
| V24           | 29/06/2010 | FIELD BLANK                 |   |   | 1.30  | <0.5  | <0.5  | <0.5  |   | <0.5  |   | <1  |
|               |            | Deionized Water             | <0.5  | <0.5  | <0.5  | <0.5  | <0.5  | <0.5  | <0.5  | <0.5  | <0.5  | <1.0  |
|               |            | Times greater than DI water | 0   | 0   | 2.6   | 1   | 1   | 1   | 0   | 1   | 0   | 1   |
|               |            | Comments                    |   |   |   |   |   |   |   |   |   |   |
|               |            | Action                      |   |   |   |   |   |   |   |   |   |   |
|               |            | Result                      |   |   |   |   |   |   |   |   |   |   |
| V2A           | 7/22/2010  | FIELD BLANK                 |   |   | 1.40  | <0.5  | <0.5  | <0.5  | <0.5  | <0.5  |   | <1  |
|               |            | Deionized Water             | <0.5  | <0.5  | <0.5  | <0.5  | <0.5  | <0.5  | <0.5  | <0.5  | <0.5  | <1.0  |
|               |            | Times greater than DI water | 0   | 0   | 2.8   | 1   | 1   | 1   | 1   | 1   | 0   | 1   |
|               |            | Comments                    |   |   |   |   |   |   |   |   |   |   |
|               |            | Action                      |   |   |   |   |   |   |   |   |   |   |
|               |            | Result                      |   |   |   |   |   |   |   |   |   |   |

Blank value < PQL  
 Blank value is a detection limit higher than that of DI water  
 Blank value > PQL and < retest limit  
 Blank value > retest limit (20X DI Water Detection Limit, or >1 pH unit difference from DI Water)

| Station    | Date      | Sample Type                 | Acid(pH4.5)<br>mg/L | Acid(pH8.3)<br>mg/L | ALK<br>mg/L | ALKPP<br>mg/L | CaCO3<br>mg/L | CaCO3-d<br>mg/L | Cl-d<br>mg/L | CO3<br>mg/L | Colour<br>TCU | COND<br>µmho/cm |
|------------|-----------|-----------------------------|---------------------|---------------------|-------------|---------------|---------------|-----------------|--------------|-------------|---------------|-----------------|
| LCD        | 8/4/2010  | FIELD BLANK                 |                     |                     | <0.5        | <0.5          | <0.5          | <0.5            | <0.5         | <0.5        | <0.5          | <1              |
|            |           | Deionized Water             | <0.5                | <0.5                | <0.5        | <0.5          | <0.5          | <0.5            | <0.5         | <0.5        | <0.5          | <1.0            |
|            |           | Times greater than DI water | 0                   | 0                   | 1           | 1             | 1             | 1               | 1            | 1           | 0             | 1               |
|            |           | Comments                    |                     |                     |             |               |               |                 |              |             |               |                 |
|            |           | Action                      |                     |                     |             |               |               |                 |              |             |               |                 |
|            |           | Result                      |                     |                     |             |               |               |                 |              |             |               |                 |
| LCD        | 9/7/2010  | FIELD BLANK                 |                     |                     | 0.60        | <0.5          |               |                 | <0.5         | <0.5        |               | <1              |
|            |           | Deionized Water             | <0.5                | <0.5                | <0.5        | <0.5          | <0.5          | <0.5            | <0.5         | <0.5        | <0.5          | <1.0            |
|            |           | Times greater than DI water | 0                   | 0                   | 1.2         | 1             | 0             | 0               | 1            | 1           | 0             | 1               |
|            |           | Comments                    |                     |                     |             |               |               |                 |              |             |               |                 |
|            |           | Action                      |                     |                     |             |               |               |                 |              |             |               |                 |
|            |           | Result                      |                     |                     |             |               |               |                 |              |             |               |                 |
| LCD Retest | 9/7/2010  | FIELD BLANK                 |                     |                     |             |               |               |                 |              |             |               |                 |
|            |           | Deionized Water             | <0.5                | <0.5                | <0.5        | <0.5          | <0.5          | <0.5            | <0.5         | <0.5        | <0.5          | <1.0            |
|            |           | Times greater than DI water | 0                   | 0                   | 0           | 0             | 0             | 0               | 0            | 0           | 0             | 0               |
|            |           | Comments                    |                     |                     |             |               |               |                 |              |             |               |                 |
|            |           | Action                      |                     |                     |             |               |               |                 |              |             |               |                 |
|            |           | Result                      |                     |                     |             |               |               |                 |              |             |               |                 |
| V23        | 9/7/2010  | FIELD BLANK                 |                     |                     | <0.5        | <0.5          | <0.5          | 1               | <0.5         | <0.5        |               | 2.0             |
|            |           | Deionized Water             | <0.5                | <0.5                | <0.5        | <0.5          | <0.5          | <0.5            | <0.5         | <0.5        | <0.5          | <1.0            |
|            |           | Times greater than DI water | 0                   | 0                   | 1           | 1             | 1             | 2.2             | 1            | 1           | 0             | 2               |
|            |           | Comments                    |                     |                     |             |               |               |                 |              |             |               |                 |
|            |           | Action                      |                     |                     |             |               |               |                 |              |             |               |                 |
|            |           | Result                      |                     |                     |             |               |               |                 |              |             |               |                 |
| V15        | 9/7/2010  | FIELD BLANK                 | <0.5                | 1                   | <0.5        | <0.5          |               | 2               | <0.5         | <0.5        |               | 4.0             |
|            |           | Deionized Water             | <0.5                | <0.5                | <0.5        | <0.5          | <0.5          | <0.5            | <0.5         | <0.5        | <0.5          | <1.0            |
|            |           | Times greater than DI water | 1                   | 1.2                 | 1           | 1             | 0             | 4.8             | 1            | 1           | 0             | 4               |
|            |           | Comments                    |                     |                     |             |               |               |                 |              |             |               |                 |
|            |           | Action                      |                     |                     |             |               |               |                 |              |             |               |                 |
|            |           | Result                      |                     |                     |             |               |               |                 |              |             |               |                 |
| MOOSE SEEP | 9/23/2010 | FIELD BLANK                 | <0.5                | <0.5                | 0.80        | <0.5          |               | 1               | <0.5         | <0.5        |               | 2.0             |
|            |           | Deionized Water             | <0.5                | <0.5                | <0.5        | <0.5          | <0.5          | <0.5            | <0.5         | <0.5        | <0.5          | <1.0            |
|            |           | Times greater than DI water | 1                   | 1                   | 1.6         | 1             | 0             | 2.8             | 1            | 1           | 0             | 2               |
|            |           | Comments                    |                     |                     |             |               |               |                 |              |             |               |                 |
|            |           | Action                      |                     |                     |             |               |               |                 |              |             |               |                 |
|            |           | Result                      |                     |                     |             |               |               |                 |              |             |               |                 |

Blank value < PQL  
 Blank value is a detection limit higher than that of DI water  
 Blank value > PQL and < retest limit  
 Blank value > retest limit (20X DI Water Detection Limit, or >1 pH unit difference from DI Water)

| Station    | Date       | Sample Type                 | Acid(pH4.5)<br>mg/L | Acid(pH8.3)<br>mg/L   | ALK<br>mg/L | ALKPP<br>mg/L | CaCO3<br>mg/L | CaCO3-d<br>mg/L | Cl-d<br>mg/L | CO3<br>mg/L | Colour<br>TCU   | COND<br>µmho/cm  |
|------------|------------|-----------------------------|---------------------|---|-------------|---------------|---------------|-----------------|--------------|-------------|---|--|
| V4         | 10/5/2010  | FIELD BLANK                 |                     |   | 1.50        | <0.5          | <0.5          | <0.5            | <0.5         | <0.5        | <0.5  | 2.0  |
|            |            | Deionized Water             | <0.5                | <0.5  | <0.5        | <0.5          | <0.5          | <0.5            | <0.5         | <0.5        | <0.5  | <1.0   |
|            |            | Times greater than DI water | 0                   | 0   | 3           | 1             | 1             | 1               | 1            | 1           | 0   | 2  |
|            |            | Comments                    |                     |   |             |               |               |                 |              |             |   |  |
|            |            | Action                      |                     |   |             |               |               |                 |              |             |   |  |
|            |            | Result                      |                     |   |             |               |               |                 |              |             |   |  |
| V16        | 10/6/2010  | FIELD BLANK                 | <0.5                | 28  | 1.40        | <0.5          |               | <0.5            | <0.5         | <0.5        |   | 6.0  |
|            |            | Deionized Water             | <0.5                | <0.5  | <0.5        | <0.5          | <0.5          | <0.5            | <0.5         | <0.5        | <0.5  | <1.0   |
|            |            | Times greater than DI water | 1                   | 56  | 2.8         | 1             | 0             | 1               | 1            | 1           | 0   | 6  |
|            |            | Comments                    |                     | Blank concentration > PQL and correctly entered into emLine.                      |             |               |               |                 |              |             |   | Blank concentration > PQL and correctly entered into emLine. |
|            |            | Action                      |                     | Let Value Stand   |             |               |               |                 |              |             |   | Let Value Stand  |
|            |            | Result                      |                     | Retest request would be filed past hold time. Discrepancy between values remains. |             |               |               |                 |              |             |   | High blank value remains.                                    |
| MOOSE SEEP | 10/21/2010 | FIELD BLANK                 | <0.5                | <0.5  | <0.5        | <0.5          |               | 2               | <0.5         | <0.5        |   | <1   |
|            |            | Deionized Water             | <0.5                | <0.5  | <0.5        | <0.5          | <0.5          | <0.5            | <0.5         | <0.5        | <0.5  | <1.0   |
|            |            | Times greater than DI water | 1                   | 1   | 1           | 1             | 0             | 4.2             | 1            | 1           | 0   | 1  |
|            |            | Comments                    |                     |   |             |               |               |                 |              |             |   |  |
|            |            | Action                      |                     |   |             |               |               |                 |              |             |   |  |
|            |            | Result                      |                     |   |             |               |               |                 |              |             |   |  |
| V27        | 11/1/2010  | FIELD BLANK                 |                     |   | 1.30        | <0.5          | <0.5          | <0.5            | <0.5         | <0.5        |   | <1   |
|            |            | Deionized Water             | <0.5                | <0.5  | <0.5        | <0.5          | <0.5          | <0.5            | <0.5         | <0.5        | <0.5  | <1.0   |
|            |            | Times greater than DI water | 0                   | 0   | 2.6         | 1             | 1             | 1               | 1            | 1           | 0   | 1  |
|            |            | Comments                    |                     |   |             |               |               |                 |              |             |   |  |
|            |            | Action                      |                     |   |             |               |               |                 |              |             |   |  |
|            |            | Result                      |                     |   |             |               |               |                 |              |             |   |  |
| V2         | 11/4/2010  | FIELD BLANK                 |                     |   | 1.30        | <0.5          | <0.5          | <0.5            | <0.5         | <0.5        | <5  | 3.0  |
|            |            | Deionized Water             | <0.5                | <0.5  | <0.5        | <0.5          | <0.5          | <0.5            | <0.5         | <0.5        | <0.5  | <1.0   |
|            |            | Times greater than DI water | 0                   | 0   | 2.6         | 1             | 1             | 1               | 1            | 1           | 10  | 3  |
|            |            | Comments                    |                     |   |             |               |               |                 |              |             | Blank concentration not > PQL (detection limit for field blank higher than that used for DI water). Therefore, comparison not valid in this case. |  |
|            |            | Action                      |                     |   |             |               |               |                 |              |             | Let Value Stand   |  |
|            |            | Result                      |                     |   |             |               |               |                 |              |             |   |  |

Blank value < PQL  
 Blank value is a detection limit higher than that of DI water  
 Blank value > PQL and < retest limit  
 Blank value > retest limit (20X DI Water Detection Limit, or >1 pH unit difference from DI Water)



| Station | Date       | Sample Type                 | Acid(pH4.5)<br>mg/L | Acid(pH8.3)<br>mg/L | ALK<br>mg/L | ALKPP<br>mg/L | CaCO3<br>mg/L | CaCO3-d<br>mg/L | Cl-d<br>mg/L | CO3<br>mg/L | Colour<br>TCU | COND<br>µmho/cm |
|---------|------------|-----------------------------|---------------------|---------------------|-------------|---------------|---------------|-----------------|--------------|-------------|---------------|-----------------|
| V27     | 12/1/2010  | FIELD BLANK                 |                     |                     | 1.00        | <0.5          | <0.5          | <0.5            | <0.5         | <0.5        |               | 2.0             |
|         |            | Deionized Water             | <0.5                | <0.5                | <0.5        | <0.5          | <0.5          | <0.5            | <0.5         | <0.5        | <0.5          | <1.0            |
|         |            | Times greater than DI water | 0                   | 0                   | 2           | 1             | 1             | 1               | 1            | 1           | 0             | 2               |
|         |            | Comments                    |                     |                     |             |               |               |                 |              |             |               |                 |
|         |            | Action                      |                     |                     |             |               |               |                 |              |             |               |                 |
|         |            | Result                      |                     |                     |             |               |               |                 |              |             |               |                 |
| V15     | 12/1/2010  | FIELD BLANK                 | <0.5                | <0.5                | <0.5        | <0.5          |               | <0.5            | <0.5         | <0.5        |               | 2.0             |
|         |            | Deionized Water             | <0.5                | <0.5                | <0.5        | <0.5          | <0.5          | <0.5            | <0.5         | <0.5        | <0.5          | <1.0            |
|         |            | Times greater than DI water | 1                   | 1                   | 1           | 1             | 0             | 1               | 1            | 1           | 0             | 2               |
|         |            | Comments                    |                     |                     |             |               |               |                 |              |             |               |                 |
|         |            | Action                      |                     |                     |             |               |               |                 |              |             |               |                 |
|         |            | Result                      |                     |                     |             |               |               |                 |              |             |               |                 |
| V22     | 12/16/2010 | FIELD BLANK                 |                     |                     | 0.70        | <0.5          | <0.5          | <0.5            | <0.5         | <0.5        |               | <1              |
|         |            | Deionized Water             | <0.5                | <0.5                | <0.5        | <0.5          | <0.5          | <0.5            | <0.5         | <0.5        | <0.5          | <1.0            |
|         |            | Times greater than DI water | 0                   | 0                   | 1.4         | 1             | 1             | 1               | 1            | 1           | 0             | 1               |
|         |            | Comments                    |                     |                     |             |               |               |                 |              |             |               |                 |
|         |            | Action                      |                     |                     |             |               |               |                 |              |             |               |                 |
|         |            | Result                      |                     |                     |             |               |               |                 |              |             |               |                 |

Blank value < PQL  
 Blank value is a detection limit higher than that of DI water  
 Blank value > PQL and < retest limit  
 Blank value > retest limit (20X DI Water Detection Limit, or >1 pH unit difference from DI Water)

| Station    | Date      | Sample Type                 | DOC<br>mg/L | HCO3<br>mg/L | NH3<br>mg/L | OH<br>mg/L | pH  | SO4-d<br>mg/L | TDS<br>mg/L | TOC<br>mg/L | TSS<br>mg/L | TURB<br>NTU |
|------------|-----------|-----------------------------|-------------|--------------|-------------|------------|---|---------------|-------------|-------------|-------------|-------------|
| V2         | 1/7/2010  | FIELD BLANK                 | <0.5        | <0.5         | <0.01       | <0.5       | 5.70  | <0.5          | <10.0       | <0.5        | <1.0        |             |
|            |           | Maxxam Deionized Water      | <0.5        | <0.5         | <0.005      | <0.5       | 5.95  | <0.5          | <10.0       | <0.5        | <4.0        | <0.1        |
|            |           | Times greater than DI water | 1           | 1            | 2           | 1          | 0.25  | 1             | 1           | 1           | 0.25        | 0           |
|            |           | Comments                    |             |              |             |            |   |               |             |             |             |             |
|            |           | Action                      |             |              |             |            |   |               |             |             |             |             |
|            |           | Result                      |             |              |             |            |   |               |             |             |             |             |
| MOOSE SEEP | 2/3/2010  | FIELD BLANK                 |             | 0.90         |             | <0.5       | 6.00  | <0.5          |             |             | <1.0        |             |
|            |           | Maxxam Deionized Water      | <0.5        | <0.5         | <0.005      | <0.5       | 5.95  | <0.5          | <10.0       | <0.5        | <4.0        | <0.1        |
|            |           | Times greater than DI water | 0           | 1.8          | 0           | 1          | 0.05  | 1             | 0           | 0           | 0.25        | 0           |
|            |           | Comments                    |             |              |             |            |   |               |             |             |             |             |
|            |           | Action                      |             |              |             |            |   |               |             |             |             |             |
|            |           | Result                      |             |              |             |            |   |               |             |             |             |             |
| V22        | 3/4/2010  | LAB BLANK                   |             | <0.5         | <0.01       | <0.5       | 5.60  | <0.5          | <10.0       |             |             |             |
|            |           | Denison Deionized Water     | <0.5        | <0.5         | <0.005      | <0.5       | 5.95  | <0.5          | <10.0       | <0.5        | <4.0        | <0.1        |
|            |           | Times greater than DI water | 0           | 1            | 2           | 1          | 0.35  | 1             | 1           | 0           | 0           | 0           |
|            |           | Comments                    |             |              |             |            |   |               |             |             |             |             |
|            |           | Action                      |             |              |             |            |   |               |             |             |             |             |
|            |           | Result                      |             |              |             |            |   |               |             |             |             |             |
| V22        | 3/4/2010  | LAB BLANK                   |             | 1.30         | <0.01       | <0.5       | 6.20  | <0.5          | 12.00       |             |             |             |
|            |           | Maxxam Deionized Water      | <0.5        | <0.5         | <0.005      | <0.5       | 5.95  | <0.5          | <10.0       | <0.5        | <4.0        | <0.1        |
|            |           | Times greater than DI water | 0           | 2.6          | 2           | 1          | 0.25  | 1             | 1.2         | 0           | 0           | 0           |
|            |           | Comments                    |             |              |             |            |   |               |             |             |             |             |
|            |           | Action                      |             |              |             |            |   |               |             |             |             |             |
|            |           | Result                      |             |              |             |            |   |               |             |             |             |             |
| V22        | 3/4/2010  | FIELD BLANK                 |             | <0.5         | <0.01       | <0.5       | 5.40  | <0.5          | <10.0       |             |             |             |
|            |           | Denison Deionized Water     | <0.5        | <0.5         | <0.005      | <0.5       | 5.95  | <0.5          | <10.0       | <0.5        | <4.0        | <0.1        |
|            |           | Times greater than DI water | 0           | 1            | 2           | 1          | 0.55  | 1             | 1           | 0           | 0           | 0           |
|            |           | Comments                    |             |              |             |            |   |               |             |             |             |             |
|            |           | Action                      |             |              |             |            |   |               |             |             |             |             |
|            |           | Result                      |             |              |             |            |   |               |             |             |             |             |
| V22        | 3/4/2010  | FIELD BLANK                 |             | 0.70         | <0.01       | <0.5       | 5.50  | <0.5          | <10.0       |             |             |             |
|            |           | Maxxam Deionized Water      | <0.5        | <0.5         | <0.005      | <0.5       | 5.95  | <0.5          | <10.0       | <0.5        | <4.0        | <0.1        |
|            |           | Times greater than DI water | 0           | 1.4          | 2           | 1          | 0.45  | 1             | 1           | 0           | 0           | 0           |
|            |           | Comments                    |             |              |             |            |   |               |             |             |             |             |
|            |           | Action                      |             |              |             |            |   |               |             |             |             |             |
|            |           | Result                      |             |              |             |            |   |               |             |             |             |             |
| V2A        | 4/7/2010  | FIELD BLANK                 | 1.2         | <0.5         | <0.01       | <0.5       | 5.20  | <0.5          | 20.00       | <0.5        | <1.0        |             |
|            |           | Deionized Water             | <0.5        | <0.5         | <0.005      | <0.5       | 5.95  | <0.5          | <10.0       | <0.5        | <4.0        | <0.1        |
|            |           | Times greater than DI water | 2.4         | 1            | 2           | 1          | 0.75  | 1             | 2           | 1           | 0.25        | 0           |
|            |           | Comments                    |             |              |             |            |   |               |             |             |             |             |
|            |           | Action                      |             |              |             |            |   |               |             |             |             |             |
|            |           | Result                      |             |              |             |            |   |               |             |             |             |             |
| V1         | 5/12/2010 | FIELD BLANK                 | 0.8         | <0.5         | 0.02        | <0.5       | 4.70  | <0.5          | <10.0       | 0.90        | <1.0        |             |
|            |           | Deionized Water             | <0.5        | <0.5         | <0.005      | <0.5       | 5.95  | <0.5          | <10.0       | <0.5        | <4.0        | <0.1        |
|            |           | Times greater than DI water | 1.6         | 1            | 4           | 1          | 1.25  | 1             | 1           | 1.8         | 0.25        | 0           |
|            |           | Comments                    |             |              |             |            | pH value correctly entered into emLine. However, difference between values > 1. |               |             |             |             |             |
|            |           | Action                      |             |              |             |            | Let Value Stand   |               |             |             |             |             |
|            |           | Result                      |             |              |             |            | Retest not requested because result would be obtained on water past hold time.  |               |             |             |             |             |

Blank value < PQL  
 Blank value is a detection limit higher than that of DI water  
 Blank value > PQL and < retest limit  
 Blank value > retest limit (20X DI Water Detection Limit, or >1 pH unit difference from DI Water)

| Station       | Date                        | Sample Type | DOC<br>mg/L   | HCO3<br>mg/L  | NH3<br>mg/L  | OH<br>mg/L  | pH  | SO4-d<br>mg/L   | TDS<br>mg/L   | TOC<br>mg/L   | TSS<br>mg/L   | TURB<br>NTU   |
|---------------|-----------------------------|-------------|---|---|--|---|---|---|---|---|---|---|
| V15           | 5/18/2010                   | FIELD BLANK |   | 1.50  |  | <0.5  | 5.90  | 1.0   |   |   | <1.0  |   |
|               | Deionized Water             |             | <0.5  | <0.5  | <0.005   | <0.5  | 5.95  | <0.5  | <10.0   | <0.5  | <4.0  | <0.1  |
|               | Times greater than DI water |             | 0   | 3   | 0  | 1   | 0.05  | 2   | 0   | 0   | 0.25  | 0   |
|               | Comments                    |             |   |   |  |   |   |   |   |   |   |   |
|               | Action                      |             |   |   |  |   |   |   |   |   |   |   |
|               | Result                      |             |   |   |  |   |   |   |   |   |   |   |
| V15           | 15/06/2010                  | FIELD BLANK |   | 7.20  |  | <0.5  | 6.70  | 150.0   |   |   | 2   |   |
|               | Deionized Water             |             | <0.5  | <0.5  | <0.005   | <0.5  | 5.95  | <0.5  | <10.0   | <0.5  | <4.0  | <0.1  |
|               | Times greater than DI water |             | 0   | 14.4  | 0  | 1   | 0.75  | 300   | 0   | 0   | 0.5   | 0   |
|               | Comments                    |             | Data incorrectly entered into emLine. A30 duplicate data entered into emLine as V15 blank data. | Data incorrectly entered into emLine. A30 duplicate data entered into emLine as V15 blank data. | Data incorrectly entered into emLine. A30 duplicate data entered into emLine as V15 blank data.  | Data incorrectly entered into emLine. A30 duplicate data entered into emLine as V15 blank data. | Data incorrectly entered into emLine. A30 duplicate data entered into emLine as V15 blank data. | Data incorrectly entered into emLine. A30 duplicate data entered into emLine as V15 blank data. | Data incorrectly entered into emLine. A30 duplicate data entered into emLine as V15 blank data. | Data incorrectly entered into emLine. A30 duplicate data entered into emLine as V15 blank data. | Data incorrectly entered into emLine. A30 duplicate data entered into emLine as V15 blank data. | Data incorrectly entered into emLine. A30 duplicate data entered into emLine as V15 blank data. |
|               | Action                      |             | Change Value  | Change Value  | Change Value   | Change Value  | Change Value  | Change Value  | Change Value  | Change Value  | Change Value  | Change Value  |
|               | Result                      |             | Value changed, see results below.   | Value changed, see results below.   | Value changed, see results below.  | Value changed, see results below.   | Value changed, see results below.   | Value changed, see results below.   | Value changed, see results below.   | Value changed, see results below.   | Value changed, see results below.   | Value changed, see results below.   |
| V15 Corrected | 15/06/2010                  | FIELD BLANK |   | 0.80  |  | <0.5  | 5.30  | <0.5  |   |   | <1  |   |
|               | Deionized Water             |             | <0.5  | <0.5  | <0.005   | <0.5  | 5.95  | <0.5  | <10.0   | <0.5  | <4.0  | <0.1  |
|               | Times greater than DI water |             | 0   | 1.6   | 0  | 1   | 0.65  | 1   | 0   | 0   | 0.25  | 0   |
|               | Comments                    |             |   |   |  |   |   |   |   |   |   |   |
|               | Action                      |             |   |   |  |   |   |   |   |   |   |   |
|               | Result                      |             |   |   |  |   |   |   |   |   |   |   |
| V8            | 17/06/2010                  | FIELD BLANK | <0.5  | 1.00  | <0.05  | <0.5  | 5.92  | 1.0   | <10   | <0.5  | <1  |   |
|               | Deionized Water             |             | <0.5  | <0.5  | <0.005   | <0.5  | 5.95  | <0.5  | <10.0   | <0.5  | <4.0  | <0.1  |
|               | Times greater than DI water |             | 1   | 2   | 10   | 1   | 0.03  | 2   | 1   | 1   | 0.25  | 0   |
|               | Comments                    |             |   |   | Blank concentration not > PQL (detection limit for field blank higher than that used for DI water, lab noted "RDL raised due to sample matrix interference). |   |   |   |   |   |   |   |
|               | Action                      |             |   |   | Let Value Stand  |   |   |   |   |   |   |   |
|               | Result                      |             |   |   |  |   |   |   |   |   |   |   |
| V24           | 29/06/2010                  | FIELD BLANK |   | 1.50  | <0.05  | <0.5  | 5.87  | <0.5  | <10   |   | <1  |   |
|               | Deionized Water             |             | <0.5  | <0.5  | <0.005   | <0.5  | 5.95  | <0.5  | <10.0   | <0.5  | <4.0  | <0.1  |
|               | Times greater than DI water |             | 0   | 3   | 10   | 1   | 0.08  | 1   | 1   | 0   | 0.25  | 0   |
|               | Comments                    |             |   |   | Blank concentration not > PQL (detection limit for field blank higher than that used for DI water, lab noted "RDL raised due to sample matrix interference). |   |   |   |   |   |   |   |
|               | Action                      |             |   |   | Let Value Stand  |   |   |   |   |   |   |   |
|               | Result                      |             |   |   |  |   |   |   |   |   |   |   |
| V2A           | 7/22/2010                   | FIELD BLANK | <0.5  | 1.70  | <0.05  | <0.5  | 5.79  | <0.5  | <10   | <0.5  | <1  |   |
|               | Deionized Water             |             | <0.5  | <0.5  | <0.005   | <0.5  | 5.95  | <0.5  | <10.0   | <0.5  | <4.0  | <0.1  |
|               | Times greater than DI water |             | 1   | 3.4   | 10   | 1   | 0.16  | 1   | 1   | 1   | 0.25  | 0   |
|               | Comments                    |             |   |   | Blank concentration not > PQL (detection limit for field blank higher than that used for DI water, lab noted "RDL raised due to sample matrix interference). |   |   |   |   |   |   |   |
|               | Action                      |             |   |   | Let Value Stand  |   |   |   |   |   |   |   |
|               | Result                      |             |   |   |  |   |   |   |   |   |   |   |

Blank value < PQL  
 Blank value is a detection limit higher than that of DI water  
 Blank value > PQL and < retest limit  
 Blank value > retest limit (20X DI Water Detection Limit, or >1 pH unit difference from DI Water)

Table D-14: Vangorda Creek Drainage Water Quality  
2010 QA/QC Field and Lab Blanks - General Parameters

| Station    | Date                        | Sample Type | DOC<br>mg/L | HCO3<br>mg/L | NH3<br>mg/L  | OH<br>mg/L | pH      | SO4-d<br>mg/L | TDS<br>mg/L | TOC<br>mg/L | TSS<br>mg/L | TURB<br>NTU |
|------------|-----------------------------|-------------|-------------|--------------|--|------------|---------|---------------|-------------|-------------|-------------|-------------|
| LCD        | 8/4/2010                    | FIELD BLANK |             | <0.5         | <0.05  | <0.5       | 5.06    | 0.6           | <10         |             | <1          |             |
|            | Deionized Water             |             | <0.5        | <0.5         | <0.005   | <0.5       | 5.95    | <0.5          | <10.0       | <0.5        | <4.0        | <0.1        |
|            | Times greater than DI water |             | 0           | 1            | 10   | 1          | 0.89    | 1.2           | 1           | 0           | 0.25        | 0           |
|            | Comments                    |             |             |              | Blank concentration not > PQL (detection limit for field blank higher than that used for DI water, lab noted "RDL raised due to sample matrix interference).   |            |         |               |             |             |             |             |
|            | Action                      |             |             |              | Let Value Stand  |            |         |               |             |             |             |             |
|            | Result                      |             |             |              |  |            |         |               |             |             |             |             |
| LCD        | 9/7/2010                    | FIELD BLANK |             | 0.70         | 0.30   | <0.5       | 5.47    | 1.3           | <10         |             | <1          |             |
|            | Deionized Water             |             | <0.5        | <0.5         | <0.005   | <0.5       | 5.95    | <0.5          | <10.0       | <0.5        | <4.0        | <0.1        |
|            | Times greater than DI water |             | 0           | 1.4          | 60   | 1          | 0.48    | 2.6           | 1           | 0           | 0.25        | 0           |
|            | Comments                    |             |             |              | Blank concentration > PQL and correctly entered into emLine. Lab noted that "RDL raised due to sample matrix interference."  |            |         |               |             |             |             |             |
|            | Action                      |             |             |              | Request Retest   |            |         |               |             |             |             |             |
|            | Result                      |             |             |              | Retest performed, see results below.   |            |         |               |             |             |             |             |
| LCD Retest | 9/7/2010                    | FIELD BLANK |             |              | <0.005   |            | -       |               |             |             |             |             |
|            | Deionized Water             |             | <0.5        | <0.5         | <0.005   | <0.5       | 5.95    | <0.5          | <10.0       | <0.5        | <4.0        | <0.1        |
|            | Times greater than DI water |             | 0           | 0            | 1  | 0          | #VALUE! | 0             | 0           | 0           | 0           | 0           |
|            | Comments                    |             |             |              | Retest for September 7 LCD blank.  |            |         |               |             |             |             |             |
|            | Action                      |             |             |              | Let Value Stand  |            |         |               |             |             |             |             |
|            | Result                      |             |             |              | New blank value entered into emLine.   |            |         |               |             |             |             |             |
| V23        | 9/7/2010                    | FIELD BLANK |             | <0.5         | 0.23   | <0.5       | 5.56    | <0.5          | <10         |             | <1          |             |
|            | Deionized Water             |             | <0.5        | <0.5         | <0.005   | <0.5       | 5.95    | <0.5          | <10.0       | <0.5        | <4.0        | <0.1        |
|            | Times greater than DI water |             | 0           | 1            | 46   | 1          | 0.39    | 1             | 1           | 0           | 0.25        | 0           |
|            | Comments                    |             |             |              | Blank concentration not > PQL (detection limit for field blank higher than that used for DI water, lab noted "RDL raised due to sample matrix interference). Therefore, comparison not valid in this case. |            |         |               |             |             |             |             |
|            | Action                      |             |             |              | Let Value Stand  |            |         |               |             |             |             |             |
|            | Result                      |             |             |              | High blank value remains.  |            |         |               |             |             |             |             |
| V15        | 9/7/2010                    | FIELD BLANK |             | <0.5         |  | <0.5       | 5.30    | 1.0           |             |             | <1          |             |
|            | Deionized Water             |             | <0.5        | <0.5         | <0.005   | <0.5       | 5.95    | <0.5          | <10.0       | <0.5        | <4.0        | <0.1        |
|            | Times greater than DI water |             | 0           | 1            | 0  | 1          | 0.65    | 2             | 0           | 0           | 0.25        | 0           |
|            | Comments                    |             |             |              |  |            |         |               |             |             |             |             |
|            | Action                      |             |             |              |  |            |         |               |             |             |             |             |
|            | Result                      |             |             |              |  |            |         |               |             |             |             |             |
| MOOSE SEEP | 9/23/2010                   | FIELD BLANK |             | 0.90         |  | <0.5       | 5.50    | 0.6           |             |             | <1          |             |
|            | Deionized Water             |             | <0.5        | <0.5         | <0.005   | <0.5       | 5.95    | <0.5          | <10.0       | <0.5        | <4.0        | <0.1        |
|            | Times greater than DI water |             | 0           | 1.8          | 0  | 1          | 0.45    | 1.2           | 0           | 0           | 0.25        | 0           |
|            | Comments                    |             |             |              |  |            |         |               |             |             |             |             |
|            | Action                      |             |             |              |  |            |         |               |             |             |             |             |
|            | Result                      |             |             |              |  |            |         |               |             |             |             |             |

Blank value < PQL  
 Blank value is a detection limit higher than that of DI water  
 Blank value > PQL and < retest limit  
 Blank value > retest limit (20X DI Water Detection Limit, or >1 pH unit difference from DI Water)

| Station                     | Date       | Sample Type | DOC<br>mg/L  | HCO3<br>mg/L | NH3<br>mg/L | OH<br>mg/L | pH   | SO4-d<br>mg/L | TDS<br>mg/L | TOC<br>mg/L | TSS<br>mg/L | TURB<br>NTU |
|-----------------------------|------------|-------------|--|--------------|-------------|------------|------|---------------|-------------|-------------|-------------|-------------|
| V4                          | 10/5/2010  | FIELD BLANK | 0.8  | 1.90         | <0.05       | <0.5       | 5.90 | 0.9           | <10         | <0.5        | <1          | 0.20        |
| Deionized Water             |            |             | <0.5   | <0.5         | <0.005      | <0.5       | 5.95 | <0.5          | <10.0       | <0.5        | <4.0        | <0.1        |
| Times greater than DI water |            |             | 1.6  | 3.8          | 10          | 1          | 0.05 | 1.8           | 1           | 1           | 0.25        | 2           |
| Comments                    |            |             | Blank concentration not > PQL (detection limit for field blank higher than that used for DI water, lab noted "RDL raised due to sample matrix interference). Therefore, comparison not valid in this case. |              |             |            |      |               |             |             |             |             |
| Action                      |            |             | Let Value Stand  |              |             |            |      |               |             |             |             |             |
| Result                      |            |             |  |              |             |            |      |               |             |             |             |             |
| V16                         | 10/6/2010  | FIELD BLANK |  | 1.70         |             | <0.5       | 5.23 | 0.7           |             |             | <1          |             |
| Deionized Water             |            |             | <0.5   | <0.5         | <0.005      | <0.5       | 5.95 | <0.5          | <10.0       | <0.5        | <4.0        | <0.1        |
| Times greater than DI water |            |             | 0  | 3.4          | 0           | 1          | 0.72 | 1.4           | 0           | 0           | 0.25        | 0           |
| Comments                    |            |             |  |              |             |            |      |               |             |             |             |             |
| Action                      |            |             |  |              |             |            |      |               |             |             |             |             |
| Result                      |            |             |  |              |             |            |      |               |             |             |             |             |
| MOOSE SEEP                  | 10/21/2010 | FIELD BLANK |  | <0.5         |             | <0.5       | 5.99 | 0.9           |             |             | <1          |             |
| Deionized Water             |            |             | <0.5   | <0.5         | <0.005      | <0.5       | 5.95 | <0.5          | <10.0       | <0.5        | <4.0        | <0.1        |
| Times greater than DI water |            |             | 0  | 1            | 0           | 1          | 0.04 | 1.8           | 0           | 0           | 0.25        | 0           |
| Comments                    |            |             |  |              |             |            |      |               |             |             |             |             |
| Action                      |            |             |  |              |             |            |      |               |             |             |             |             |
| Result                      |            |             |  |              |             |            |      |               |             |             |             |             |
| V27                         | 11/1/2010  | FIELD BLANK | <0.5   | 1.60         | 0.01        | <0.5       | 5.78 | 3.0           | <10         | <0.5        | <1          | <0.1        |
| Deionized Water             |            |             | <0.5   | <0.5         | <0.005      | <0.5       | 5.95 | <0.5          | <10.0       | <0.5        | <4.0        | <0.1        |
| Times greater than DI water |            |             | 1  | 3.2          | 2.4         | 1          | 0.17 | 6             | 1           | 1           | 0.25        | 1           |
| Comments                    |            |             | Blank concentration > PQL and correctly entered into emLine.   |              |             |            |      |               |             |             |             |             |
| Action                      |            |             | Let Value Stand  |              |             |            |      |               |             |             |             |             |
| Result                      |            |             | High blank value remains.  |              |             |            |      |               |             |             |             |             |
| V2                          | 11/4/2010  | FIELD BLANK | <0.5   | 1.50         | 0.04        | <0.5       | 5.93 | 5.0           | <10         | <0.5        | <1          | <0.2        |
| Deionized Water             |            |             | <0.5   | <0.5         | <0.005      | <0.5       | 5.95 | <0.5          | <10.0       | <0.5        | <4.0        | <0.1        |
| Times greater than DI water |            |             | 1  | 3            | 7           | 1          | 0.02 | 10            | 1           | 1           | 0.25        | 2           |
| Comments                    |            |             | Blank concentration > PQL and correctly entered into emLine.   |              |             |            |      |               |             |             |             |             |
| Action                      |            |             | Let Value Stand  |              |             |            |      |               |             |             |             |             |
| Result                      |            |             | High blank value remains.  |              |             |            |      |               |             |             |             |             |

Blank value < PQL  
 Blank value is a detection limit higher than that of DI water  
 Blank value > PQL and < retest limit  
 Blank value > retest limit (20X DI Water Detection Limit, or >1 pH unit difference from DI Water)

| Station                     | Date       | Sample Type | DOC<br>mg/L  | HCO3<br>mg/L | NH3<br>mg/L | OH<br>mg/L | pH   | SO4-d<br>mg/L | TDS<br>mg/L | TOC<br>mg/L | TSS<br>mg/L | TURB<br>NTU |
|-----------------------------|------------|-------------|--|--------------|-------------|------------|------|---------------|-------------|-------------|-------------|-------------|
| V27                         | 12/1/2010  | FIELD BLANK | <0.5   | 1.20         | <0.05       | <0.5       | 5.93 | 0.8           | <10         | <0.5        | <1          |             |
| Deionized Water             |            |             | <0.5   | <0.5         | <0.005      | <0.5       | 5.95 | <0.5          | <10.0       | <0.5        | <4.0        | <0.1        |
| Times greater than DI water |            |             | 1  | 2.4          | 10          | 1          | 0.02 | 1.6           | 1           | 1           | 0.25        | 0           |
| Comments                    |            |             | Blank concentration not > PQL (detection limit for field blank higher than that used for DI water, lab noted "RDL raised due to sample matrix interference). Therefore, comparison not valid in this case. |              |             |            |      |               |             |             |             |             |
| Action                      |            |             | Let Value Stand  |              |             |            |      |               |             |             |             |             |
| Result                      |            |             |  |              |             |            |      |               |             |             |             |             |
| V15                         | 12/1/2010  | FIELD BLANK |  | <0.5         |             | <0.5       | 5.55 | 1.3           |             |             | <1          |             |
| Deionized Water             |            |             | <0.5   | <0.5         | <0.005      | <0.5       | 5.95 | <0.5          | <10.0       | <0.5        | <4.0        | <0.1        |
| Times greater than DI water |            |             | 0  | 1            | 0           | 1          | 0.40 | 2.6           | 0           | 0           | 0.25        | 0           |
| Comments                    |            |             |  |              |             |            |      |               |             |             |             |             |
| Action                      |            |             |  |              |             |            |      |               |             |             |             |             |
| Result                      |            |             |  |              |             |            |      |               |             |             |             |             |
| V22                         | 12/16/2010 | FIELD BLANK |  | 0.80         | <0.05       | <0.5       | 5.58 | <0.5          | <10         |             | <4          |             |
| Deionized Water             |            |             | <0.5   | <0.5         | <0.005      | <0.5       | 5.95 | <0.5          | <10.0       | <0.5        | <4.0        | <0.1        |
| Times greater than DI water |            |             | 0  | 1.6          | 10          | 1          | 0.37 | 1             | 1           | 0           | 1           | 0           |
| Comments                    |            |             | Blank concentration not > PQL (detection limit for field blank higher than that used for DI water, lab noted "RDL raised due to sample matrix interference). Therefore, comparison not valid in this case. |              |             |            |      |               |             |             |             |             |
| Action                      |            |             | Let Value Stand  |              |             |            |      |               |             |             |             |             |
| Result                      |            |             |  |              |             |            |      |               |             |             |             |             |

Blank value < PQL  
 Blank value is a detection limit higher than that of DI water  
 Blank value > PQL and < retest limit  
 Blank value > retest limit (20X DI Water Detection Limit, or >1 pH unit difference from DI Water)

Table D-15: Vangorda Creek Drainage Water Quality  
2010 QA/QC Splits - Dissolved Metals



| Station    | Date      | Sample Type                 | Ag-d<br>µg/L | Al-d<br>µg/L | As-d<br>µg/L | Ba-d<br>µg/L  | B-d<br>µg/L | Be-d<br>µg/L | Bi-d<br>µg/L | Ca-d<br>mg/L | Cd-d<br>µg/L | Co-d<br>µg/L | Cr-d<br>µg/L | Cu-d<br>µg/L | Fe-d<br>µg/L | K-d<br>mg/L | Li-d<br>mg/L | Mg-d<br>mg/L |
|------------|-----------|-----------------------------|--------------|--------------|--------------|---|-------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|-------------|--------------|--------------|
| V2         | 1/7/2010  | FIELD BLANK                 | <0.005       | 0.70         | <0.02        | 0.110   | <50.0       | <0.01        | <0.005       | <0.05        | <0.005       | <0.005       | <0.1         | <0.05        | <1.0         | <0.05       | <0.0005      | <0.05        |
|            |           | Maxxam Deionized Water      | <0.005       | <0.2         | <0.02        | <0.02   | <50         | <0.01        | <0.005       | <0.05        | <0.005       | <0.005       | <0.1         | <0.05        | <1           | <0.05       | <0.5         | <0.05        |
|            |           | Times greater than DI water | 1            | 3.5          | 1            | 5.5   | 1           | 1            | 1            | 1            | 1            | 1            | 1            | 1            | 1            | 1           | 0.001        | 1            |
|            |           | Comments                    |              |              |              | Blank concentration > PQL and correctly entered into emLine. Lab noted that "Dissolved greater than total. Retest yields similar results."  |             |              |              |              |              |              |              |              |              |             |              |              |
|            |           | Action                      |              |              |              | Let Value Stand   |             |              |              |              |              |              |              |              |              |             |              |              |
|            |           | Result                      |              |              |              | High blank value remains.   |             |              |              |              |              |              |              |              |              |             |              |              |
| MOOSE SEEP | 2/3/2010  | FIELD BLANK                 | <0.005       | 0.60         | <0.02        | 0.040   | <50.0       | <0.01        | <0.005       | <0.05        | <0.005       | <0.005       | <0.1         | <0.05        | <1.0         | <0.05       | <0.0005      | <0.05        |
|            |           | Maxxam Deionized Water      | <0.005       | <0.2         | <0.02        | <0.02   | <50         | <0.01        | <0.005       | <0.05        | <0.005       | <0.005       | <0.1         | <0.05        | <1           | <0.05       | <0.5         | <0.05        |
|            |           | Times greater than DI water | 1            | 3            | 1            | 2   | 1           | 1            | 1            | 1            | 1            | 1            | 1            | 1            | 1            | 1           | 0.001        | 1            |
| V22        | 3/4/2010  | LAB BLANK                   | <0.005       | 0.60         | <0.02        | 0.210   | <50.0       | <0.01        | <0.005       | <0.05        | <0.005       | <0.005       | <0.1         | <0.05        | <1.0         | <0.05       | <0.0005      | <0.05        |
|            |           | Denison Deionized Water     | <0.005       | <0.2         | <0.02        | <0.02   | <50         | <0.01        | <0.005       | <0.05        | <0.005       | <0.005       | <0.1         | <0.05        | <1           | <0.05       | <0.5         | <0.05        |
|            |           | Times greater than DI water | 1            | 3            | 1            | 10.5  | 1           | 1            | 1            | 1            | 1            | 1            | 1            | 1            | 1            | 1           | 0.001        | 1            |
|            |           | Comments                    |              |              |              | Blank concentration > PQL and correctly entered into emLine. Lab noted that "Dissolved greater than total. Retest yields similar results."  |             |              |              |              |              |              |              |              |              |             |              |              |
|            |           | Action                      |              |              |              | Let Value Stand   |             |              |              |              |              |              |              |              |              |             |              |              |
|            |           | Result                      |              |              |              | High blank value remains.   |             |              |              |              |              |              |              |              |              |             |              |              |
| V22        | 3/4/2010  | LAB BLANK                   | <0.005       | 0.30         | <0.02        | <0.02   | <50.0       | <0.01        | <0.005       | <0.05        | <0.005       | <0.005       | <0.1         | <0.05        | <1.0         | <0.05       | <0.0005      | <0.05        |
|            |           | Maxxam Deionized Water      | <0.005       | <0.2         | <0.02        | <0.02   | <50         | <0.01        | <0.005       | <0.05        | <0.005       | <0.005       | <0.1         | <0.05        | <1           | <0.05       | <0.5         | <0.05        |
|            |           | Times greater than DI water | 1            | 1.5          | 1            | 1   | 1           | 1            | 1            | 1            | 1            | 1            | 1            | 1            | 1            | 1           | 0.001        | 1            |
| V22        | 3/4/2010  | FIELD BLANK                 | <0.005       | 0.30         | <0.02        | <0.02   | <50.0       | <0.01        | <0.005       | <0.05        | <0.005       | <0.005       | <0.1         | <0.05        | <1.0         | <0.05       | <0.0005      | <0.05        |
|            |           | Denison Deionized Water     | <0.005       | <0.2         | <0.02        | <0.02   | <50         | <0.01        | <0.005       | <0.05        | <0.005       | <0.005       | <0.1         | <0.05        | <1           | <0.05       | <0.5         | <0.05        |
|            |           | Times greater than DI water | 1            | 1.5          | 1            | 1   | 1           | 1            | 1            | 1            | 1            | 1            | 1            | 1            | 1            | 1           | 0.001        | 1            |
| V22        | 3/4/2010  | FIELD BLANK                 | <0.005       | 0.40         | <0.02        | <0.02   | <50.0       | <0.01        | <0.005       | <0.05        | <0.005       | <0.005       | <0.1         | 0.0600       | <1.0         | <0.05       | <0.0005      | <0.05        |
|            |           | Maxxam Deionized Water      | <0.005       | <0.2         | <0.02        | <0.02   | <50         | <0.01        | <0.005       | <0.05        | <0.005       | <0.005       | <0.1         | <0.05        | <1           | <0.05       | <0.5         | <0.05        |
|            |           | Times greater than DI water | 1            | 2            | 1            | 1   | 1           | 1            | 1            | 1            | 1            | 1            | 1            | 1.2          | 1            | 1           | 0.001        | 1            |
| V2A        | 4/7/2010  | FIELD BLANK                 | <0.005       | 0.80         | <0.02        | 0.100   | <50.0       | <0.01        | <0.005       | <0.05        | <0.005       | <0.005       | <0.1         | <0.05        | <1.0         | <0.05       | <0.0005      | <0.05        |
|            |           | Deionized Water             | <0.005       | <0.2         | <0.02        | <0.02   | <50         | <0.01        | <0.005       | <0.05        | <0.005       | <0.005       | <0.1         | <0.05        | <1           | <0.05       | <0.5         | <0.05        |
|            |           | Times greater than DI water | 1            | 4            | 1            | 5   | 1           | 1            | 1            | 1            | 1            | 1            | 1            | 1            | 1            | 1           | 0.001        | 1            |
|            |           | Comments                    |              |              |              | Blank concentration > PQL and correctly entered into emLine.  |             |              |              |              |              |              |              |              |              |             |              |              |
|            |           | Action                      |              |              |              | Let Value Stand   |             |              |              |              |              |              |              |              |              |             |              |              |
|            |           | Result                      |              |              |              | High blank value remains.   |             |              |              |              |              |              |              |              |              |             |              |              |
| V1         | 5/12/2010 | FIELD BLANK                 | <0.005       | 1.00         | <0.02        | 0.150   | <50.0       | <0.01        | <0.005       | <0.05        | <0.005       | <0.005       | <0.1         | <0.05        | <1.0         | <0.05       | <0.0005      | <0.05        |
|            |           | Deionized Water             | <0.005       | <0.2         | <0.02        | <0.02   | <50         | <0.01        | <0.005       | <0.05        | <0.005       | <0.005       | <0.1         | <0.05        | <1           | <0.05       | <0.5         | <0.05        |
|            |           | Times greater than DI water | 1            | 5            | 1            | 7.5   | 1           | 1            | 1            | 1            | 1            | 1            | 1            | 1            | 1            | 1           | 0.001        | 1            |
|            |           | Comments                    |              |              |              | Blank concentration > PQL and correctly entered into emLine. Lab noted that "Dissolved metals greater than total metals for some parameters; analysis from separate field prepared sample bottles." |             |              |              |              |              |              |              |              |              |             |              |              |
|            |           | Action                      |              |              |              | Let Value Stand   |             |              |              |              |              |              |              |              |              |             |              |              |
|            |           | Result                      |              |              |              | High blank value remains.   |             |              |              |              |              |              |              |              |              |             |              |              |
| V1 Retest  | 5/12/2010 | FIELD BLANK                 | <0.005       | <0.2         | <0.02        | <0.02   | <50         | <0.01        | <0.005       | <0.05        | <0.005       | <0.005       | <0.1         | <0.05        | <1           | <0.05       | <0.5         | <0.05        |
|            |           | Deionized Water             | <0.005       | <0.2         | <0.02        | <0.02   | <50         | <0.01        | <0.005       | <0.05        | <0.005       | <0.005       | <0.1         | <0.05        | <1           | <0.05       | <0.5         | <0.05        |
|            |           | Times greater than DI water | 0            | 0            | 0            | 0   | 0           | 0            | 0            | 0            | 0            | 0            | 0            | 0            | 0            | 0           | 0            | 0            |
| V15        | 5/18/2010 | FIELD BLANK                 | <0.005       | 1.90         | <0.02        | 0.140   | <50.0       | <0.01        | <0.005       | <0.05        | <0.005       | <0.005       | <0.1         | 0.0600       | 4.00         | <0.05       | <0.0005      | <0.05        |
|            |           | Deionized Water             | <0.005       | <0.2         | <0.02        | <0.02   | <50         | <0.01        | <0.005       | <0.05        | <0.005       | <0.005       | <0.1         | <0.05        | <1           | <0.05       | <0.5         | <0.05        |
|            |           | Times greater than DI water | 1            | 9.5          | 1            | 7   | 1           | 1            | 1            | 1            | 1            | 1            | 1            | 1.2          | 4            | 1           | 0.001        | 1            |
|            |           | Comments                    |              |              |              | Blank concentration > PQL and correctly entered into emLine.  |             |              |              |              |              |              |              |              |              |             |              |              |
|            |           | Action                      |              |              |              | Let Value Stand   |             |              |              |              |              |              |              |              |              |             |              |              |
|            |           | Result                      |              |              |              | High blank value remains.   |             |              |              |              |              |              |              |              |              |             |              |              |

Blank value < PQL  
 Blank value is a detection limit higher than that of DI water  
 Blank value > PQL and < retest limit  
 Blank value > retest limit (20X DI Water Detection Limit)





Table D-15: Vangorda Creek Drainage Water Quality  
2010 QA/QC Splits - Dissolved Metals

| Station                     | Date       | Sample Type | Ag-d<br>µg/L  | Al-d<br>µg/L | As-d<br>µg/L | Ba-d<br>µg/L | B-d<br>µg/L | Be-d<br>µg/L | Bi-d<br>µg/L | Ca-d<br>mg/L | Cd-d<br>µg/L | Co-d<br>µg/L | Cr-d<br>µg/L | Cu-d<br>µg/L | Fe-d<br>µg/L | K-d<br>mg/L | Li-d<br>mg/L | Mg-d<br>mg/L |
|-----------------------------|------------|-------------|---|--------------|--------------|--------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|-------------|--------------|--------------|
| Action                      |            |             | Let Value Stand   |              |              |              |             |              |              |              |              |              |              |              |              |             |              |              |
| Result                      |            |             | Let Value Stand   |              |              |              |             |              |              |              |              |              |              |              |              |             |              |              |
|                             |            |             | Blank value < PQL   |              |              |              |             |              |              |              |              |              |              |              |              |             |              |              |
|                             |            |             | Blank value is a detection limit higher than that of DI water   |              |              |              |             |              |              |              |              |              |              |              |              |             |              |              |
|                             |            |             | Blank value > PQL and < retest limit  |              |              |              |             |              |              |              |              |              |              |              |              |             |              |              |
|                             |            |             | Blank value > retest limit (20X DI Water Detection Limit)   |              |              |              |             |              |              |              |              |              |              |              |              |             |              |              |
| LCD                         | 9/7/2010   | FIELD BLANK | <0.02   | <0.1         | <0.1         | <1           | <50         | <0.1         | <1           | <0.05        | <0.01        | <0.5         | <1           | <0.2         | <5           | <0.05       | <0.005       | <0.05        |
| Deionized Water             |            |             | <0.005  | <0.2         | <0.02        | <0.02        | <50         | <0.01        | <0.005       | <0.05        | <0.005       | <0.005       | <0.1         | <0.05        | <1           | <0.05       | <0.5         | <0.05        |
| Times greater than DI water |            |             | 4   | 15           | 5            | 50           | 1           | 10           | 200          | 1            | 2            | 100          | 10           | 4            | 5            | 1           | 0.01         | 1            |
| Comments                    |            |             | Blank concentration not > PQL (detection limit for field blank higher than that used for DI water). Therefore, comparison not valid in this case.   |              |              |              |             |              |              |              |              |              |              |              |              |             |              |              |
| Action                      |            |             | Let Value Stand   |              |              |              |             |              |              |              |              |              |              |              |              |             |              |              |
| Result                      |            |             | Let Value Stand   |              |              |              |             |              |              |              |              |              |              |              |              |             |              |              |
| V23                         | 9/7/2010   | FIELD BLANK | <0.005  | 3.40         | 0.09         | 0.410        | <50         | <0.01        | <0.005       | 0.24         | 0.01         | 0.0490       | <0.1         | <0.05        | 3.00         | <0.05       | <0.0005      | 0.13         |
| Deionized Water             |            |             | <0.005  | <0.2         | <0.02        | <0.02        | <50         | <0.01        | <0.005       | <0.05        | <0.005       | <0.05        | <0.1         | <0.05        | <1           | <0.05       | <0.5         | <0.05        |
| Times greater than DI water |            |             | 1   | 17           | 4.5          | 20.5         | 1           | 1            | 1            | 4.8          | 1.6          | 9.8          | 1            | 1            | 3            | 1           | 0.001        | 2.6          |
| Comments                    |            |             | Blank concentration > PQL and correctly entered into emLine. Lab noted that "Dissolved metals greater than total metals for some parameters; analysis from separate field prepared sample bottles." |              |              |              |             |              |              |              |              |              |              |              |              |             |              |              |
| Action                      |            |             | Let Value Stand   |              |              |              |             |              |              |              |              |              |              |              |              |             |              |              |
| Result                      |            |             | High blank value remains.   |              |              |              |             |              |              |              |              |              |              |              |              |             |              |              |
| V15                         | 9/7/2010   | FIELD BLANK | <0.005  | 2.20         | <0.02        | 0.460        | <50         | <0.01        | <0.005       | 0.40         | <0.005       | 0.0080       | <0.1         | 0.2200       | 3.00         | 0.07        | <0.0005      | 0.34         |
| Deionized Water             |            |             | <0.005  | <0.2         | <0.02        | <0.02        | <50         | <0.01        | <0.005       | <0.05        | <0.005       | <0.05        | <0.1         | <0.05        | <1           | <0.05       | <0.5         | <0.05        |
| Times greater than DI water |            |             | 1   | 11           | 1            | 23           | 1           | 1            | 1            | 8            | 1            | 1.6          | 1            | 4.4          | 3            | 1.4         | 0.001        | 6.8          |
| Comments                    |            |             | Blank concentration > PQL and correctly entered into emLine.  |              |              |              |             |              |              |              |              |              |              |              |              |             |              |              |
| Action                      |            |             | Request Retest  |              |              |              |             |              |              |              |              |              |              |              |              |             |              |              |
| Result                      |            |             | Retest performed, see results below.  |              |              |              |             |              |              |              |              |              |              |              |              |             |              |              |
| V15 Retest                  | 9/7/2010   | FIELD BLANK | <0.005  | 5.80         | <0.09        | 1.320        | <50         | <0.01        | <0.005       | 0.40         | <0.005       | 0.0090       | <0.1         | 0.2700       | 7.00         | 0.07        | <0.0005      | 0.37         |
| Deionized Water             |            |             | <0.005  | <0.2         | <0.02        | <0.02        | <50         | <0.01        | <0.005       | <0.05        | <0.005       | <0.05        | <0.1         | <0.05        | <1           | <0.05       | <0.5         | <0.05        |
| Times greater than DI water |            |             | 1   | 29           | 4.5          | 66           | 1           | 1            | 1            | 8            | 1            | 1.8          | 1            | 5.4          | 7            | 1.4         | 0.001        | 7.4          |
| Comments                    |            |             | Retest for September 7 V15 blank. Blank concentration > PQL and correctly entered into emLine.  |              |              |              |             |              |              |              |              |              |              |              |              |             |              |              |
| Action                      |            |             | Let Value Stand   |              |              |              |             |              |              |              |              |              |              |              |              |             |              |              |
| Result                      |            |             | New blank value entered into emLine.  |              |              |              |             |              |              |              |              |              |              |              |              |             |              |              |
| MOOSE SEEP                  | 9/23/2010  | FIELD BLANK | 0.0260  | 1.40         | <0.02        | 0.220        | <50         | <0.01        | <0.005       | 0.29         | 0.01         | 0.0230       | <0.1         | 0.3300       | 16.00        | 0.37        | 0.003        | 0.16         |
| Deionized Water             |            |             | <0.005  | <0.2         | <0.02        | <0.02        | <50         | <0.01        | <0.005       | <0.05        | <0.005       | <0.05        | <0.1         | <0.05        | <1           | <0.05       | <0.5         | <0.05        |
| Times greater than DI water |            |             | 5.2   | 7            | 1            | 11           | 1           | 1            | 1            | 5.8          | 2            | 4.6          | 1            | 6.6          | 16           | 7.4         | 0.005        | 3.2          |
| Comments                    |            |             | Blank concentration > PQL and correctly entered into emLine.  |              |              |              |             |              |              |              |              |              |              |              |              |             |              |              |
| Action                      |            |             | Let Value Stand   |              |              |              |             |              |              |              |              |              |              |              |              |             |              |              |
| Result                      |            |             | High blank value remains.   |              |              |              |             |              |              |              |              |              |              |              |              |             |              |              |
| V4                          | 10/5/2010  | FIELD BLANK | <0.005  | 1.40         | <0.02        | 0.320        | <50         | <0.01        | <0.005       | 0.13         | 0.01         | 0.0130       | <0.1         | 0.1400       | 2.00         | 0.06        | <0.0005      | <0.05        |
| Deionized Water             |            |             | <0.005  | <0.2         | <0.02        | <0.02        | <50         | <0.01        | <0.005       | <0.05        | <0.005       | <0.05        | <0.1         | <0.05        | <1           | <0.05       | <0.5         | <0.05        |
| Times greater than DI water |            |             | 1   | 7            | 1            | 16           | 1           | 1            | 1            | 2.6          | 1.8          | 2.6          | 1            | 2.8          | 2            | 1.2         | 0.001        | 1            |
| Comments                    |            |             | Blank concentration > PQL and correctly entered into emLine.  |              |              |              |             |              |              |              |              |              |              |              |              |             |              |              |
| Action                      |            |             | Let Value Stand   |              |              |              |             |              |              |              |              |              |              |              |              |             |              |              |
| Result                      |            |             | High blank value remains.   |              |              |              |             |              |              |              |              |              |              |              |              |             |              |              |
| V16                         | 10/6/2010  | FIELD BLANK | <0.005  | 2.10         | <0.02        | 0.040        | <50         | <0.01        | <0.005       | <0.05        | <0.005       | <0.005       | <0.1         | 0.0600       | 3.00         | <0.05       | <0.0005      | <0.05        |
| Deionized Water             |            |             | <0.005  | <0.2         | <0.02        | <0.02        | <50         | <0.01        | <0.005       | <0.05        | <0.005       | <0.005       | <0.1         | <0.05        | <1           | <0.05       | <0.5         | <0.05        |
| Times greater than DI water |            |             | 1   | 10.5         | 1            | 2            | 1           | 1            | 1            | 1            | 1            | 1            | 1            | 1.2          | 3            | 1           | 0.001        | 1            |
| Comments                    |            |             | Blank concentration > PQL and correctly entered into emLine.  |              |              |              |             |              |              |              |              |              |              |              |              |             |              |              |
| Action                      |            |             | Let Value Stand   |              |              |              |             |              |              |              |              |              |              |              |              |             |              |              |
| Result                      |            |             | High blank value remains.   |              |              |              |             |              |              |              |              |              |              |              |              |             |              |              |
| V16 Retest                  | 10/6/2010  | FIELD BLANK | <0.005  | <0.2         | <0.02        | <0.02        | <50         | <0.01        | <0.005       | <0.05        | <0.005       | <0.005       | <0.1         | <0.05        | <1           | <0.05       | <0.5         | <0.05        |
| Deionized Water             |            |             | <0.005  | <0.2         | <0.02        | <0.02        | <50         | <0.01        | <0.005       | <0.05        | <0.005       | <0.005       | <0.1         | <0.05        | <1           | <0.05       | <0.5         | <0.05        |
| Times greater than DI water |            |             | 0   | 0            | 0            | 0            | 0           | 0            | 0            | 0            | 0            | 0            | 0            | 0            | 0            | 0           | 0            | 0            |
| Comments                    |            |             |   |              |              |              |             |              |              |              |              |              |              |              |              |             |              |              |
| Action                      |            |             |   |              |              |              |             |              |              |              |              |              |              |              |              |             |              |              |
| Result                      |            |             |   |              |              |              |             |              |              |              |              |              |              |              |              |             |              |              |
| MOOSE SEEP                  | 10/21/2010 | FIELD BLANK | <0.005  | 3.90         | <0.02        | 0.910        | <50         | <0.01        | <0.005       | 0.42         | 0.02         | 0.0410       | <0.1         | 0.6500       | 10.00        | 0.63        | 0.003        | 0.25         |
| Deionized Water             |            |             | <0.005  | <0.2         | <0.02        | <0.02        | <50         | <0.01        | <0.005       | <0.05        | <0.005       | <0.05        | <0.1         | <0.05        | <1           | <0.05       | <0.5         | <0.05        |
| Times greater than DI water |            |             | 1   | 19.5         | 1            | 45.5         | 1           | 1            | 1            | 8.4          | 3.8          | 8.2          | 1            | 13           | 10           | 12.6        | 0.0056       | 5            |

| Station                            | Date       | Sample Type | Ag-d<br>µg/L   | Al-d<br>µg/L | As-d<br>µg/L | Ba-d<br>µg/L   | B-d<br>µg/L | Be-d<br>µg/L | Bi-d<br>µg/L   | Ca-d<br>mg/L | Cd-d<br>µg/L | Co-d<br>µg/L   | Cr-d<br>µg/L | Cu-d<br>µg/L | Fe-d<br>µg/L   | K-d<br>mg/L | Li-d<br>mg/L | Mg-d<br>mg/L   |  |  |
|------------------------------------|------------|-------------|--|--------------|--------------|--|-------------|--------------|--|--------------|--------------|--|--------------|--------------|--|-------------|--------------|--|--|--|
| <b>Comments</b>                    |            |             | Blank concentration > PQL and correctly entered into emLine.   |              |              | Blank concentration > PQL and correctly entered into emLine.   |             |              | Blank concentration > PQL and correctly entered into emLine.   |              |              | Blank concentration > PQL and correctly entered into emLine.   |              |              | Blank concentration > PQL and correctly entered into emLine.   |             |              | Blank concentration > PQL and correctly entered into emLine.   |  |  |
| <b>Action</b>                      |            |             | Request Retest   |              |              | Request Retest   |             |              | Request Retest   |              |              | Request Retest   |              |              | Request Retest   |             |              | Request Retest   |  |  |
| <b>Result</b>                      |            |             | Retest performed, see results below.   |              |              | Retest performed, see results below.   |             |              | Retest performed, see results below.   |              |              | Retest performed, see results below.   |              |              | Retest performed, see results below.   |             |              | Retest performed, see results below.   |  |  |
| <b>Comments</b>                    |            |             | Blank value < PQL  |              |              | Blank value is a detection limit higher than that of DI water  |             |              | Blank value > PQL and < retest limit   |              |              | Blank value > retest limit (20X DI Water Detection Limit)  |              |              |  |             |              |  |  |  |
| MOOSE SEEP R                       | 10/21/2010 | FIELD BLANK | <0.005   | 6.20         | <0.03        | 0.950  | <50         | <0.01        | <0.005   | 0.42         | 0.02         | 0.0510   | <0.1         | 0.6200       | 13.00  | 0.63        | 0.003        | 0.25   |  |  |
| <b>Deionized Water</b>             |            |             | <0.005   | <0.2         | <0.02        | <0.02  | <50         | <0.01        | <0.005   | <0.05        | <0.005       | <0.005   | <0.1         | <0.05        | <1   | <0.05       | <0.5         | <0.05  |  |  |
| <b>Times greater than DI water</b> |            |             | 1  | 3.1          | 1.5          | 47.5   | 1           | 1            | 1  | 8.4          | 3.4          | 10.2   | 1            | 12.4         | 13   | 12.6        | 0.0062       | 5  |  |  |
| <b>Comments</b>                    |            |             | Retest for October 21 MOOSE SEEP blank. Blank concentration > PQL and correctly entered into emLine.   |              |              | Retest for October 21 MOOSE SEEP blank. Blank concentration > PQL and correctly entered into emLine.   |             |              | Retest for October 21 MOOSE SEEP blank. Blank concentration > PQL and correctly entered into emLine. |              |              | Retest for October 21 MOOSE SEEP blank. Blank concentration > PQL and correctly entered into emLine. |              |              | Retest for October 21 MOOSE SEEP blank. Blank concentration > PQL and correctly entered into emLine.   |             |              | Retest for October 21 MOOSE SEEP blank. Blank concentration > PQL and correctly entered into emLine. |  |  |
| <b>Action</b>                      |            |             | Let Value Stand  |              |              | Let Value Stand  |             |              | Let Value Stand  |              |              | Let Value Stand  |              |              | Let Value Stand  |             |              | Let Value Stand  |  |  |
| <b>Result</b>                      |            |             | New blank value entered into emLine.   |              |              | New blank value entered into emLine.   |             |              | New blank value entered into emLine.   |              |              | New blank value entered into emLine.   |              |              | New blank value entered into emLine.   |             |              | New blank value entered into emLine.   |  |  |
| V27                                | 11/1/2010  | FIELD BLANK | <0.005   | 0.70         | <0.02        | 0.080  | <50         | <0.01        | <0.005   | <0.05        | <0.005       | <0.005   | <0.1         | 0.0600       | <1   | <0.05       | <0.0005      | <0.05  |  |  |
| <b>Deionized Water</b>             |            |             | <0.005   | <0.2         | <0.02        | <0.02  | <50         | <0.01        | <0.005   | <0.05        | <0.005       | <0.005   | <0.1         | <0.05        | <1   | <0.05       | <0.5         | <0.05  |  |  |
| <b>Times greater than DI water</b> |            |             | 1  | 3.5          | 1            | 4  | 1           | 1            | 1  | 1            | 1            | 1  | 1            | 1.2          | 1  | 1           | 0.001        | 1  |  |  |
| <b>Comments</b>                    |            |             |  |              |              |  |             |              |  |              |              |  |              |              |  |             |              |  |  |  |
| <b>Action</b>                      |            |             |  |              |              |  |             |              |  |              |              |  |              |              |  |             |              |  |  |  |
| <b>Result</b>                      |            |             |  |              |              |  |             |              |  |              |              |  |              |              |  |             |              |  |  |  |
| V2                                 | 11/4/2010  | FIELD BLANK | <0.005   | 2.30         | <0.02        | 0.200  | <50         | <0.01        | <0.005   | <0.05        | 0.01         | 0.0170   | <0.1         | 0.2400       | 5.00   | <0.05       | <0.0005      | <0.05  |  |  |
| <b>Deionized Water</b>             |            |             | <0.005   | <0.2         | <0.02        | <0.02  | <50         | <0.01        | <0.005   | <0.05        | <0.005       | <0.005   | <0.1         | <0.05        | <1   | <0.05       | <0.5         | <0.05  |  |  |
| <b>Times greater than DI water</b> |            |             | 1  | 11.5         | 1            | 10   | 1           | 1            | 1  | 1            | 1.4          | 3.4  | 1            | 4.8          | 5  | 1           | 0.001        | 1  |  |  |
| <b>Comments</b>                    |            |             | Blank concentration > PQL and correctly entered into emLine. Lab noted that "Dissolved greater than total. Reanalysis yields similar results." |              |              | Blank concentration > PQL and correctly entered into emLine. Lab noted that "Dissolved greater than total. Reanalysis yields similar results." |             |              |  |              |              |  |              |              | Blank concentration equal to PQL and correctly entered into emLine.  |             |              |  |  |  |
| <b>Action</b>                      |            |             | Let Value Stand  |              |              | Let Value Stand  |             |              |  |              |              |  |              |              | Let Value Stand  |             |              |  |  |  |
| <b>Result</b>                      |            |             | High blank value remains.  |              |              | High blank value remains.  |             |              |  |              |              |  |              |              | High blank value remains.  |             |              |  |  |  |
| V27                                | 12/1/2010  | FIELD BLANK | 0.0090   | 1.00         | <0.02        | 0.090  | <50         | <0.01        | 0.01   | 0.06         | 0.01         | 0.0080   | <0.1         | 0.4000       | <1   | 0.20        | <0.0005      | <0.05  |  |  |
| <b>Deionized Water</b>             |            |             | <0.005   | <0.2         | <0.02        | <0.02  | <50         | <0.01        | <0.005   | <0.05        | <0.005       | <0.005   | <0.1         | <0.05        | <1   | <0.05       | <0.5         | <0.05  |  |  |
| <b>Times greater than DI water</b> |            |             | 1.8  | 5            | 1            | 4.5  | 1           | 1            | 1.4  | 1.2          | 1.2          | 1.6  | 1            | 8            | 1  | 4           | 0.001        | 1  |  |  |
| <b>Comments</b>                    |            |             | Blank concentration equal to PQL and correctly entered into emLine.  |              |              |  |             |              |  |              |              |  |              |              | Blank concentration > PQL and correctly entered into emLine. Lab noted that "Dissolved greater than total. Reanalysis yields similar results." |             |              |  |  |  |
| <b>Action</b>                      |            |             | Let Value Stand  |              |              |  |             |              |  |              |              |  |              |              | Let Value Stand  |             |              |  |  |  |
| <b>Result</b>                      |            |             | High blank value remains.  |              |              |  |             |              |  |              |              |  |              |              | High blank value remains.  |             |              |  |  |  |
| V15                                | 12/1/2010  | FIELD BLANK | <0.005   | 0.50         | <0.02        | 0.030  | <50         | <0.01        | <0.005   | <0.05        | <0.005       | <0.005   | <0.1         | <0.05        | <1   | <0.05       | <0.0005      | <0.05  |  |  |
| <b>Deionized Water</b>             |            |             | <0.005   | <0.2         | <0.02        | <0.02  | <50         | <0.01        | <0.005   | <0.05        | <0.005       | <0.005   | <0.1         | <0.05        | <1   | <0.05       | <0.5         | <0.05  |  |  |
| <b>Times greater than DI water</b> |            |             | 1  | 2.5          | 1            | 1.5  | 1           | 1            | 1  | 1            | 1            | 1  | 1            | 1            | 1  | 1           | 0.001        | 1  |  |  |
| <b>Comments</b>                    |            |             |  |              |              |  |             |              |  |              |              |  |              |              |  |             |              |  |  |  |
| <b>Action</b>                      |            |             |  |              |              |  |             |              |  |              |              |  |              |              |  |             |              |  |  |  |
| <b>Result</b>                      |            |             |  |              |              |  |             |              |  |              |              |  |              |              |  |             |              |  |  |  |
| V15 Retest                         | 12/1/2010  | FIELD BLANK | <0.005   | <0.2         | <0.02        | <0.02  | <50         | <0.01        | <0.005   | <0.05        | <0.005       | <0.005   | <0.1         | <0.05        | <1   | <0.05       | <0.5         | <0.05  |  |  |
| <b>Deionized Water</b>             |            |             | <0.005   | <0.2         | <0.02        | <0.02  | <50         | <0.01        | <0.005   | <0.05        | <0.005       | <0.005   | <0.1         | <0.05        | <1   | <0.05       | <0.5         | <0.05  |  |  |
| <b>Times greater than DI water</b> |            |             | 0  | 0            | 0            | 0  | 0           | 0            | 0  | 0            | 0            | 0  | 0            | 0            | 0  | 0           | 0            | 0  |  |  |
| <b>Comments</b>                    |            |             |  |              |              |  |             |              |  |              |              |  |              |              |  |             |              |  |  |  |
| <b>Action</b>                      |            |             |  |              |              |  |             |              |  |              |              |  |              |              |  |             |              |  |  |  |
| <b>Result</b>                      |            |             |  |              |              |  |             |              |  |              |              |  |              |              |  |             |              |  |  |  |
| V22                                | 12/16/2010 | FIELD BLANK | <0.005   | 0.70         | <0.02        | 0.050  | <50         | <0.01        | <0.005   | <0.05        | <0.005       | 0.0150   | <0.1         | <0.05        | <1   | <0.05       | <0.0005      | <0.05  |  |  |
| <b>Deionized Water</b>             |            |             | <0.005   | <0.2         | <0.02        | <0.02  | <50         | <0.01        | <0.005   | <0.05        | <0.005       | <0.005   | <0.1         | <0.05        | <1   | <0.05       | <0.5         | <0.05  |  |  |
| <b>Times greater than DI water</b> |            |             | 1  | 3.5          | 1            | 2.5  | 1           | 1            | 1  | 1            | 1            | 3  | 1            | 1            | 1  | 1           | 0.001        | 1  |  |  |
| <b>Comments</b>                    |            |             |  |              |              |  |             |              |  |              |              |  |              |              |  |             |              |  |  |  |
| <b>Action</b>                      |            |             |  |              |              |  |             |              |  |              |              |  |              |              |  |             |              |  |  |  |
| <b>Result</b>                      |            |             |  |              |              |  |             |              |  |              |              |  |              |              |  |             |              |  |  |  |

Blank value < PQL  
 Blank value is a detection limit higher than that of DI water  
 Blank value > PQL and < retest limit  
 Blank value > retest limit (20X DI Water Detection Limit)





Table D-15: Vangorda Creek Drainage Water Quality  
2010 QA/QC Splits - Dissolved Metals

| Station    | Date                        | Sample Type   | Mn-d<br>µg/L    | Mo-d<br>µg/L    | Na-d<br>mg/L    | Ni-d<br>µg/L    | Pb-d<br>µg/L    | Sb-d<br>µg/L    | Se-d<br>µg/L    | Si-d<br>µg/L    | Sn-d<br>µg/L    | Sr-d<br>µg/L    | Ti-d<br>µg/L    | Ti-d<br>µg/L    | U-d<br>µg/L     | V-d<br>µg/L     | Zn-d<br>µg/L    | Zr-d<br>µg/L    |                 |
|------------|-----------------------------|---|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Action     | Result                      | Let Value Stand   | Let Value Stand | Let Value Stand | Let Value Stand | Let Value Stand | Let Value Stand | Let Value Stand | Let Value Stand | Let Value Stand | Let Value Stand | Let Value Stand | Let Value Stand | Let Value Stand | Let Value Stand | Let Value Stand | Let Value Stand | Let Value Stand |                 |
| LCD        | 9/7/2010                    | FIELD BLANK   | <1              | <1              | <0.05           | <1              | <0.2            | <0.5            | <0.1            | <100            | <5              | <1              | <5              | <0.05           | <0.1            | <5              | <5              | <0.5            |                 |
|            | Deionized Water             | <0.05   | <0.05           | <0.05           | <0.02           | <0.005          | <0.02           | <0.04           | <100            | <0.01           | <0.05           | <0.05           | <0.5            | <0.002          | <0.002          | <0.2            | <0.1            | <0.1            |                 |
|            | Times greater than DI water | 20  | 20              | 1               | 50              | 40              | 25              | 2.5             | 1               | 500             | 20              | 10              | 25              | 50              | 25              | 50              | 50              | 5               |                 |
|            | Comments                    | Blank concentration not > PQL (detection limit for field blank higher than that used for DI water). Therefore, comparison not valid in this case. |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
|            | Action                      | Let Value Stand   | Let Value Stand | Let Value Stand | Let Value Stand | Let Value Stand | Let Value Stand | Let Value Stand | Let Value Stand | Let Value Stand | Let Value Stand | Let Value Stand | Let Value Stand | Let Value Stand | Let Value Stand | Let Value Stand | Let Value Stand | Let Value Stand | Let Value Stand |
|            | Result                      | High blank value remains.   |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
| V23        | 9/7/2010                    | FIELD BLANK   | 4.240           | <0.05           | <0.05           | 0.280           | 0.3500          | <0.02           | <0.04           | <100            | <0.01           | 1.32            | <0.5            | 0.00            | 0.0660          | <0.2            | 12.400          | <0.1            |                 |
|            | Deionized Water             | <0.05   | <0.05           | <0.05           | <0.02           | <0.005          | <0.02           | <0.04           | <100            | <0.01           | <0.05           | <0.05           | <0.5            | <0.002          | <0.002          | <0.2            | <0.1            | <0.1            |                 |
|            | Times greater than DI water | 84.8  | 1               | 1               | 14              | 70              | 1               | 1               | 1               | 1               | 26.4            | 1               | 2               | 33              | 1               | 124             | 1               |                 |                 |
|            | Comments                    | Blank concentration > PQL and correctly entered into emLine. Lab noted that "Dissolved greater than total. Reanalysis yields similar results."    |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
|            | Action                      | Let Value Stand   | Let Value Stand | Let Value Stand | Let Value Stand | Let Value Stand | Let Value Stand | Let Value Stand | Let Value Stand | Let Value Stand | Let Value Stand | Let Value Stand | Let Value Stand | Let Value Stand | Let Value Stand | Let Value Stand | Let Value Stand | Let Value Stand | Let Value Stand |
|            | Result                      | High blank value remains. Retest not requested because lab already reanalyzed.  |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
| V15        | 9/7/2010                    | FIELD BLANK   | 3.320           | <0.05           | <0.05           | 0.100           | 0.4920          | <0.02           | <0.04           | <100            | <0.01           | 1.86            | <0.5            | <0.002          | 0.0580          | <0.2            | 2.700           | <0.1            |                 |
|            | Deionized Water             | <0.05   | <0.05           | <0.05           | <0.02           | <0.005          | <0.02           | <0.04           | <100            | <0.01           | <0.05           | <0.05           | <0.5            | <0.002          | <0.002          | <0.2            | <0.1            | <0.1            |                 |
|            | Times greater than DI water | 66.4  | 1               | 1               | 5               | 98.4            | 1               | 1               | 1               | 1               | 37.2            | 1               | 1               | 29              | 1               | 27              | 1               |                 |                 |
|            | Comments                    | Blank concentration > PQL and correctly entered into emLine.  |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
|            | Action                      | Request Retest  | Request Retest  | Request Retest  | Request Retest  | Request Retest  | Request Retest  | Request Retest  | Request Retest  | Request Retest  | Request Retest  | Request Retest  | Request Retest  | Request Retest  | Request Retest  | Request Retest  | Request Retest  | Request Retest  |                 |
|            | Result                      | Retest performed, see results below.  |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
| V15 Retest | 9/7/2010                    | FIELD BLANK   | 3.510           | <0.05           | <0.06           | 0.180           | 0.6600          | <0.02           | <0.04           | <100            | <0.01           | 1.46            | <0.5            | <0.002          | 0.0330          | <0.2            | 3.100           | <0.1            |                 |
|            | Deionized Water             | <0.05   | <0.05           | <0.05           | <0.02           | <0.005          | <0.02           | <0.04           | <100            | <0.01           | <0.05           | <0.05           | <0.5            | <0.002          | <0.002          | <0.2            | <0.1            | <0.1            |                 |
|            | Times greater than DI water | 70.2  | 1               | 1.2             | 8               | 132             | 1               | 1               | 1               | 4               | 29.2            | 1               | 1               | 16.5            | 1               | 31              | 1               |                 |                 |
|            | Comments                    | Retest for September 7 V15 blank. Blank concentration > PQL and correctly entered into emLine.  |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
|            | Action                      | Let Value Stand   | Let Value Stand | Let Value Stand | Let Value Stand | Let Value Stand | Let Value Stand | Let Value Stand | Let Value Stand | Let Value Stand | Let Value Stand | Let Value Stand | Let Value Stand | Let Value Stand | Let Value Stand | Let Value Stand | Let Value Stand | Let Value Stand |                 |
|            | Result                      | New blank value entered into emLine.  |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
| MOOSE SEEP | 9/23/2010                   | FIELD BLANK   | 3.040           | 0.16            | 0.07            | 0.120           | 0.2510          | 0.04            | <0.04           | <100            | <0.01           | 0.86            | <0.5            | <0.002          | 0.0210          | <0.2            | 7.800           | <0.1            |                 |
|            | Deionized Water             | <0.05   | <0.05           | <0.05           | <0.02           | <0.005          | <0.02           | <0.04           | <100            | <0.01           | <0.05           | <0.05           | <0.5            | <0.002          | <0.002          | <0.2            | <0.1            | <0.1            |                 |
|            | Times greater than DI water | 60.8  | 3.2             | 1.4             | 6               | 50.2            | 2               | 1               | 1               | 1               | 17.2            | 1               | 1               | 10.5            | 1               | 78              | 1               |                 |                 |
|            | Comments                    | Blank concentration > PQL and correctly entered into emLine.  |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
|            | Action                      | Request Retest  | Let Value Stand | Request Retest  | Let Value Stand | Request Retest  | Let Value Stand | Request Retest  | Let Value Stand | Request Retest  | Let Value Stand | Request Retest  | Let Value Stand | Request Retest  | Let Value Stand | Request Retest  | Let Value Stand | Request Retest  |                 |
|            | Result                      | Retest mistakenly requested on another sample. Therefore, retest not carried out. High blank value remains.                                       |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
| V4         | 10/5/2010                   | FIELD BLANK   | 1.480           | <0.05           | 0.08            | 0.050           | 0.3180          | <0.02           | <0.04           | <100            | <0.01           | 0.38            | <0.5            | <0.002          | 0.0390          | <0.2            | 3.500           | <0.1            |                 |
|            | Deionized Water             | <0.05   | <0.05           | <0.05           | <0.02           | <0.005          | <0.02           | <0.04           | <100            | <0.01           | <0.05           | <0.05           | <0.5            | <0.002          | <0.002          | <0.2            | <0.1            | <0.1            |                 |
|            | Times greater than DI water | 29.6  | 1               | 1.6             | 2.5             | 63.6            | 1               | 1               | 1               | 1               | 7.6             | 1               | 1               | 19.5            | 1               | 35              | 1               |                 |                 |
|            | Comments                    | Blank concentration > PQL and correctly entered into emLine. Lab noted that "Dissolved greater than total. Reanalysis yields similar results."    |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
|            | Action                      | Let Value Stand   | Let Value Stand | Let Value Stand | Let Value Stand | Let Value Stand | Let Value Stand | Let Value Stand | Let Value Stand | Let Value Stand | Let Value Stand | Let Value Stand | Let Value Stand | Let Value Stand | Let Value Stand | Let Value Stand | Let Value Stand | Let Value Stand |                 |
|            | Result                      | High blank value remains. Retest not requested because lab already reanalyzed.  |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
| V16        | 10/6/2010                   | FIELD BLANK   | 0.720           | <0.05           | <0.05           | 0.110           | 0.0760          | <0.02           | <0.04           | <100            | <0.01           | 0.07            | <0.5            | <0.002          | <0.002          | <0.2            | 2.200           | <0.1            |                 |
|            | Deionized Water             | <0.05   | <0.05           | <0.05           | <0.02           | <0.005          | <0.02           | <0.04           | <100            | <0.01           | <0.05           | <0.05           | <0.5            | <0.002          | <0.002          | <0.2            | <0.1            | <0.1            |                 |
|            | Times greater than DI water | 14.4  | 1               | 1               | 5.5             | 15.2            | 1               | 1               | 1               | 1               | 1.4             | 1               | 1               | 1               | 1               | 22              | 1               |                 |                 |
|            | Comments                    | Blank concentration > PQL and correctly entered into emLine.  |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
|            | Action                      | Let Value Stand   | Let Value Stand | Let Value Stand | Let Value Stand | Let Value Stand | Let Value Stand | Let Value Stand | Let Value Stand | Let Value Stand | Let Value Stand | Let Value Stand | Let Value Stand | Let Value Stand | Let Value Stand | Let Value Stand | Let Value Stand | Let Value Stand |                 |
|            | Result                      | High blank value remains.   |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
| V16 Retest | 10/6/2010                   | FIELD BLANK   | <0.05           | <0.05           | <0.05           | <0.02           | <0.005          | <0.02           | <0.04           | <100            | <0.01           | <0.05           | <0.5            | <0.002          | <0.002          | <0.2            | 2.500           | <0.1            |                 |
|            | Deionized Water             | <0.05   | <0.05           | <0.05           | <0.02           | <0.005          | <0.02           | <0.04           | <100            | <0.01           | <0.05           | <0.05           | <0.5            | <0.002          | <0.002          | <0.2            | <0.1            | <0.1            |                 |
|            | Times greater than DI water | 0   | 0               | 0               | 0               | 0               | 0               | 0               | 0               | 0               | 0               | 0               | 0               | 0               | 0               | 25              | 0               |                 |                 |
|            | Comments                    | Retest for October 6 V16 blank. Blank concentration > PQL and correctly entered into emLine.  |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
|            | Action                      | Let Value Stand   | Let Value Stand | Let Value Stand | Let Value Stand | Let Value Stand | Let Value Stand | Let Value Stand | Let Value Stand | Let Value Stand | Let Value Stand | Let Value Stand | Let Value Stand | Let Value Stand | Let Value Stand | Let Value Stand | Let Value Stand | Let Value Stand |                 |
|            | Result                      | New blank value entered into emLine.  |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
| MOOSE SEEP | 10/21/2010                  | FIELD BLANK   | 6.320           | <0.05           | 0.28            | 0.160           | 1.9900          | <0.02           | <0.04           | <100            | 0.03            | 1.64            | <0.5            | <0.002          | 0.0160          | <0.2            | 13.000          | <0.1            |                 |
|            | Deionized Water             | <0.05   | <0.05           | <0.05           | <0.02           | <0.005          | <0.02           | <0.04           | <100            | <0.01           | <0.05           | <0.05           | <0.5            | <0.002          | <0.002          | <0.2            | <0.1            | <0.1            |                 |
|            | Times greater than DI water | 126.4   | 1               | 5.6             | 8               | 396             | 1               | 1               | 1               | 3               | 32.8            | 1               | 1               | 8               | 1               | 130             | 1               |                 |                 |

Table D-15: Vangorda Creek Drainage Water Quality  
2010 QA/QC Splits - Dissolved Metals

| Station      | Date       | Sample Type                 | Mn-d<br>µg/L   | Mo-d<br>µg/L | Na-d<br>mg/L | Ni-d<br>µg/L | Pb-d<br>µg/L | Sb-d<br>µg/L | Se-d<br>µg/L | Si-d<br>µg/L | Sn-d<br>µg/L | Sr-d<br>µg/L | Ti-d<br>µg/L | Ti-d<br>µg/L | U-d<br>µg/L | V-d<br>µg/L | Zn-d<br>µg/L | Zr-d<br>µg/L |  |
|--------------|------------|-----------------------------|--|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|-------------|-------------|--------------|--------------|--|
|              |            | Comments                    | Blank concentration > PQL and correctly entered into emLine.   |              |              |              |              |              |              |              |              |              |              |              |             |             |              |              |  |
|              |            | Action                      | Request Retest   |              |              |              |              |              |              |              |              |              |              |              |             |             |              |              |  |
|              |            | Result                      | Retest performed, see results below.   |              |              |              |              |              |              |              |              |              |              |              |             |             |              |              |  |
|              |            |                             | Blank value < PQL  |              |              |              |              |              |              |              |              |              |              |              |             |             |              |              |  |
|              |            |                             | Blank value is a detection limit higher than that of DI water  |              |              |              |              |              |              |              |              |              |              |              |             |             |              |              |  |
|              |            |                             | Blank value > PQL and < retest limit   |              |              |              |              |              |              |              |              |              |              |              |             |             |              |              |  |
|              |            |                             | Blank value > retest limit (20X DI Water Detection Limit)  |              |              |              |              |              |              |              |              |              |              |              |             |             |              |              |  |
| MOOSE SEEP R | 10/21/2010 | FIELD BLANK                 | 6.400  | <0.05        | 0.28         | 0.210        | 2.1100       | <0.03        | <0.04        | <100         | 0.02         | 1.60         | <0.5         | <0.002       | 0.0180      | <0.2        | 12.600       | <0.1         |  |
|              |            | Deionized Water             | <0.05  | <0.05        | <0.05        | <0.02        | <0.005       | <0.02        | <0.04        | <100         | <0.01        | <0.05        | <0.5         | <0.002       | <0.002      | <0.2        | <0.1         | <0.1         |  |
|              |            | Times greater than DI water | 128  | 1            | 5.6          | 10.5         | 422          | 1.5          | 1            | 1            | 2            | 32           | 1            | 1            | 9           | 1           | 128          | 1            |  |
|              |            | Comments                    | Retest for October 21 MOOSE SEEP blank. Blank concentration > PQL and correctly entered into emLine.   |              |              |              |              |              |              |              |              |              |              |              |             |             |              |              |  |
|              |            | Action                      | Let Value Stand  |              |              |              |              |              |              |              |              |              |              |              |             |             |              |              |  |
|              |            | Result                      | New blank value entered into emLine.   |              |              |              |              |              |              |              |              |              |              |              |             |             |              |              |  |
| V27          | 11/1/2010  | FIELD BLANK                 | <0.05  | <0.05        | <0.05        | 0.090        | 0.0520       | <0.02        | <0.04        | <100         | 0.02         | 0.21         | <0.5         | <0.002       | 0.0280      | <0.2        | 0.400        | <0.1         |  |
|              |            | Deionized Water             | <0.05  | <0.05        | <0.05        | <0.02        | <0.005       | <0.02        | <0.04        | <100         | <0.01        | <0.05        | <0.5         | <0.002       | <0.002      | <0.2        | <0.1         | <0.1         |  |
|              |            | Times greater than DI water | 1  | 1            | 1            | 4.5          | 10.4         | 1            | 1            | 1            | 2            | 4.2          | 1            | 1            | 14          | 1           | 4            | 1            |  |
|              |            | Comments                    | Blank concentration > PQL and correctly entered into emLine.   |              |              |              |              |              |              |              |              |              |              |              |             |             |              |              |  |
|              |            | Action                      | Let Value Stand  |              |              |              |              |              |              |              |              |              |              |              |             |             |              |              |  |
|              |            | Result                      | High blank value remains.  |              |              |              |              |              |              |              |              |              |              |              |             |             |              |              |  |
| V2           | 11/4/2010  | FIELD BLANK                 | 1.260  | <0.05        | <0.05        | 0.140        | 0.4120       | <0.02        | <0.04        | <100         | <0.01        | 0.13         | <0.5         | <0.002       | 0.0060      | <0.2        | 7.100        | <0.1         |  |
|              |            | Deionized Water             | <0.05  | <0.05        | <0.05        | <0.02        | <0.005       | <0.02        | <0.04        | <100         | <0.01        | <0.05        | <0.5         | <0.002       | <0.002      | <0.2        | <0.1         | <0.1         |  |
|              |            | Times greater than DI water | 25.2   | 1            | 1            | 7            | 82.4         | 1            | 1            | 1            | 1            | 2.6          | 1            | 1            | 3           | 1           | 71           | 1            |  |
|              |            | Comments                    | Blank concentration > PQL and correctly entered into emLine. Lab noted that "Dissolved greater than total. Reanalysis yields similar results." |              |              |              |              |              |              |              |              |              |              |              |             |             |              |              |  |
|              |            | Action                      | Let Value Stand  |              |              |              |              |              |              |              |              |              |              |              |             |             |              |              |  |
|              |            | Result                      | High blank value remains. Retest not requested because lab already reanalyzed.   |              |              |              |              |              |              |              |              |              |              |              |             |             |              |              |  |
| V27          | 12/1/2010  | FIELD BLANK                 | 0.970  | <0.05        | 0.15         | 0.170        | 0.2450       | <0.02        | <0.04        | <100         | <0.01        | 0.21         | <0.5         | <0.002       | 0.0490      | <0.2        | 2.700        | <0.1         |  |
|              |            | Deionized Water             | <0.05  | <0.05        | <0.05        | <0.02        | <0.005       | <0.02        | <0.04        | <100         | <0.01        | <0.05        | <0.5         | <0.002       | <0.002      | <0.2        | <0.1         | <0.1         |  |
|              |            | Times greater than DI water | 19.4   | 1            | 3            | 8.5          | 49           | 1            | 1            | 1            | 1            | 4.2          | 1            | 1            | 24.5        | 1           | 27           | 1            |  |
|              |            | Comments                    | Blank concentration > PQL and correctly entered into emLine. Lab noted that "Dissolved greater than total. Reanalysis yields similar results." |              |              |              |              |              |              |              |              |              |              |              |             |             |              |              |  |
|              |            | Action                      | Let Value Stand  |              |              |              |              |              |              |              |              |              |              |              |             |             |              |              |  |
|              |            | Result                      | High blank value remains. Retest not requested because lab already reanalyzed.   |              |              |              |              |              |              |              |              |              |              |              |             |             |              |              |  |
| V15          | 12/1/2010  | FIELD BLANK                 | 0.090  | <0.05        | <0.05        | <0.02        | 0.0290       | <0.02        | <0.04        | <100         | <0.01        | 0.12         | <0.5         | <0.002       | 0.0430      | <0.2        | 0.500        | <0.1         |  |
|              |            | Deionized Water             | <0.05  | <0.05        | <0.05        | <0.02        | <0.005       | <0.02        | <0.04        | <100         | <0.01        | <0.05        | <0.5         | <0.002       | <0.002      | <0.2        | <0.1         | <0.1         |  |
|              |            | Times greater than DI water | 1.8  | 1            | 1            | 1            | 5.8          | 1            | 1            | 1            | 1            | 2.4          | 1            | 1            | 21.5        | 1           | 5            | 1            |  |
|              |            | Comments                    | Blank concentration > PQL and correctly entered into emLine.   |              |              |              |              |              |              |              |              |              |              |              |             |             |              |              |  |
|              |            | Action                      | Let Value Stand  |              |              |              |              |              |              |              |              |              |              |              |             |             |              |              |  |
|              |            | Result                      | High blank value remains. Retest performed, see results below.   |              |              |              |              |              |              |              |              |              |              |              |             |             |              |              |  |
| V15 Retest   | 12/1/2010  | FIELD BLANK                 | <0.05  | <0.05        | <0.05        | <0.02        | <0.005       | <0.02        | <0.04        | <100         | <0.01        | <0.05        | <0.5         | <0.002       | 0.0360      | <0.2        | <0.1         | <0.1         |  |
|              |            | Deionized Water             | <0.05  | <0.05        | <0.05        | <0.02        | <0.005       | <0.02        | <0.04        | <100         | <0.01        | <0.05        | <0.5         | <0.002       | <0.002      | <0.2        | <0.1         | <0.1         |  |
|              |            | Times greater than DI water | 0  | 0            | 0            | 0            | 0            | 0            | 0            | 0            | 0            | 0            | 0            | 0            | 18          | 0           | 0            | 0            |  |
|              |            | Comments                    | Retest for December 1 V15 blank. Blank concentration > PQL and correctly entered into emLine.  |              |              |              |              |              |              |              |              |              |              |              |             |             |              |              |  |
|              |            | Action                      | Let Value Stand  |              |              |              |              |              |              |              |              |              |              |              |             |             |              |              |  |
|              |            | Result                      | New blank value entered into emLine.   |              |              |              |              |              |              |              |              |              |              |              |             |             |              |              |  |
| V22          | 12/16/2010 | FIELD BLANK                 | 0.980  | <0.05        | <0.05        | 0.070        | 0.0580       | <0.02        | <0.04        | <100         | <0.01        | 0.18         | <0.5         | <0.002       | 0.0530      | <0.2        | 4.200        | <0.1         |  |
|              |            | Deionized Water             | <0.05  | <0.05        | <0.05        | <0.02        | <0.005       | <0.02        | <0.04        | <100         | <0.01        | <0.05        | <0.5         | <0.002       | <0.002      | <0.2        | <0.1         | <0.1         |  |
|              |            | Times greater than DI water | 19.6   | 1            | 1            | 3.5          | 11.6         | 1            | 1            | 1            | 1            | 3.6          | 1            | 1            | 26.5        | 1           | 42           | 1            |  |
|              |            | Comments                    | Blank concentration > PQL and correctly entered into emLine. Lab noted that "Dissolved greater than total. Reanalysis yields similar results." |              |              |              |              |              |              |              |              |              |              |              |             |             |              |              |  |
|              |            | Action                      | Let Value Stand  |              |              |              |              |              |              |              |              |              |              |              |             |             |              |              |  |
|              |            | Result                      | High blank value remains. Retest not requested because lab already reanalyzed.   |              |              |              |              |              |              |              |              |              |              |              |             |             |              |              |  |

Blank value < PQL  
 Blank value is a detection limit higher than that of DI water  
 Blank value > PQL and < retest limit  
 Blank value > retest limit (20X DI Water Detection Limit)



| Station    | Date      | Sample Type                 | Ag<br>µg/L   | Al<br>µg/L | As<br>µg/L | B<br>µg/L   | Ba<br>µg/L | Be<br>µg/L | Bi<br>µg/L  | Ca<br>mg/L | Cd<br>µg/L | Co<br>µg/L  | Cr<br>µg/L | Cu<br>µg/L | Fe<br>µg/L  | K<br>mg/L | Li<br>mg/L | Mg<br>mg/L   |  |  |
|------------|-----------|-----------------------------|--|------------|------------|---|------------|------------|---|------------|------------|---|------------|------------|---|-----------|------------|--|--|--|
| LCD        | 8/4/2010  | FIELD BLANK                 | <0.02  | 6.00       | <0.1       | <50   | <1         | <0.1       | <1  | 0.07       | 0.09       | <0.5  | <1         | <0.2       | 20.00   | <0.05     | <0.005     | 0.06   |  |  |
|            |           | Deionized Water             | <0.005   | <0.2       | <0.02      | <50   | <0.02      | <0.01      | <0.005  | <0.05      | <0.005     | <0.005  | <0.1       | <0.05      | <1  | <0.05     | <0.5       | <0.05  |  |  |
|            |           | Times greater than DI water | 4  | 30         | 5          | 1   | 50         | 10         | 200   | 1.4        | 18         | 100   | 10         | 4          | 20  | 1         | 0.01       | 1.2  |  |  |
|            |           | Comments                    | Blank value correctly entered into emLine. However concentration not > PQL (detection limit for field blank higher than that used for DI water). Therefore, comparison not valid in this case. |            |            | Blank concentration not > PQL (detection limit for field blank higher than that used for DI water). Therefore, comparison not valid in this case. |            |            | Blank concentration not > PQL (detection limit for field blank higher than that used for DI water). Therefore, comparison not valid in this case. |            |            | Blank concentration not > PQL (detection limit for field blank higher than that used for DI water). Therefore, comparison not valid in this case. |            |            | Blank concentration not > PQL (detection limit for field blank higher than that used for DI water). Therefore, comparison not valid in this case. |           |            | Blank value correctly entered into emLine. However concentration not > PQL (detection limit for field blank higher than that used for DI water). Therefore, comparison not valid in this case. |  |  |
|            |           | Action                      | Let Value Stand  |            |            | Let Value Stand   |            |            | Let Value Stand   |            |            | Let Value Stand   |            |            | Let Value Stand   |           |            |  |  |  |
|            |           | Result                      | High blank value remains.  |            |            |   |            |            |   |            |            | High blank value remains.   |            |            | High blank value remains.   |           |            |  |  |  |
| LCD Retest | 8/4/2010  | FIELD BLANK                 | <0.005   | <0.2       | <0.02      | <50   | <0.02      | <0.01      | <0.005  | <0.05      | <0.005     | <0.005  | <0.1       | <0.05      | <1  | <0.05     | <0.5       | <0.05  |  |  |
|            |           | Deionized Water             | <0.005   | <0.2       | <0.02      | <50   | <0.02      | <0.01      | <0.005  | <0.05      | <0.005     | <0.005  | <0.1       | <0.05      | <1  | <0.05     | <0.5       | <0.05  |  |  |
|            |           | Times greater than DI water | 0  | 0          | 0          | 0   | 0          | 0          | 0   | 0          | 0          | 0   | 0          | 0          | 0   | 0         | 0          | 0  |  |  |
|            |           | Comments                    |  |            |            |   |            |            |   |            |            |   |            |            |   |           |            |  |  |  |
|            |           | Action                      |  |            |            |   |            |            |   |            |            |   |            |            |   |           |            |  |  |  |
|            |           | Result                      |  |            |            |   |            |            |   |            |            |   |            |            |   |           |            |  |  |  |
| LCD        | 9/7/2010  | FIELD BLANK                 | <0.02  | 4.00       | <0.1       | <50   | <1         | <0.1       | <1  | 0.07       | 0.03       | <0.5  | <1         | <0.2       | 22.00   | <0.05     | <0.005     | <0.05  |  |  |
|            |           | Deionized Water             | <0.005   | <0.2       | <0.02      | <50   | <0.02      | <0.01      | <0.005  | <0.05      | <0.005     | <0.005  | <0.1       | <0.05      | <1  | <0.05     | <0.5       | <0.05  |  |  |
|            |           | Times greater than DI water | 4  | 20         | 5          | 1   | 50         | 10         | 200   | 1.4        | 6          | 100   | 10         | 4          | 22  | 1         | 0.01       | 1  |  |  |
|            |           | Comments                    | Blank value correctly entered into emLine. However concentration not > PQL (detection limit for field blank higher than that used for DI water). Therefore, comparison not valid in this case. |            |            | Blank concentration not > PQL (detection limit for field blank higher than that used for DI water). Therefore, comparison not valid in this case. |            |            | Blank concentration not > PQL (detection limit for field blank higher than that used for DI water). Therefore, comparison not valid in this case. |            |            | Blank concentration not > PQL (detection limit for field blank higher than that used for DI water). Therefore, comparison not valid in this case. |            |            | Blank concentration not > PQL (detection limit for field blank higher than that used for DI water). Therefore, comparison not valid in this case. |           |            | Blank value correctly entered into emLine. However concentration not > PQL (detection limit for field blank higher than that used for DI water). Therefore, comparison not valid in this case. |  |  |
|            |           | Action                      | Let Value Stand  |            |            | Let Value Stand   |            |            | Let Value Stand   |            |            | Let Value Stand   |            |            | Let Value Stand   |           |            |  |  |  |
|            |           | Result                      | High blank value remains.  |            |            |   |            |            |   |            |            | High blank value remains.   |            |            | High blank value remains.   |           |            |  |  |  |
| LCD Retest | 9/7/2010  | FIELD BLANK                 | <0.005   | <0.2       | <0.02      | <50   | <0.02      | <0.01      | <0.005  | <0.05      | <0.005     | <0.005  | <0.1       | <0.05      | <1  | <0.05     | <0.5       | <0.05  |  |  |
|            |           | Deionized Water             | <0.005   | <0.2       | <0.02      | <50   | <0.02      | <0.01      | <0.005  | <0.05      | <0.005     | <0.005  | <0.1       | <0.05      | <1  | <0.05     | <0.5       | <0.05  |  |  |
|            |           | Times greater than DI water | 0  | 0          | 0          | 0   | 0          | 0          | 0   | 0          | 0          | 0   | 0          | 0          | 0   | 0         | 0          | 0  |  |  |
|            |           | Comments                    |  |            |            |   |            |            |   |            |            |   |            |            |   |           |            |  |  |  |
|            |           | Action                      |  |            |            |   |            |            |   |            |            |   |            |            |   |           |            |  |  |  |
|            |           | Result                      |  |            |            |   |            |            |   |            |            |   |            |            |   |           |            |  |  |  |
| V23        | 9/7/2010  | FIELD BLANK                 | <0.005   | 1.40       | <0.02      | <50   | 0.080      | <0.01      | <0.005  | <0.05      | <0.005     | <0.005  | <0.1       | <0.05      | <1  | <0.05     | <0.0005    | <0.05  |  |  |
|            |           | Deionized Water             | <0.005   | <0.2       | <0.02      | <50   | <0.02      | <0.01      | <0.005  | <0.05      | <0.005     | <0.005  | <0.1       | <0.05      | <1  | <0.05     | <0.5       | <0.05  |  |  |
|            |           | Times greater than DI water | 1  | 7          | 1          | 1   | 4          | 1          | 1   | 1          | 1          | 1   | 1          | 1          | 1   | 1         | 0.001      | 1  |  |  |
|            |           | Comments                    | Blank concentration > PQL and correctly entered into emLine.   |            |            |   |            |            |   |            |            |   |            |            |   |           |            |  |  |  |
|            |           | Action                      | Let Value Stand  |            |            |   |            |            |   |            |            |   |            |            |   |           |            |  |  |  |
|            |           | Result                      | High blank value remains.  |            |            |   |            |            |   |            |            |   |            |            |   |           |            |  |  |  |
| V4         | 10/5/2010 | FIELD BLANK                 | <0.005   | 3.10       | <0.02      | <50   | 0.980      | <0.01      | <0.005  | 0.06       | 0.01       | 0.0060  | <0.1       | 0.1400     | 5.00  | <0.05     | <0.0005    | <0.05  |  |  |
|            |           | Deionized Water             | <0.005   | <0.2       | <0.02      | <50   | <0.02      | <0.01      | <0.005  | <0.05      | <0.005     | <0.005  | <0.1       | <0.05      | <1  | <0.05     | <0.5       | <0.05  |  |  |
|            |           | Times greater than DI water | 1  | 15.5       | 1          | 1   | 49         | 1          | 1   | 1.2        | 1.2        | 1.2   | 1          | 2.8        | 5   | 1         | 0.001      | 1  |  |  |
|            |           | Comments                    | Blank concentration > PQL and correctly entered into emLine.   |            |            | Blank concentration > PQL and correctly entered into emLine.  |            |            |   |            |            |   |            |            | Blank concentration equal to PQL and correctly entered into emLine.   |           |            |  |  |  |
|            |           | Action                      | Let Value Stand  |            |            | Let Value Stand   |            |            |   |            |            |   |            |            | Let Value Stand   |           |            |  |  |  |
|            |           | Result                      | High blank value remains.  |            |            | High blank value remains. Retest not requested because lab already reanalyzed full suite because dissolved > total for some metals.               |            |            |   |            |            |   |            |            | High blank value remains.   |           |            |  |  |  |
| V27        | 11/1/2010 | FIELD BLANK                 | <0.005   | 0.80       | <0.02      | <50   | 0.090      | <0.01      | <0.005  | 0.06       | <0.005     | <0.005  | <0.1       | <0.05      | <1  | <0.05     | <0.0005    | <0.05  |  |  |
|            |           | Deionized Water             | <0.005   | <0.2       | <0.02      | <50   | <0.02      | <0.01      | <0.005  | <0.05      | <0.005     | <0.005  | <0.1       | <0.05      | <1  | <0.05     | <0.5       | <0.05  |  |  |
|            |           | Times greater than DI water | 1  | 4          | 1          | 1   | 4.5        | 1          | 1   | 1.2        | 1          | 1   | 1          | 1          | 1   | 1         | 0.001      | 1  |  |  |
|            |           | Comments                    |  |            |            |   |            |            |   |            |            |   |            |            |   |           |            |  |  |  |
|            |           | Action                      |  |            |            |   |            |            |   |            |            |   |            |            |   |           |            |  |  |  |
|            |           | Result                      |  |            |            |   |            |            |   |            |            |   |            |            |   |           |            |  |  |  |
| V2         | 11/4/2010 | FIELD BLANK                 | <0.005   | 0.70       | <0.02      | <50   | 0.070      | <0.01      | <0.005  | <0.05      | <0.005     | <0.005  | <0.1       | <0.05      | <1  | <0.05     | <0.0005    | <0.05  |  |  |
|            |           | Deionized Water             | <0.005   | <0.2       | <0.02      | <50   | <0.02      | <0.01      | <0.005  | <0.05      | <0.005     | <0.005  | <0.1       | <0.05      | <1  | <0.05     | <0.5       | <0.05  |  |  |
|            |           | Times greater than DI water | 1  | 3.5        | 1          | 1   | 3.5        | 1          | 1   | 1          | 1          | 1   | 1          | 1          | 1   | 1         | 0.001      | 1  |  |  |
|            |           | Comments                    |  |            |            |   |            |            |   |            |            |   |            |            |   |           |            |  |  |  |
|            |           | Action                      |  |            |            |   |            |            |   |            |            |   |            |            |   |           |            |  |  |  |
|            |           | Result                      |  |            |            |   |            |            |   |            |            |   |            |            |   |           |            |  |  |  |

Blank value < PQL  
 Blank value is a detection limit higher than that of DI water  
 Blank value > PQL and < retest limit  
 Blank value > retest limit (20X DI Water Detection Limit)



| Station | Date       | Sample Type                 | Ag<br>µg/L  | Al<br>µg/L | As<br>µg/L | B<br>µg/L | Ba<br>µg/L | Be<br>µg/L | Bi<br>µg/L | Ca<br>mg/L | Cd<br>µg/L | Co<br>µg/L | Cr<br>µg/L | Cu<br>µg/L | Fe<br>µg/L | K<br>mg/L | Li<br>mg/L | Mg<br>mg/L |  |
|---------|------------|-----------------------------|---|------------|------------|-----------|------------|------------|------------|------------|------------|------------|------------|------------|------------|-----------|------------|------------|--|
| V27     | 12/1/2010  | FIELD BLANK                 | <0.005  | 1.00       | <0.02      | <50       | 0.040      | <0.01      | 0.02       | <0.05      | <0.005     | <0.005     | <0.1       | 0.0700     | <1         | <0.05     | <0.0005    | <0.05      |  |
|         |            | Deionized Water             | <0.005  | <0.2       | <0.02      | <50       | <0.02      | <0.01      | <0.005     | <0.05      | <0.005     | <0.005     | <0.1       | <0.05      | <1         | <0.05     | <0.5       | <0.05      |  |
|         |            | Times greater than DI water | 1   | 5          | 1          | 1         | 2          | 1          | 4.2        | 1          | 1          | 1          | 1          | 1.4        | 1          | 1         | 0.001      | 1          |  |
|         |            | Comments                    | Blank concentration equal to PQL and correctly entered into emLine. |            |            |           |            |            |            |            |            |            |            |            |            |           |            |            |  |
|         |            | Action                      | Let Value Stand   |            |            |           |            |            |            |            |            |            |            |            |            |           |            |            |  |
|         |            | Result                      | High blank value remains.   |            |            |           |            |            |            |            |            |            |            |            |            |           |            |            |  |
| V22     | 12/16/2010 | FIELD BLANK                 | <0.005  | 1.70       | <0.02      | <50       | 0.060      | <0.01      | <0.005     | <0.05      | <0.005     | 0.0060     | <0.1       | <0.05      | 2.00       | <0.05     | <0.0005    | <0.05      |  |
|         |            | Deionized Water             | <0.005  | <0.2       | <0.02      | <50       | <0.02      | <0.01      | <0.005     | <0.05      | <0.005     | <0.005     | <0.1       | <0.05      | <1         | <0.05     | <0.5       | <0.05      |  |
|         |            | Times greater than DI water | 1   | 8.5        | 1          | 1         | 3          | 1          | 1          | 1          | 1          | 1.2        | 1          | 1          | 2          | 1         | 0.001      | 1          |  |
|         |            | Comments                    | Blank concentration equal to PQL and correctly entered into emLine. |            |            |           |            |            |            |            |            |            |            |            |            |           |            |            |  |
|         |            | Action                      | Let Value Stand   |            |            |           |            |            |            |            |            |            |            |            |            |           |            |            |  |
|         |            | Result                      | High blank value remains.   |            |            |           |            |            |            |            |            |            |            |            |            |           |            |            |  |

Blank value < PQL  
 Blank value is a detection limit higher than that of DI water  
 Blank value > PQL and < retest limit  
 Blank value > retest limit (20X DI Water Detection Limit)



| Station    | Date      | Sample Type                 | Mn<br>µg/L   | Mo<br>µg/L      | Na<br>mg/L | Ni<br>µg/L      | Pb<br>µg/L      | Sb<br>µg/L      | Se<br>µg/L | Si<br>µg/L | Sn<br>µg/L      | Sr<br>µg/L      | Ti<br>µg/L      | Tl<br>µg/L      | U<br>µg/L       | V<br>µg/L       | Zn<br>µg/L     | Zr<br>µg/L      |
|------------|-----------|-----------------------------|--|-----------------|------------|-----------------|-----------------|-----------------|------------|------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|----------------|-----------------|
| LCD        | 8/4/2010  | FIELD BLANK                 | 34.000   | <1              | <0.05      | <1              | 0.4000          | <0.5            | <0.1       | <100       | <5              | <1              | <5              | <0.05           | <0.1            | <5              | 75.000         | <0.5            |
|            |           | Deionized Water             | <0.05  | <0.05           | <0.05      | <0.02           | <0.005          | <0.02           | <0.04      | <100       | <0.01           | <0.05           | <0.5            | <0.002          | <0.002          | <0.2            | <0.1           | <0.1            |
|            |           | Times greater than DI water | 680  | 20              | 1          | 50              | 80              | 25              | 2.5        | 1          | 500             | 20              | 10              | 25              | 50              | 25              | 750            | 5               |
|            |           | Comments                    | Blank concentration > PQL and correctly entered into emLine.   |                 |            |                 |                 |                 |            |            |                 |                 |                 |                 |                 |                 |                |                 |
|            |           | Action                      | Request Retest   | Let Value Stand |            | Let Value Stand | Let Value Stand | Let Value Stand |            |            | Let Value Stand | Let Value Stand | Let Value Stand | Let Value Stand | Let Value Stand | Let Value Stand | Request Retest | Let Value Stand |
|            |           | Result                      | Retest performed, see results below.   |                 |            |                 |                 |                 |            |            |                 |                 |                 |                 |                 |                 |                |                 |
| LCD Retest | 8/4/2010  | FIELD BLANK                 | 2.000  |                 |            |                 |                 |                 |            |            |                 |                 |                 |                 |                 |                 | 7.000          |                 |
|            |           | Deionized Water             | <0.05  | <0.05           | <0.05      | <0.02           | <0.005          | <0.02           | <0.04      | <100       | <0.01           | <0.05           | <0.5            | <0.002          | <0.002          | <0.2            | <0.1           | <0.1            |
|            |           | Times greater than DI water | 40   | 0               | 0          | 0               | 0               | 0               | 0          | 0          | 0               | 0               | 0               | 0               | 0               | 0               | 70             | 0               |
|            |           | Comments                    | Retest for August 4 LCD blank. Blank value correctly entered into emLine; however, value not > PQL (detection limit for field blank higher than that used for DI water). Therefore, comparison not valid in this case. |                 |            |                 |                 |                 |            |            |                 |                 |                 |                 |                 |                 |                |                 |
|            |           | Action                      | Let Value Stand  |                 |            |                 |                 |                 |            |            |                 |                 |                 |                 |                 |                 |                |                 |
|            |           | Result                      | New blank value entered into emLine.   |                 |            |                 |                 |                 |            |            |                 |                 |                 |                 |                 |                 |                |                 |
| LCD        | 9/7/2010  | FIELD BLANK                 | 17.000   | <1              | <0.05      | <1              | <0.2            | 0.60            | <0.1       | <100       | <5              | <1              | <5              | <0.05           | <0.1            | <5              | 46.000         | <0.5            |
|            |           | Deionized Water             | <0.05  | <0.05           | <0.05      | <0.02           | <0.005          | <0.02           | <0.04      | <100       | <0.01           | <0.05           | <0.5            | <0.002          | <0.002          | <0.2            | <0.1           | <0.1            |
|            |           | Times greater than DI water | 340  | 20              | 1          | 50              | 40              | 30              | 2.5        | 1          | 500             | 20              | 10              | 25              | 50              | 25              | 460            | 5               |
|            |           | Comments                    | Blank concentration > PQL and correctly entered into emLine.   |                 |            |                 |                 |                 |            |            |                 |                 |                 |                 |                 |                 |                |                 |
|            |           | Action                      | Request Retest   | Let Value Stand |            | Let Value Stand | Let Value Stand | Let Value Stand |            |            | Let Value Stand | Let Value Stand | Let Value Stand | Let Value Stand | Let Value Stand | Let Value Stand | Request Retest | Let Value Stand |
|            |           | Result                      | Retest performed, see results below.   |                 |            |                 |                 |                 |            |            |                 |                 |                 |                 |                 |                 |                |                 |
| LCD Retest | 9/7/2010  | FIELD BLANK                 | <10  |                 |            |                 |                 |                 |            |            |                 |                 |                 |                 |                 |                 | <50            |                 |
|            |           | Deionized Water             | <0.05  | <0.05           | <0.05      | <0.02           | <0.005          | <0.02           | <0.04      | <100       | <0.01           | <0.05           | <0.5            | <0.002          | <0.002          | <0.2            | <0.1           | <0.1            |
|            |           | Times greater than DI water | 200  | 0               | 0          | 0               | 0               | 0               | 0          | 0          | 0               | 0               | 0               | 0               | 0               | 0               | 500            | 0               |
|            |           | Comments                    | Retest for September 7 LCD blank. Blank concentration not > PQL (detection limit for field blank higher than that used for DI water). Therefore, comparison not valid in this case.                                    |                 |            |                 |                 |                 |            |            |                 |                 |                 |                 |                 |                 |                |                 |
|            |           | Action                      | Let Value Stand  |                 |            |                 |                 |                 |            |            |                 |                 |                 |                 |                 |                 |                |                 |
|            |           | Result                      | New blank value entered into emLine.   |                 |            |                 |                 |                 |            |            |                 |                 |                 |                 |                 |                 |                |                 |
| V23        | 9/7/2010  | FIELD BLANK                 | 0.060  | <0.05           | <0.05      | 0.030           | 0.1810          | 0.68            | <0.04      | <100       | <0.01           | 0.12            | <0.5            | <0.002          | 0.0240          | <0.2            | 0.700          | <0.1            |
|            |           | Deionized Water             | <0.05  | <0.05           | <0.05      | <0.02           | <0.005          | <0.02           | <0.04      | <100       | <0.01           | <0.05           | <0.5            | <0.002          | <0.002          | <0.2            | <0.1           | <0.1            |
|            |           | Times greater than DI water | 1.2  | 1               | 1          | 1.5             | 36.2            | 34              | 1          | 1          | 1               | 2.4             | 1               | 1               | 12              | 1               | 7              | 1               |
|            |           | Comments                    | Blank concentration > PQL and correctly entered into emLine.   |                 |            |                 |                 |                 |            |            |                 |                 |                 |                 |                 |                 |                |                 |
|            |           | Action                      | Let Value Stand  |                 |            |                 |                 |                 |            |            |                 |                 |                 |                 |                 |                 |                |                 |
|            |           | Result                      | High blank value remains. Retest not requested because lab already reanalyzed full suite because dissolved > total for some metals.  |                 |            |                 |                 |                 |            |            |                 |                 |                 |                 |                 |                 |                |                 |
| V4         | 10/5/2010 | FIELD BLANK                 | 0.550  | <0.05           | <0.05      | 0.040           | 0.4840          | <0.02           | <0.04      | <100       | <0.01           | 0.20            | <0.5            | <0.002          | 0.0120          | <0.2            | 2.800          | <0.1            |
|            |           | Deionized Water             | <0.05  | <0.05           | <0.05      | <0.02           | <0.005          | <0.02           | <0.04      | <100       | <0.01           | <0.05           | <0.5            | <0.002          | <0.002          | <0.2            | <0.1           | <0.1            |
|            |           | Times greater than DI water | 11   | 1               | 1          | 2               | 96.8            | 1               | 1          | 1          | 1               | 4               | 1               | 1               | 6               | 1               | 28             | 1               |
|            |           | Comments                    | Blank concentration > PQL and correctly entered into emLine.   |                 |            |                 |                 |                 |            |            |                 |                 |                 |                 |                 |                 |                |                 |
|            |           | Action                      | Let Value Stand  |                 |            |                 |                 |                 |            |            |                 |                 |                 |                 |                 |                 |                |                 |
|            |           | Result                      | High blank value remains.  |                 |            |                 |                 |                 |            |            |                 |                 |                 |                 |                 |                 |                |                 |
| V27        | 11/1/2010 | FIELD BLANK                 | 0.080  | <0.05           | <0.05      | <0.02           | 0.0700          | <0.02           | <0.04      | <100       | <0.01           | 0.14            | <0.5            | <0.002          | 0.0250          | <0.2            | 0.300          | <0.1            |
|            |           | Deionized Water             | <0.05  | <0.05           | <0.05      | <0.02           | <0.005          | <0.02           | <0.04      | <100       | <0.01           | <0.05           | <0.5            | <0.002          | <0.002          | <0.2            | <0.1           | <0.1            |
|            |           | Times greater than DI water | 1.6  | 1               | 1          | 1               | 14              | 1               | 1          | 1          | 1               | 2.8             | 1               | 1               | 12.5            | 1               | 3              | 1               |
|            |           | Comments                    | Blank concentration > PQL and correctly entered into emLine.   |                 |            |                 |                 |                 |            |            |                 |                 |                 |                 |                 |                 |                |                 |
|            |           | Action                      | Let Value Stand  |                 |            |                 |                 |                 |            |            |                 |                 |                 |                 |                 |                 |                |                 |
|            |           | Result                      | High blank value remains.  |                 |            |                 |                 |                 |            |            |                 |                 |                 |                 |                 |                 |                |                 |
| V2         | 11/4/2010 | FIELD BLANK                 | 0.160  | 0.11            | <0.05      | <0.02           | 0.0780          | <0.02           | <0.04      | <100       | <0.01           | 0.09            | <0.5            | <0.002          | 0.0040          | <0.2            | 0.800          | <0.1            |
|            |           | Deionized Water             | <0.05  | <0.05           | <0.05      | <0.02           | <0.005          | <0.02           | <0.04      | <100       | <0.01           | <0.05           | <0.5            | <0.002          | <0.002          | <0.2            | <0.1           | <0.1            |
|            |           | Times greater than DI water | 3.2  | 2.2             | 1          | 1               | 15.6            | 1               | 1          | 1          | 1.8             | 1               | 1               | 1               | 2               | 1               | 8              | 1               |
|            |           | Comments                    | Blank concentration > PQL and correctly entered into emLine.   |                 |            |                 |                 |                 |            |            |                 |                 |                 |                 |                 |                 |                |                 |
|            |           | Action                      | Let Value Stand  |                 |            |                 |                 |                 |            |            |                 |                 |                 |                 |                 |                 |                |                 |
|            |           | Result                      | High blank value remains.  |                 |            |                 |                 |                 |            |            |                 |                 |                 |                 |                 |                 |                |                 |

Blank value < PQL  
 Blank value is a detection limit higher than that of DI water  
 Blank value > PQL and < retest limit  
 Blank value > retest limit (20X DI Water Detection Limit)

Table D-16: Vangorda Creek Drainage Water Quality  
2010 QA/QC Field and Lab Blanks - Total Metals

| Station | Date       | Sample Type                 | Mn<br>µg/L  | Mo<br>µg/L | Na<br>mg/L | Ni<br>µg/L | Pb<br>µg/L  | Sb<br>µg/L | Se<br>µg/L | Si<br>µg/L | Sn<br>µg/L | Sr<br>µg/L | Tl<br>µg/L | Tl<br>µg/L | U<br>µg/L  | V<br>µg/L | Zn<br>µg/L  | Zr<br>µg/L |
|---------|------------|-----------------------------|---|------------|------------|------------|---|------------|------------|------------|------------|------------|------------|------------|--|-----------|---|------------|
| V27     | 12/1/2010  | FIELD BLANK                 | 0.160   | <0.05      | <0.05      | 0.040      | 0.0850  | <0.02      | <0.04      | <100       | <0.01      | <0.05      | <0.5       | <0.002     | 0.0360   | <0.2      | 0.900   | <0.1       |
|         |            | Deionized Water             | <0.05   | <0.05      | <0.05      | <0.02      | <0.005  | <0.02      | <0.04      | <100       | <0.01      | <0.05      | <0.5       | <0.002     | <0.002   | <0.2      | <0.1  | <0.1       |
|         |            | Times greater than DI water | 3.2   | 1          | 1          | 2          | 17  | 1          | 1          | 1          | 1          | 1          | 1          | 1          | 18   | 1         | 9   | 1          |
|         |            | Comments                    |   |            |            |            | Blank concentration > PQL and correctly entered into emLine.        |            |            |            |            |            |            |            | Blank concentration > PQL and correctly entered into emLine. |           | Blank concentration > PQL and correctly entered into emLine.        |            |
|         |            | Action                      |   |            |            |            | Let Value Stand   |            |            |            |            |            |            |            | Let Value Stand  |           | Let Value Stand   |            |
|         |            | Result                      |   |            |            |            | High blank value remains.   |            |            |            |            |            |            |            | High blank value remains.                                    |           | High blank value remains.   |            |
| V22     | 12/16/2010 | FIELD BLANK                 | 0.350   | 0.21       | <0.05      | 0.060      | 0.0750  | <0.02      | <0.04      | <100       | <0.01      | 0.24       | <0.5       | <0.002     | 0.0060   | <0.2      | 1.900   | <0.1       |
|         |            | Deionized Water             | <0.05   | <0.05      | <0.05      | <0.02      | <0.005  | <0.02      | <0.04      | <100       | <0.01      | <0.05      | <0.5       | <0.002     | <0.002   | <0.2      | <0.1  | <0.1       |
|         |            | Times greater than DI water | 7   | 4.2        | 1          | 3          | 15  | 1          | 1          | 1          | 1          | 4.8        | 1          | 1          | 3  | 1         | 19  | 1          |
|         |            | Comments                    | Blank concentration equal to PQL and correctly entered into emLine. |            |            |            | Blank concentration equal to PQL and correctly entered into emLine. |            |            |            |            |            |            |            |  |           | Blank concentration equal to PQL and correctly entered into emLine. |            |
|         |            | Action                      | Let Value Stand   |            |            |            | Let Value Stand   |            |            |            |            |            |            |            |  |           | Let Value Stand   |            |
|         |            | Result                      | High blank value remains.   |            |            |            | High blank value remains.   |            |            |            |            |            |            |            |  |           | High blank value remains.   |            |

Blank value < PQL  
 Blank value is a detection limit higher than that of DI water  
 Blank value > PQL and < retest limit  
 Blank value > retest limit (20X DI Water Detection Limit)





## Table D-17: Vangorda Creek Drainage Water Quality 2010 QA/QC Duplicates - Seepage - General Metals



| Station    | Date      | Sample Type | Acid(pH4.5)<br>mg/L  | Acid(pH8.3)<br>mg/L | ALK<br>mg/L | ALKPP<br>mg/L | CaCO3<br>mg/L | CaCO3-d<br>mg/L | Chloride<br>mg/L | CN(wad)<br>mg/L | CNTHIO<br>mg/L | CO3<br>mg/L | Colour<br>TCU | COND<br>µmho/cm | DOC<br>mg/L | HCO3<br>mg/L | NH3<br>mg/L | NO2<br>mg/L | NO2/3<br>mg/L | NO3<br>mg/L | OH<br>mg/L | pH<br>(blank) | SO4-d<br>mg/L | TDS<br>mg/L | TOC<br>mg/L | TSS<br>mg/L | TURB<br>NTU |
|------------|-----------|-------------|--|---------------------|-------------|---------------|---------------|-----------------|------------------|-----------------|----------------|-------------|---------------|-----------------|-------------|--------------|-------------|-------------|---------------|-------------|------------|---------------|---------------|-------------|-------------|-------------|-------------|
| MOOSE SEEP | 5/1/2010  | M           | <0.5   | 4.50                | 330.00      | <0.5          | 1600.00       |                 | 0.90             |                 |                | <0.5        |               | 2240.00         |             | 400.00       |             |             |               |             | <0.5       | 8.00          | 1100.00       |             |             | <1          |             |
| MOOSE SEEP | 5/1/2010  | DUPLICATE   | <0.5   | 4.00                | 330.00      | <0.5          | 1490.00       |                 | 0.90             |                 |                | <0.5        |               | 2230.00         |             | 400.00       |             |             |               |             | <0.5       | 8.10          | 1100.00       |             |             | 2.00        |             |
| RPD (%)    |           |             | N/A  | 11.76               | 0.00        | N/A           | N/A           | 7.12            | 0.00             | N/A             | N/A            | N/A         | N/A           | 0.45            | N/A         | 0.00         | N/A         | N/A         | N/A           | N/A         | N/A        | 0.10          | 0.00          | N/A         | N/A         | N/A         |             |
| Comments   |           |             |  |                     |             |               |               |                 |                  |                 |                |             |               |                 |             |              |             |             |               |             |            |               |               |             |             |             |             |
| Action     |           |             |  |                     |             |               |               |                 |                  |                 |                |             |               |                 |             |              |             |             |               |             |            |               |               |             |             |             |             |
| Result     |           |             |  |                     |             |               |               |                 |                  |                 |                |             |               |                 |             |              |             |             |               |             |            |               |               |             |             |             |             |
| LCD        | 5/12/2010 | M           |  |                     | <0.5        | <0.5          | 1020.00       | 980.00          | <0.5             |                 |                | <0.5        |               | 2400.00         |             | <0.5         | 0.60        |             |               |             | <0.5       | 3.90          | 1600.00       | 2400.00     |             | 21.00       |             |
| LCD        | 5/12/2010 | DUPLICATE   |  |                     | <0.5        | <0.5          | 1040.00       | 1020.00         | <0.5             |                 |                | <0.5        |               | 2400.00         |             | <0.5         | 0.71        |             |               |             | <0.5       | 3.60          | 1600.00       | 2500.00     |             | 14.00       |             |
| RPD (%)    |           |             | N/A  | N/A                 | N/A         | N/A           | 1.94          | 4.00            | N/A              | N/A             | N/A            | N/A         | N/A           | 0.00            | N/A         | N/A          | 16.79       | N/A         | N/A           | N/A         | N/A        | 0.30          | 0.00          | 4.08        | N/A         | 40.00       |             |
| Comments   |           |             |  |                     |             |               |               |                 |                  |                 |                |             |               |                 |             |              |             |             |               |             |            |               |               |             |             |             |             |
| Action     |           |             |  |                     |             |               |               |                 |                  |                 |                |             |               |                 |             |              |             |             |               |             |            |               |               |             |             |             |             |
| Result     |           |             |  |                     |             |               |               |                 |                  |                 |                |             |               |                 |             |              |             |             |               |             |            |               |               |             |             |             |             |
| V2A        | 5/18/2010 | M           |  |                     | 350.00      | <0.5          | 1370.00       | 1540.00         |                  |                 |                | <0.5        |               | 2240.00         | 3.40        | 430.00       | 0.02        |             |               |             | <0.5       | 8.20          | 1200.00       | 2100.00     | 3.40        | 2.00        |             |
| V2A        | 5/18/2010 | DUPLICATE   |  |                     | 350.00      | <0.5          | 1430.00       | 1550.00         |                  |                 |                | <0.5        |               | 2250.00         | 3.40        | 430.00       | 0.02        |             |               |             | <0.5       | 8.10          | 1100.00       | 2100.00     | 3.60        | 2.00        |             |
| RPD (%)    |           |             | N/A  | N/A                 | 0.00        | N/A           | 4.29          | 0.65            | N/A              | N/A             | N/A            | N/A         | N/A           | 0.45            | 0.00        | 0.00         | 6.45        | N/A         | N/A           | N/A         | N/A        | 0.10          | 8.70          | 0.00        | 5.71        | 0.00        |             |
| Comments   |           |             |  |                     |             |               |               |                 |                  |                 |                |             |               |                 |             |              |             |             |               |             |            |               |               |             |             |             |             |
| Action     |           |             |  |                     |             |               |               |                 |                  |                 |                |             |               |                 |             |              |             |             |               |             |            |               |               |             |             |             |             |
| Result     |           |             |  |                     |             |               |               |                 |                  |                 |                |             |               |                 |             |              |             |             |               |             |            |               |               |             |             |             |             |
| LCD        | 6/16/2010 | M           |  |                     | <0.5        | <0.5          | 2930          | 2950            | <0.5             |                 |                | <0.5        |               | 5950            |             | <0.5         | 1.5         |             |               |             | <0.5       | 3.49          | 5400          | 7700        |             | 11          |             |
| LCD        | 6/16/2010 | DUPLICATE   |  |                     | <0.5        | <0.5          | 3030          | 2990            | <0.5             |                 |                | <0.5        |               | 5960            |             | <0.5         | 1.5         |             |               |             | <0.5       | 3.42          | 5400          | 7900        |             | 9           |             |
| RPD (%)    |           |             | N/A  | N/A                 | N/A         | N/A           | 3.36          | 1.35            | N/A              | N/A             | N/A            | N/A         | N/A           | 0.17            | N/A         | N/A          | 0.00        | N/A         | N/A           | N/A         | N/A        | 0.07          | 0.00          | 2.56        | N/A         | 20.00       |             |
| Comments   |           |             |  |                     |             |               |               |                 |                  |                 |                |             |               |                 |             |              |             |             |               |             |            |               |               |             |             |             |             |
| Action     |           |             |  |                     |             |               |               |                 |                  |                 |                |             |               |                 |             |              |             |             |               |             |            |               |               |             |             |             |             |
| Result     |           |             |  |                     |             |               |               |                 |                  |                 |                |             |               |                 |             |              |             |             |               |             |            |               |               |             |             |             |             |
| V25        | 7/6/2010  | M           |  |                     | 30.00       | <0.5          | 1560.00       | 1590.00         | <0.5             |                 |                | <0.5        |               | 2280.0000       |             | 37.00        | 0.24        |             |               |             | <0.5       | 7.71          | 1500.000      | 2100.0000   |             | 2           |             |
| V25        | 7/6/2010  | DUPLICATE   |  |                     | 30.00       | <0.5          | 1580.00       | 1600.00         | <0.5             |                 |                | <0.5        |               | 2230.0000       |             | 37.00        | 0.25        |             |               |             | <0.5       | 7.51          | 1600.000      | 2100.0000   |             | 2           |             |
| RPD (%)    |           |             | N/A  | N/A                 | 0.00        | N/A           | 1.27          | 0.63            | N/A              | N/A             | N/A            | N/A         | N/A           | 2.22            | N/A         | 0.00         | 4.08        | N/A         | N/A           | N/A         | N/A        | 0.20          | 6.45          | 0.00        | N/A         | 0.00        |             |
| Comments   |           |             |  |                     |             |               |               |                 |                  |                 |                |             |               |                 |             |              |             |             |               |             |            |               |               |             |             |             |             |
| Action     |           |             |  |                     |             |               |               |                 |                  |                 |                |             |               |                 |             |              |             |             |               |             |            |               |               |             |             |             |             |
| Result     |           |             |  |                     |             |               |               |                 |                  |                 |                |             |               |                 |             |              |             |             |               |             |            |               |               |             |             |             |             |
| V2A        | 7/7/2010  | M           |  |                     | 390.00      | 9.20          | 1670.00       | 1610.00         | 0.90             |                 |                | 11.00       |               | 2370.00         | 4.70        | 460.00       | <0.05       |             |               |             | <0.5       | 8.35          | 1200.00       | 2300.00     | 4.40        | 2.00        |             |
| V2A        | 7/7/2010  | DUPLICATE   |  |                     | 400.00      | 7.50          | 1630.00       | 1610.00         | 0.80             |                 |                | 8.90        |               | 2460.00         | 3.70        | 470.00       | <0.05       |             |               |             | <0.5       | 8.34          | 1200.00       | 2300.00     | 3.90        | 2.00        |             |
| RPD (%)    |           |             | N/A  | N/A                 | 2.53        | 20.36         | 2.42          | 0.00            | 11.76            | N/A             | N/A            | 21.11       | N/A           | 3.73            | 23.81       | 2.15         | N/A         | N/A         | N/A           | N/A         | N/A        | 0.01          | 0.00          | 0.00        | 12.05       | 0.00        |             |
| Comments   |           |             |  |                     |             |               |               |                 |                  |                 |                |             |               |                 |             |              |             |             |               |             |            |               |               |             |             |             |             |
| Action     |           |             |  |                     |             |               |               |                 |                  |                 |                |             |               |                 |             |              |             |             |               |             |            |               |               |             |             |             |             |
| Result     |           |             |  |                     |             |               |               |                 |                  |                 |                |             |               |                 |             |              |             |             |               |             |            |               |               |             |             |             |             |
| V25 BSP    | 7/13/2010 | M           |  |                     | 40.00       | <0.5          | 1440.00       | 1470.00         | <0.5             |                 |                | <0.0005     | <0.5          | <5              | 2080.00     | 49.00        | 0.09        |             |               |             | <0.5       | 7.65          | 1300.00       | 2000.00     |             | <1          |             |
| V25 BSP    | 7/13/2010 | DUPLICATE   |  |                     | 39.00       | <0.5          | 1430.00       | 1440.00         | <0.5             |                 |                | <0.0005     | <0.5          | <5              | 2080.00     | 47.00        | 0.10        |             |               |             | <0.5       | 7.59          | 1300.00       | 2000.00     |             | <1          |             |
| RPD (%)    |           |             | N/A  | N/A                 | 2.53        | N/A           | 0.70          | 2.06            | N/A              | N/A             | N/A            | N/A         | N/A           | 0.00            | N/A         | 4.17         | 10.53       | N/A         | N/A           | N/A         | N/A        | 0.06          | 0.00          | 0.00        | N/A         | N/A         |             |
| Comments   |           |             |  |                     |             |               |               |                 |                  |                 |                |             |               |                 |             |              |             |             |               |             |            |               |               |             |             |             |             |
| Action     |           |             |  |                     |             |               |               |                 |                  |                 |                |             |               |                 |             |              |             |             |               |             |            |               |               |             |             |             |             |
| Result     |           |             |  |                     |             |               |               |                 |                  |                 |                |             |               |                 |             |              |             |             |               |             |            |               |               |             |             |             |             |
| V15        | 7/22/2010 | M           | <0.5   | 44.50               | 540.00      | <0.5          |               | 3160.00         | 1.70             |                 |                | <0.5        |               | 3930.00         |             | 660.00       |             |             |               |             | <0.5       | 7.70          | 2700.00       |             |             | 2.00        |             |
| V15        | 7/22/2010 | DUPLICATE   | <0.5   | 46.60               | 540.00      | <0.5          |               | 3070.00         | 11.00            |                 |                | <0.5        |               | 3910.00         |             | 660.00       |             |             |               |             | <0.5       | 7.88          | 2000.00       |             |             | 3.00        |             |
| RPD (%)    |           |             | N/A  | 4.61                | 0.00        | N/A           | N/A           | 2.89            | 146.46           | N/A             | N/A            | N/A         | N/A           | 0.51            | N/A         | 0.00         | N/A         | N/A         | N/A           | N/A         | N/A        | 0.18          | 29.79         | N/A         | N/A         | 40.00       |             |
| Comments   |           |             | Both values correctly entered into emLine; however, main sample value not > PQL. Therefore, RPD analysis not valid in this case. |                     |             |               |               |                 |                  |                 |                |             |               |                 |             |              |             |             |               |             |            |               |               |             |             |             |             |
| Action     |           |             | Let Value Stand  |                     |             |               |               |                 |                  |                 |                |             |               |                 |             |              |             |             |               |             |            |               |               |             |             |             |             |
| Result     |           |             | Discrepancy between values remains.  |                     |             |               |               |                 |                  |                 |                |             |               |                 |             |              |             |             |               |             |            |               |               |             |             |             |             |
| V8         | 7/14/2010 | M           |  |                     | 93.00       | <0.5          | 359.00        | 378.00          | 0.70             |                 |                | <0.5        |               | 684.00          | 2.00        | 110.00       | <0.05       |             |               |             | <0.5       | 8.07          | 230.00        | 510.00      | 2.10        | 26.00       |             |
| V8         | 7/14/2010 | DUPLICATE   |  |                     | 92.00       | <0.5          | 361.00        | 371.00          | 1.20             |                 |                | <0.5        |               | 686.00          | 1.90        | 110.00       | <0.05       |             |               |             | <0.5       | 8.05          | 230.00        | 490.00      | 2.00        | 26.00       |             |
| RPD (%)    |           |             | N/A  | N/A                 | 1.08        | N/A           | 0.56          | 1.87            | 52.63            | N/A             | N/A            | N/A         | N/A           | 0.29            | 5.13        | 0.00         | N/A         | N/A         | N/A           | N/A         | N/A        | 0.02          | 0.00          | 4.00        | 4.88        | 0.00        |             |
| Comments   |           |             | Both values correctly entered into emLine; however, neither value > PQL. Therefore, RPD analysis not valid in this case.         |                     |             |               |               |                 |                  |                 |                |             |               |                 |             |              |             |             |               |             |            |               |               |             |             |             |             |
| Action     |           |             | Let Value Stand  |                     |             |               |               |                 |                  |                 |                |             |               |                 |             |              |             |             |               |             |            |               |               |             |             |             |             |
| Result     |           |             | Discrepancy between values remains.  |                     |             |               |               |                 |                  |                 |                |             |               |                 |             |              |             |             |               |             |            |               |               |             |             |             |             |

RPD > 50%

Table D-17: Vangorda Creek Drainage Water Quality  
2010 QA/QC Duplicates - Seepage - General Metals

| Station  | Date       | Sample Type | Acid(pH4.5)<br>mg/L  | Acid(pH8.3)<br>mg/L | ALK<br>mg/L | ALKPP<br>mg/L | CaCO3<br>mg/L | CaCO3-d<br>mg/L | Chloride<br>mg/L | CN(wad)<br>mg/L | CNTHIO<br>mg/L | CO3<br>mg/L | Colour<br>TCU | COND<br>µmho/cm | DOC<br>mg/L | HCO3<br>mg/L | NH3<br>mg/L | NO2<br>mg/L | NO2/3<br>mg/L | NO3<br>mg/L | OH<br>mg/L | pH<br>(blank) | SO4-d<br>mg/L | TDS<br>mg/L | TOC<br>mg/L | TSS<br>mg/L | TURB<br>NTU |
|----------|------------|-------------|--|---------------------|-------------|---------------|---------------|-----------------|------------------|-----------------|----------------|-------------|---------------|-----------------|-------------|--------------|-------------|-------------|---------------|-------------|------------|---------------|---------------|-------------|-------------|-------------|-------------|
| V2A      | 8/18/2010  | M           |  |                     | 410.00      | 11.00         | 1840.00       | 1800.00         | 0.90             |                 |                | 14.00       |               | 2610.00         | 2.80        | 480.00       | <0.05       |             |               |             | <0.5       | 8.40          | 1400.00       | 2500.00     | 2.80        | 3.00        |             |
| V2A      | 8/18/2010  | DUPLICATE   |  |                     | 410.00      | 13.00         | 1890.00       | 1790.00         | 0.90             |                 |                | 16.00       |               | 2590.00         | 3.20        | 470.00       | <0.05       |             |               |             | <0.5       | 8.42          | 1400.00       | 2400.00     | 3.20        | 9.00        |             |
| RPD (%)  |            |             | N/A  | N/A                 | 0.00        | 16.67         | 2.68          | 0.56            | 0.00             | N/A             | N/A            | 13.33       | N/A           | 0.77            | 13.33       | 2.11         | N/A         | N/A         | N/A           | N/A         | 0.02       | 0.00          | 4.08          | 13.33       | 100.00      | N/A         |             |
| Comments |            |             | Both values correctly entered into emLine; however, main sample value not > PQL. Therefore, RPD analysis not valid in this case. |                     |             |               |               |                 |                  |                 |                |             |               |                 |             |              |             |             |               |             |            |               |               |             |             |             |             |
| Action   |            |             | Let Value Stand  |                     |             |               |               |                 |                  |                 |                |             |               |                 |             |              |             |             |               |             |            |               |               |             |             |             |             |
| Result   |            |             | Discrepancy between values remains.  |                     |             |               |               |                 |                  |                 |                |             |               |                 |             |              |             |             |               |             |            |               |               |             |             |             |             |
| V2A      | 9/7/2010   | M           |  |                     | 390.00      | 14.00         | 1780.00       | 1600.00         | 1.50             |                 |                | 17.00       |               | 2530.00         | 3.50        | 440.00       | 0.15        |             |               |             | <0.5       | 8.45          | 1400.00       | 2500.00     | 3.20        | <1          | 0.30        |
| V2A      | 9/7/2010   | DUPLICATE   |  |                     | 400.00      | 9.20          | 1690.00       | 1650.00         | 1.50             |                 |                | 11.00       |               | 2540.00         | 2.90        | 460.00       | 0.18        |             |               |             | <0.5       | 8.40          | 1500.00       | 2500.00     | 2.80        | <1          | 0.20        |
| RPD (%)  |            |             | N/A  | N/A                 | 2.53        | 41.38         | 5.19          | 3.08            | 0.00             | N/A             | N/A            | 42.86       | N/A           | 0.39            | 18.75       | 4.44         | 18.18       | N/A         | N/A           | N/A         | N/A        | 0.05          | 6.90          | 0.00        | 13.33       | N/A         | 40.00       |
| Comments |            |             |  |                     |             |               |               |                 |                  |                 |                |             |               |                 |             |              |             |             |               |             |            |               |               |             |             |             |             |
| Action   |            |             |  |                     |             |               |               |                 |                  |                 |                |             |               |                 |             |              |             |             |               |             |            |               |               |             |             |             |             |
| Result   |            |             |  |                     |             |               |               |                 |                  |                 |                |             |               |                 |             |              |             |             |               |             |            |               |               |             |             |             |             |
| V22      | 9/7/2010   | M           |  |                     | <0.5        | <0.5          | 1030.00       | 1040.00         | <0.5             |                 |                | <0.5        |               | 2380.00         |             | <0.5         | 0.88        |             |               |             | <0.5       | 3.58          | 1600.00       | 2300.00     |             | 8.00        |             |
| V22      | 9/7/2010   | DUPLICATE   |  |                     | <0.5        | <0.5          | 1020.00       | 1030.00         | <0.5             |                 |                | <0.5        |               | 2380.00         |             | <0.5         | 0.89        |             |               |             | <0.5       | 3.55          | 1500.00       | 2300.00     |             | 5.00        |             |
| RPD (%)  |            |             | N/A  | N/A                 | N/A         | N/A           | 0.98          | 0.97            | N/A              | N/A             | N/A            | N/A         | N/A           | 0.00            | N/A         | N/A          | 1.13        | N/A         | N/A           | N/A         | N/A        | 0.03          | 6.45          | 0.00        | N/A         | 46.15       | N/A         |
| Comments |            |             |  |                     |             |               |               |                 |                  |                 |                |             |               |                 |             |              |             |             |               |             |            |               |               |             |             |             |             |
| Action   |            |             |  |                     |             |               |               |                 |                  |                 |                |             |               |                 |             |              |             |             |               |             |            |               |               |             |             |             |             |
| Result   |            |             |  |                     |             |               |               |                 |                  |                 |                |             |               |                 |             |              |             |             |               |             |            |               |               |             |             |             |             |
| V15      | 9/23/2010  | M           | <0.5   | 64.80               | 550.00      | <0.5          |               | 2790.00         | 2.00             |                 |                | <0.5        |               | 3800.00         |             | 670.00       |             |             |               |             | <0.5       | 7.69          | 2000.00       |             |             | <1          |             |
| V15      | 9/23/2010  | DUPLICATE   | <0.5   | 59.70               | 550.00      | <0.5          |               | 2730.00         | 1.60             |                 |                | <0.5        |               | 3830.00         |             | 670.00       |             |             |               |             | <0.5       | 7.31          | 1900.00       |             |             | 2.00        |             |
| RPD (%)  |            |             | N/A  | 8.19                | 0.00        | N/A           | N/A           | 2.17            | 22.22            | N/A             | N/A            | N/A         | N/A           | 0.79            | N/A         | 0.00         | N/A         | N/A         | N/A           | N/A         | N/A        | 0.38          | 5.13          | N/A         | N/A         | N/A         |             |
| Comments |            |             |  |                     |             |               |               |                 |                  |                 |                |             |               |                 |             |              |             |             |               |             |            |               |               |             |             |             |             |
| Action   |            |             |  |                     |             |               |               |                 |                  |                 |                |             |               |                 |             |              |             |             |               |             |            |               |               |             |             |             |             |
| Result   |            |             |  |                     |             |               |               |                 |                  |                 |                |             |               |                 |             |              |             |             |               |             |            |               |               |             |             |             |             |
| V2A      | 10/21/2010 | M           |  |                     | 390.00      | 4.00          | 1600.00       | 1710.00         | 0.80             |                 |                | 4.80        |               | 2450.00         | 3.20        | 470.00       | 0.06        |             |               |             | <0.5       | 8.32          | 1300.00       | 2200.00     | 3.40        | 3.00        |             |
| V2A      | 10/21/2010 | DUPLICATE   |  |                     | 390.00      | 4.10          | 1600.00       | 1670.00         | 1.20             |                 |                | 4.90        |               | 2440.00         | 3.80        | 470.00       | 0.05        |             |               |             | <0.5       | 8.33          | 1200.00       | 2300.00     | 3.50        | 3.00        |             |
| RPD (%)  |            |             | N/A  | N/A                 | 0.00        | 2.47          | 0.00          | 2.37            | 40.00            | N/A             | N/A            | 2.06        | N/A           | 0.41            | 17.14       | 0.00         | 13.79       | N/A         | N/A           | N/A         | N/A        | 0.01          | 8.00          | 4.44        | 2.90        | 0.00        | 6.90        |
| Comments |            |             |  |                     |             |               |               |                 |                  |                 |                |             |               |                 |             |              |             |             |               |             |            |               |               |             |             |             |             |
| Action   |            |             |  |                     |             |               |               |                 |                  |                 |                |             |               |                 |             |              |             |             |               |             |            |               |               |             |             |             |             |
| Result   |            |             |  |                     |             |               |               |                 |                  |                 |                |             |               |                 |             |              |             |             |               |             |            |               |               |             |             |             |             |
| V25 BSP  | 11/1/2010  | M           |  |                     | 63.00       | <0.5          | 731.00        | 678.00          | <0.5             |                 |                | <0.0005     | <0.5          | <5              | 1230.0000   |              | 77.00       | <0.005      | <0.005        | 0.10        | 0.100      | <0.5          | 7.66          | 620.000     | 980.0000    | <1          | 0.1000      |
| V25 BSP  | 11/1/2010  | DUPLICATE   |  |                     | 64.00       | <0.5          | 730.00        | 672.00          | <0.5             |                 |                | <0.0005     | <0.5          | <5              | 1230.0000   |              | 78.00       | 0.01        | <0.005        | 0.10        | 0.100      | <0.5          | 7.72          | 620.000     | 990.0000    | <1          | 0.1500      |
| RPD (%)  |            |             | N/A  | N/A                 | 1.57        | N/A           | 0.14          | 0.89            | N/A              | N/A             | N/A            | N/A         | N/A           | 0.00            | N/A         | 1.29         | N/A         | N/A         | 0.00          | 0.00        | N/A        | 0.06          | 0.00          | 1.02        | N/A         | N/A         | 40.00       |
| Comments |            |             |  |                     |             |               |               |                 |                  |                 |                |             |               |                 |             |              |             |             |               |             |            |               |               |             |             |             |             |
| Action   |            |             |  |                     |             |               |               |                 |                  |                 |                |             |               |                 |             |              |             |             |               |             |            |               |               |             |             |             |             |
| Result   |            |             |  |                     |             |               |               |                 |                  |                 |                |             |               |                 |             |              |             |             |               |             |            |               |               |             |             |             |             |
| V8       | 12/1/2010  | M           |  |                     | 190.00      | <0.5          | 347.00        | 350.00          | 1.30             |                 |                | <0.5        |               | 627.00          | 1.60        | 240.00       | <0.05       |             |               |             | <0.5       | 8.25          | 150.00        | 410.00      | 2.40        | 2.00        | 0.70        |
| V8       | 12/1/2010  | DUPLICATE   |  |                     | 190.00      | <0.5          | 355.00        | 347.00          | 1.80             |                 |                | <0.5        |               | 612.00          | 1.60        | 240.00       | <0.05       |             |               |             | <0.5       | 8.20          | 150.00        | 390.00      | 1.90        | 3.00        |             |
| RPD (%)  |            |             | N/A  | N/A                 | 0.00        | N/A           | 2.28          | 0.86            | 32.26            | N/A             | N/A            | N/A         | N/A           | 2.42            | 0.00        | 0.00         | N/A         | N/A         | N/A           | N/A         | N/A        | 0.05          | 0.00          | 5.00        | 23.26       | 40.00       | 200.00      |
| Comments |            |             | Turbidity not run on duplicate sample. Accidentally not requested for duplicate sample.  |                     |             |               |               |                 |                  |                 |                |             |               |                 |             |              |             |             |               |             |            |               |               |             |             |             |             |
| Action   |            |             | Let Value Stand  |                     |             |               |               |                 |                  |                 |                |             |               |                 |             |              |             |             |               |             |            |               |               |             |             |             |             |
| Result   |            |             | No turbidity value for duplicate.  |                     |             |               |               |                 |                  |                 |                |             |               |                 |             |              |             |             |               |             |            |               |               |             |             |             |             |

RPD > 50%





| Station   | Date      | Sample Type | Ag-d<br>µg/L   | Al-d<br>µg/L | As-d<br>µg/L | Ba-d<br>µg/L | B-d<br>µg/L | Be-d<br>µg/L | Bi-d<br>µg/L | Ca-d<br>mg/L | Cd-d<br>µg/L | Co-d<br>µg/L | Cr-d<br>µg/L | Cu-d<br>µg/L | Fe-d<br>µg/L | Hg-d<br>µg/L | K-d<br>mg/L | Li-d<br>mg/L | Mg-d<br>mg/L |
|-----------|-----------|-------------|--|--------------|--------------|--------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|-------------|--------------|--------------|
| V5        | 1/6/2010  | M           | <0.005   | 1.90         | 0.45         | 88.700       | <50.0       | <0.01        | <0.005       | 121.00       | 0.06         | 0.0440       | <0.1         | 0.6600       | 11.00        |              | 1.69        | 0.007        | 53.90        |
| V5        | 1/6/2010  | DUPLICATE   | <0.005   | 2.10         | 0.40         | 89.300       | <50.0       | <0.01        | <0.005       | 118.00       | 0.06         | 0.0430       | <0.1         | 0.6600       | 10.00        |              | 1.61        | 0.006        | 52.60        |
| RPD (%)   |           |             | N/A  | 10.00        | 11.76        | 0.67         | N/A         | N/A          | N/A          | 2.51         | 3.45         | 2.30         | N/A          | 0.00         | 9.52         | N/A          | 4.85        | 1.55         | 2.44         |
| Comments  |           |             |  |              |              |              |             |              |              |              |              |              |              |              |              |              |             |              |              |
| Action    |           |             |  |              |              |              |             |              |              |              |              |              |              |              |              |              |             |              |              |
| Result    |           |             |  |              |              |              |             |              |              |              |              |              |              |              |              |              |             |              |              |
| V15       | 1/7/2010  | M           | <0.03  | 5.00         | 0.50         | 51.70        | <300.0      | <0.05        | <0.03        | 494.00       | 1.90         | 0.05         | <0.5         | 1.90         | 17.00        |              | 6.55        | 0.02         | 472.00       |
| V15       | 1/7/2010  | DUPLICATE   | <0.03  | 6.00         | 0.50         | 51.50        | <300.0      | <0.05        | <0.03        | 492.00       | 1.81         | 0.08         | <0.5         | 2.00         | 20.00        |              | 6.55        | 0.02         | 470.00       |
| RPD (%)   |           |             | N/A  | 18.18        | 0.00         | 0.39         | N/A         | N/A          | N/A          | 0.41         | 4.85         | 46.15        | N/A          | 5.13         | 16.22        | N/A          | 0.00        | 4.26         | 0.42         |
| Comments  |           |             |  |              |              |              |             |              |              |              |              |              |              |              |              |              |             |              |              |
| Action    |           |             |  |              |              |              |             |              |              |              |              |              |              |              |              |              |             |              |              |
| Result    |           |             |  |              |              |              |             |              |              |              |              |              |              |              |              |              |             |              |              |
| V2A       | 2/3/2010  | M           | <0.03  | 2.00         | 1.00         | 92.80        | <300.0      | <0.05        | <0.03        | 344.00       | 0.43         | 0.10         | <0.5         | 1.60         | <5.0         |              | 3.94        | 0.01         | 211.00       |
| V2A       | 2/3/2010  | DUPLICATE   | <0.03  | 3.00         | 1.00         | 93.20        | <300.0      | <0.05        | <0.03        | 343.00       | 0.46         | 0.13         | <0.5         | 1.60         | <5.0         |              | 3.93        | 0.01         | 211.00       |
| RPD (%)   |           |             | N/A  | 40.00        | 0.00         | 0.43         | N/A         | N/A          | N/A          | 0.29         | 6.74         | 26.09        | N/A          | 0.00         | N/A          | N/A          | 0.25        | 0.00         | 0.00         |
| Comments  |           |             |  |              |              |              |             |              |              |              |              |              |              |              |              |              |             |              |              |
| Action    |           |             |  |              |              |              |             |              |              |              |              |              |              |              |              |              |             |              |              |
| Result    |           |             |  |              |              |              |             |              |              |              |              |              |              |              |              |              |             |              |              |
| V1        | 2/18/2010 | M           | <0.005   | 4.10         | 0.29         | 39.30        | <50.0       | <0.01        | <0.005       | 17.90        | <0.005       | 0.01         | <0.1         | 0.27         | 2.00         |              | 0.59        | 0.00         | 3.08         |
| V1        | 2/18/2010 | DUPLICATE   | <0.005   | 4.00         | 0.29         | 39.40        | <50.0       | <0.01        | <0.005       | 17.30        | <0.005       | 0.01         | <0.1         | 0.20         | 2.00         |              | 0.56        | 0.00         | 3.01         |
| RPD (%)   |           |             | N/A  | 2.47         | 0.00         | 0.25         | N/A         | N/A          | N/A          | 3.41         | N/A          | 0.00         | N/A          | 29.79        | 0.00         | N/A          | 5.22        | 6.45         | 2.30         |
| Comments  |           |             |  |              |              |              |             |              |              |              |              |              |              |              |              |              |             |              |              |
| Action    |           |             |  |              |              |              |             |              |              |              |              |              |              |              |              |              |             |              |              |
| Result    |           |             |  |              |              |              |             |              |              |              |              |              |              |              |              |              |             |              |              |
| V2        | 3/2/2010  | M           | <0.03  | 2.00         | 0.90         | 66.30        | <300.0      | <0.05        | <0.03        | 351.00       | 0.17         | <0.03        | <0.5         | 0.90         | 9.00         | <0.05        | 2.84        | 0.01         | 195.00       |
| V2        | 3/2/2010  | DUPLICATE   | 0.06   | 2.00         | 0.80         | 66.60        | <300.0      | <0.05        | <0.03        | 344.00       | 0.18         | <0.03        | <0.5         | 0.90         | 10.00        |              | 2.76        | 0.01         | 184.00       |
| RPD (%)   |           |             | N/A  | 0.00         | 11.76        | 0.45         | N/A         | N/A          | N/A          | 2.01         | 6.06         | N/A          | N/A          | 0.00         | 10.53        | N/A          | 2.86        | 0.00         | 5.80         |
| Comments  |           |             |  |              |              |              |             |              |              |              |              |              |              |              |              |              |             |              |              |
| Action    |           |             |  |              |              |              |             |              |              |              |              |              |              |              |              |              |             |              |              |
| Result    |           |             |  |              |              |              |             |              |              |              |              |              |              |              |              |              |             |              |              |
| V5        | 3/30/2010 | M           | <0.005   | 2.00         | 0.43         | 81.40        | <50.0       | <0.01        | <0.005       | 104.00       | 0.05         | 0.06         | <0.1         | 0.61         | 11.00        |              | 1.46        | 0.01         | 50.10        |
| V5        | 3/30/2010 | DUPLICATE   | <0.005   | 2.10         | 0.41         | 78.90        | <50.0       | <0.01        | <0.005       | 102.00       | 0.04         | 0.06         | <0.1         | 0.59         | 10.00        |              | 1.44        | 0.01         | 50.40        |
| RPD (%)   |           |             | N/A  | 4.88         | 4.76         | 3.12         | N/A         | N/A          | N/A          | 1.94         | 18.18        | 1.68         | N/A          | 3.33         | 9.52         | N/A          | 1.38        | 1.50         | 0.60         |
| Comments  |           |             |  |              |              |              |             |              |              |              |              |              |              |              |              |              |             |              |              |
| Action    |           |             |  |              |              |              |             |              |              |              |              |              |              |              |              |              |             |              |              |
| Result    |           |             |  |              |              |              |             |              |              |              |              |              |              |              |              |              |             |              |              |
| V8        | 3/30/2010 | M           | <0.005   | 2.50         | 0.39         | 73.60        | <50.0       | <0.01        | <0.005       | 94.10        | 0.06         | 0.06         | <0.1         | 0.81         | 15.00        |              | 1.33        | 0.01         | 47.60        |
| V8        | 3/30/2010 | DUPLICATE   | <0.005   | 2.00         | 0.43         | 78.50        | <50.0       | <0.01        | <0.005       | 98.30        | 0.06         | 0.08         | <0.1         | 0.57         | 30.00        |              | 1.41        | 0.01         | 45.90        |
| RPD (%)   |           |             | N/A  | 22.22        | 9.76         | 6.44         | N/A         | N/A          | N/A          | 4.37         | 3.33         | 28.57        | N/A          | 34.78        | 66.67        | N/A          | 5.84        | 1.44         | 3.64         |
| Comments  |           |             | Both values > PQL and entered correctly into emLine.   |              |              |              |             |              |              |              |              |              |              |              |              |              |             |              |              |
| Action    |           |             | Let Value Stand  |              |              |              |             |              |              |              |              |              |              |              |              |              |             |              |              |
| Result    |           |             | Discrepancy between values remains.  |              |              |              |             |              |              |              |              |              |              |              |              |              |             |              |              |
| V15       | 4/7/2010  | M           | <0.03  | 5.00         | 0.40         | 46.60        | <300        | <0.05        | <0.03        | 471.00       | 1.94         | 0.06         | <0.5         | 2.20         | 13.00        |              | 6.40        | 0.03         | 488.00       |
| V15       | 4/7/2010  | DUPLICATE   | 0.06   | 6.00         | 0.40         | 46.20        | <300        | <0.05        | <0.03        | 450.00       | 1.85         | 0.06         | <0.5         | 2.00         | 14.00        |              | 6.20        | 0.02         | 456.00       |
| RPD (%)   |           |             | N/A  | 18.18        | 0.00         | 0.86         | N/A         | N/A          | N/A          | 4.56         | 4.75         | 0.00         | N/A          | 9.52         | 7.41         | N/A          | 3.17        | 4.08         | 6.78         |
| Comments  |           |             |  |              |              |              |             |              |              |              |              |              |              |              |              |              |             |              |              |
| Action    |           |             |  |              |              |              |             |              |              |              |              |              |              |              |              |              |             |              |              |
| Result    |           |             |  |              |              |              |             |              |              |              |              |              |              |              |              |              |             |              |              |
| V1        | 4/20/2010 | M           | <0.005   | 9.50         | 0.30         | 38.70        | <50         | <0.01        | 0.01         | 17.30        | 0.01         | 0.02         | <0.1         | 0.25         | 12.00        |              | 0.66        | 0.00         | 2.87         |
| V1        | 4/20/2010 | DUPLICATE   | 0.01   | 5.40         | 0.32         | 37.80        | <50         | <0.01        | <0.005       | 17.60        | 0.01         | 0.02         | <0.1         | 0.26         | 72.00        |              | 0.66        | 0.00         | 2.91         |
| RPD (%)   |           |             | N/A  | 55.03        | 6.45         | 2.35         | N/A         | N/A          | N/A          | 1.72         | 44.44        | 23.53        | N/A          | 3.92         | 142.86       | N/A          | 0.00        | 0.00         | 1.38         |
| Comments  |           |             | Both values > PQL and correctly entered into emLine. Lab noted on both samples that "Dissolved greater than total. Reanalysis yields similar results."   |              |              |              |             |              |              |              |              |              |              |              |              |              |             |              |              |
| Action    |           |             | Request Retest   |              |              |              |             |              |              |              |              |              |              |              |              |              |             |              |              |
| Result    |           |             | Retest performed, see results below.   |              |              |              |             |              |              |              |              |              |              |              |              |              |             |              |              |
| V1 Retest | 4/20/2010 | M           | <0.005   | 10.90        | 0.30         | 37.30        | <50         | <0.01        | 0.01         | 14.90        | 0.01         | 0.02         | <0.1         | 0.24         | 15.00        |              | 0.57        | 0.00         | 2.62         |
| V1 Retest | 4/20/2010 | DUPLICATE   | 0.01   | 5.40         | 0.32         | 37.80        | <50         | <0.01        | <0.005       | 17.60        | 0.01         | 0.02         | <0.1         | 0.26         | 72.00        |              | 0.66        | 0.00         | 2.91         |
| RPD (%)   |           |             | N/A  | 67.48        | 6.45         | 1.33         | N/A         | N/A          | N/A          | 16.62        | 58.82        | 18.18        | N/A          | 8.00         | 131.03       | N/A          | 14.63       | 7.41         | 10.49        |
| Comments  |           |             | Retest of April 20 V1 sample and duplicate. Both values > PQL and correctly entered into emLine. Lab noted on both samples that "Dissolved greater than total. Reanalysis yields similar results." |              |              |              |             |              |              |              |              |              |              |              |              |              |             |              |              |
| Action    |           |             | Let Value Stand  |              |              |              |             |              |              |              |              |              |              |              |              |              |             |              |              |
| Result    |           |             | New values entered into emLine.  |              |              |              |             |              |              |              |              |              |              |              |              |              |             |              |              |

RPD > 50%  
RPD > 100%



| Station           | Date      | Sample Type | Ag-d<br>µg/L   | Al-d<br>µg/L | As-d<br>µg/L | Ba-d<br>µg/L | B-d<br>µg/L | Be-d<br>µg/L | Bi-d<br>µg/L | Ca-d<br>mg/L | Cd-d<br>µg/L | Co-d<br>µg/L | Cr-d<br>µg/L | Cu-d<br>µg/L | Fe-d<br>µg/L | Hg-d<br>µg/L | K-d<br>mg/L | Li-d<br>mg/L | Mg-d<br>mg/L |
|-------------------|-----------|-------------|--|--------------|--------------|--------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|-------------|--------------|--------------|
| MOOSE SEEP        | 5/1/2010  | M           | 0.05   | 4.00         | 1.60         | 39.40        | <300        | <0.05        | <0.03        | 304.00       | 0.15         | 0.04         | <0.5         | 1.00         | 6.00         |              | 3.40        | 0.01         | 204.00       |
| MOOSE SEEP        | 5/1/2010  | DUPLICATE   | <0.03  | 6.00         | 1.70         | 38.80        | <300        | <0.05        | <0.03        | 282.00       | 0.16         | 0.05         | <0.5         | 1.00         | 6.00         |              | 3.30        | 0.01         | 191.00       |
| RPD (%)           |           |             | N/A  | 40.00        | 6.06         | 1.53         | N/A         | N/A          | N/A          | 7.51         | 6.45         | 22.22        | N/A          | 0.00         | 0.00         | N/A          | 2.99        | 18.18        | 6.58         |
| Comments          |           |             |  |              |              |              |             |              |              |              |              |              |              |              |              |              |             |              |              |
| Action            |           |             |  |              |              |              |             |              |              |              |              |              |              |              |              |              |             |              |              |
| Result            |           |             |  |              |              |              |             |              |              |              |              |              |              |              |              |              |             |              |              |
| MOOSE SEEP Retest | 5/1/2010  | M           |  |              |              |              |             |              |              |              |              |              |              |              |              |              |             |              |              |
| MOOSE SEEP Retest | 5/1/2010  | DUPLICATE   |  |              |              |              |             |              |              |              |              |              |              |              |              |              |             |              |              |
| RPD (%)           |           |             | N/A  | N/A          | N/A          | N/A          | N/A         | N/A          | N/A          | N/A          | N/A          | N/A          | N/A          | N/A          | N/A          | N/A          | N/A         | N/A          | N/A          |
| Comments          |           |             |  |              |              |              |             |              |              |              |              |              |              |              |              |              |             |              |              |
| Action            |           |             |  |              |              |              |             |              |              |              |              |              |              |              |              |              |             |              |              |
| Result            |           |             |  |              |              |              |             |              |              |              |              |              |              |              |              |              |             |              |              |
| LCD               | 5/12/2010 | M           | 0.14   | 2910.00      | 1.10         | 26.00        | <200        | <0.4         | <4           | 115.00       | 159.00       | 623.00       | <4           | 55.50        | 24500.00     |              | 1.70        | 0.02         | 169.00       |
| LCD               | 5/12/2010 | DUPLICATE   | 0.16   | 2980.00      | 0.90         | 28.00        | <200        | 0.50         | <4           | 121.00       | 168.00       | 643.00       | <4           | 58.10        | 25100.00     |              | 1.80        | 0.03         | 174.00       |
| RPD (%)           |           |             | 13.33  | 2.38         | 20.00        | 7.41         | N/A         | N/A          | N/A          | 5.08         | 5.50         | 3.16         | N/A          | 4.58         | 2.42         | N/A          | 5.71        | 8.33         | 2.92         |
| Comments          |           |             |  |              |              |              |             |              |              |              |              |              |              |              |              |              |             |              |              |
| Action            |           |             |  |              |              |              |             |              |              |              |              |              |              |              |              |              |             |              |              |
| Result            |           |             |  |              |              |              |             |              |              |              |              |              |              |              |              |              |             |              |              |
| V2A               | 5/18/2010 | M           | <0.03  | 9.00         | 1.30         | 58.800       | <300        | <0.05        | <0.03        | 282.00       | 0.45         | 0.2700       | <0.5         | 1.3000       | 26.00        |              | 3.90        | 0.012        | 203.00       |
| V2A               | 5/18/2010 | DUPLICATE   | <0.03  | 9.00         | 1.30         | 59.400       | <300        | <0.05        | <0.03        | 285.00       | 0.41         | 0.2800       | <0.5         | 1.2000       | 30.00        |              | 3.90        | 0.011        | 203.00       |
| RPD (%)           |           |             | N/A  | 0.00         | 0.00         | 1.02         | N/A         | N/A          | N/A          | 1.06         | 9.30         | 3.64         | N/A          | 8.00         | 14.29        | N/A          | 0.00        | 8.70         | 0.00         |
| Comments          |           |             |  |              |              |              |             |              |              |              |              |              |              |              |              |              |             |              |              |
| Action            |           |             |  |              |              |              |             |              |              |              |              |              |              |              |              |              |             |              |              |
| Result            |           |             |  |              |              |              |             |              |              |              |              |              |              |              |              |              |             |              |              |
| LCD               | 6/16/2010 | M           | 1.1  | 11600        | 4            | 22           | <1000       | 3            | <20          | 207          | 541          | 2520         | <20          | 258          | 71600        |              | 3           | <0.1         | 590          |
| LCD               | 6/16/2010 | DUPLICATE   | 0.9  | 11500        | <2           | 21           | <1000       | 3            | <20          | 217          | 530          | 2560         | <20          | 250          | 69000        |              | 3           | <0.1         | 595          |
| RPD (%)           |           |             | 20.00  | 0.87         | N/A          | 4.65         | N/A         | 0.00         | N/A          | 4.72         | 2.05         | 1.57         | N/A          | 3.15         | 3.70         | N/A          | 0.00        | N/A          | 0.84         |
| Comments          |           |             |  |              |              |              |             |              |              |              |              |              |              |              |              |              |             |              |              |
| Action            |           |             |  |              |              |              |             |              |              |              |              |              |              |              |              |              |             |              |              |
| Result            |           |             |  |              |              |              |             |              |              |              |              |              |              |              |              |              |             |              |              |
| V25               | 7/6/2010  | M           | 0.07   | 12.00        | 0.20         | 19.10        | <300        | <0.05        | <0.03        | 474.00       | 0.67         | 0.39         | <0.5         | <0.3         | 24.00        | <0.05        | 2.90        | 0.05         | 99.70        |
| V25               | 7/6/2010  | DUPLICATE   | <0.03  | 10.00        | 0.20         | 19.70        | <300        | <0.05        | <0.03        | 477.00       | 0.70         | 0.38         | <0.5         | <0.3         | 15.00        | <0.05        | 2.90        | 0.05         | 100.00       |
| RPD (%)           |           |             | N/A  | 18.18        | 0.00         | 3.09         | N/A         | N/A          | N/A          | 0.63         | 4.38         | 2.60         | N/A          | N/A          | 46.15        | N/A          | 0.00        | 2.11         | 0.30         |
| Comments          |           |             |  |              |              |              |             |              |              |              |              |              |              |              |              |              |             |              |              |
| Action            |           |             |  |              |              |              |             |              |              |              |              |              |              |              |              |              |             |              |              |
| Result            |           |             |  |              |              |              |             |              |              |              |              |              |              |              |              |              |             |              |              |
| V2A               | 7/7/2010  | M           | <0.03  | 13.00        | 1.20         | 55.90        | <300        | <0.05        | <0.03        | 267.00       | 0.44         | 0.08         | <0.5         | 1.40         | 31.00        |              | 4.40        | 0.01         | 229.00       |
| V2A               | 7/7/2010  | DUPLICATE   | <0.03  | 5.00         | 1.20         | 56.20        | <300        | <0.05        | <0.03        | 271.00       | 0.45         | 0.08         | <0.5         | 1.20         | 14.00        |              | 4.30        | 0.01         | 226.00       |
| RPD (%)           |           |             | N/A  | 88.89        | 0.00         | 0.54         | N/A         | N/A          | N/A          | 1.49         | 2.25         | 0.00         | N/A          | 15.38        | 75.56        | N/A          | 2.30        | 0.00         | 1.32         |
| Comments          |           |             | Both values > PQL and correctly entered into emLine. Lab noted on main sample that "Dissolved greater than total. Reanalysis yields similar results."      |              |              |              |             |              |              |              |              |              |              |              |              |              |             |              |              |
| Action            |           |             | Let Value Stand  |              |              |              |             |              |              |              |              |              |              |              |              |              |             |              |              |
| Result            |           |             | Discrepancy between values remains.  |              |              |              |             |              |              |              |              |              |              |              |              |              |             |              |              |
| V25 BSP           | 7/13/2010 | M           | <0.03  | 17.00        | 0.20         | 31.70        | <300        | <0.05        | <0.03        | 439.00       | 0.90         | 1.06         | <0.5         | 1.70         | 20.00        | <0.05        | 3.40        | 0.04         | 90.80        |
| V25 BSP           | 7/13/2010 | DUPLICATE   | <0.03  | 14.00        | 0.20         | 30.60        | <300        | <0.05        | <0.03        | 431.00       | 0.91         | 0.97         | <0.5         | 1.60         | 15.00        | <0.05        | 3.20        | 0.04         | 87.70        |
| RPD (%)           |           |             | N/A  | 19.35        | 0.00         | 3.53         | N/A         | N/A          | N/A          | 1.84         | 1.10         | 8.87         | N/A          | 6.06         | 28.57        | N/A          | 6.06        | 0.00         | 3.47         |
| Comments          |           |             |  |              |              |              |             |              |              |              |              |              |              |              |              |              |             |              |              |
| Action            |           |             |  |              |              |              |             |              |              |              |              |              |              |              |              |              |             |              |              |
| Result            |           |             |  |              |              |              |             |              |              |              |              |              |              |              |              |              |             |              |              |
| V15               | 7/22/2010 | M           | <0.03  | 8.00         | 0.60         | 47.10        | <300        | <0.05        | <0.03        | 470.00       | 1.61         | 0.06         | <0.5         | 1.90         | 12.00        |              | 6.60        | 0.02         | 482.00       |
| V15               | 7/22/2010 | DUPLICATE   | <0.03  | 7.00         | 0.60         | 47.70        | <300        | <0.05        | <0.03        | 461.00       | 1.56         | 0.04         | <0.5         | 1.80         | 11.00        |              | 6.30        | 0.02         | 466.00       |
| RPD (%)           |           |             | N/A  | 13.33        | 0.00         | 1.27         | N/A         | N/A          | N/A          | 1.93         | 3.15         | 40.00        | N/A          | 5.41         | 8.70         | N/A          | 4.65        | 0.00         | 3.38         |
| Comments          |           |             |  |              |              |              |             |              |              |              |              |              |              |              |              |              |             |              |              |
| Action            |           |             |  |              |              |              |             |              |              |              |              |              |              |              |              |              |             |              |              |
| Result            |           |             |  |              |              |              |             |              |              |              |              |              |              |              |              |              |             |              |              |
| V8                | 7/14/2010 | M           | <0.005   | 12.10        | 0.41         | 68.20        | <50.0       | <0.01        | <0.005       | 104.00       | 0.10         | 0.14         | <0.1         | 1.66         | 24.00        |              | 1.13        | 0.01         | 28.60        |
| V8                | 7/14/2010 | DUPLICATE   | <0.005   | 8.00         | 0.42         | 67.50        | <50.0       | <0.01        | <0.005       | 102.00       | 0.17         | 0.81         | <0.1         | 1.50         | 17.00        |              | 1.29        | 0.01         | 28.20        |
| RPD (%)           |           |             | N/A  | 40.80        | 2.41         | 1.03         | N/A         | N/A          | N/A          | 1.94         | 47.76        | 140.87       | N/A          | 10.13        | 34.15        | N/A          | 13.22       | 0.00         | 1.41         |
| Comments          |           |             | Both values > PQL and correctly entered into emLine. Lab noted on duplicate sample that "Dissolved greater than total. Reanalysis yields similar results." |              |              |              |             |              |              |              |              |              |              |              |              |              |             |              |              |
| Action            |           |             | Request Retest   |              |              |              |             |              |              |              |              |              |              |              |              |              |             |              |              |
| Result            |           |             | Retest performed, see results below.   |              |              |              |             |              |              |              |              |              |              |              |              |              |             |              |              |

RPD > 50%  
RPD > 100%

Table D-18: Vangorda Creek Drainage Water Quality  
2010 QA/QC Duplicates - Seepage - Dissolved Metals



| Station   | Date       | Sample Type | Ag-d<br>µg/L  | Al-d<br>µg/L | As-d<br>µg/L | Ba-d<br>µg/L | B-d<br>µg/L | Be-d<br>µg/L | Bi-d<br>µg/L | Ca-d<br>mg/L | Cd-d<br>µg/L | Co-d<br>µg/L | Cr-d<br>µg/L | Cu-d<br>µg/L | Fe-d<br>µg/L | Hg-d<br>µg/L | K-d<br>mg/L | Li-d<br>mg/L | Mg-d<br>mg/L |
|-----------|------------|-------------|---|--------------|--------------|--------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|-------------|--------------|--------------|
| V8 Retest | 7/14/2010  | M           |   |              |              |              |             |              |              |              |              | 0.14         |              |              |              |              |             |              |              |
| V8 Retest | 7/14/2010  | DUPLICATE   |   |              |              |              |             |              |              |              |              | 0.76         |              |              |              |              |             |              |              |
| RPD (%)   |            |             | N/A   | N/A          | N/A          | N/A          | N/A         | N/A          | N/A          | N/A          | N/A          | 136.14       | N/A          | N/A          | N/A          | N/A          | N/A         | N/A          | N/A          |
| Comments  |            |             | Retest for July 14 V8 sample and duplicate. Both values > PQL and correctly entered into emLine.  |              |              |              |             |              |              |              |              |              |              |              |              |              |             |              |              |
| Action    |            |             | Let Value Stand   |              |              |              |             |              |              |              |              |              |              |              |              |              |             |              |              |
| Result    |            |             | New values entered into emLine.   |              |              |              |             |              |              |              |              |              |              |              |              |              |             |              |              |
| V2A       | 8/18/2010  | M           | <0.03   | 4.00         | 1.20         | 57.60        | <300        | <0.05        | <0.03        | 303.00       | 0.43         | 0.05         | <0.5         | 1.20         | 6.00         |              | 4.40        | 0.02         | 252.00       |
| V2A       | 8/18/2010  | DUPLICATE   | <0.03   | 6.00         | 1.10         | 57.80        | <300        | <0.05        | <0.03        | 297.00       | 0.44         | 0.06         | <0.5         | 2.00         | 9.00         |              | 4.50        | 0.02         | 254.00       |
| RPD (%)   |            |             | N/A   | 40.00        | 8.70         | 0.35         | N/A         | N/A          | N/A          | 2.00         | 2.30         | 18.18        | N/A          | 50.00        | 40.00        | N/A          | 2.25        | 6.45         | 0.79         |
| Comments  |            |             | Both values correctly entered into emLine; however, main sample value not > PQL. Therefore, RPD analysis not valid in this case. In addition, lab noted on duplicate sample that "Dissolved greater than total. Reanalysis yields similar results." |              |              |              |             |              |              |              |              |              |              |              |              |              |             |              |              |
| Action    |            |             | Let Value Stand   |              |              |              |             |              |              |              |              |              |              |              |              |              |             |              |              |
| Result    |            |             | Discrepancy between values remains.   |              |              |              |             |              |              |              |              |              |              |              |              |              |             |              |              |
| V2A       | 9/7/2010   | M           | <0.03   | 6.00         | 0.90         | 58.10        | <300        | <0.05        | <0.03        | 278.00       | 0.49         | <0.03        | <0.5         | 1.40         | 10.00        |              | 4.20        | 0.01         | 220.00       |
| V2A       | 9/7/2010   | DUPLICATE   | <0.03   | 6.00         | 1.00         | 58.10        | <300        | <0.05        | <0.03        | 293.00       | 0.53         | 0.04         | <0.5         | 1.50         | 9.00         |              | 4.30        | 0.01         | 222.00       |
| RPD (%)   |            |             | N/A   | 0.00         | 10.53        | 0.00         | N/A         | N/A          | N/A          | 5.25         | 7.84         | N/A          | N/A          | 6.90         | 10.53        | N/A          | 2.35        | 0.00         | 0.90         |
| Comments  |            |             |   |              |              |              |             |              |              |              |              |              |              |              |              |              |             |              |              |
| Action    |            |             |   |              |              |              |             |              |              |              |              |              |              |              |              |              |             |              |              |
| Result    |            |             |   |              |              |              |             |              |              |              |              |              |              |              |              |              |             |              |              |
| V22       | 9/7/2010   | M           | 0.1900  | 1580.00      | 2.30         | 20.000       | <50         | 0.40         | <1           | 223.00       | 139.00       | 711.0000     | <1           | 490.0000     | 50600.00     |              | 2.68        | 0.050        | 117.00       |
| V22       | 9/7/2010   | DUPLICATE   | 0.2100  | 1540.00      | 2.30         | 21.000       | <50         | 0.40         | <1           | 220.00       | 138.00       | 726.0000     | <1           | 496.0000     | 50300.00     |              | 2.65        | 0.051        | 116.00       |
| RPD (%)   |            |             | 10.00   | 2.56         | 0.00         | 4.88         | N/A         | 0.00         | N/A          | 1.35         | 0.72         | 2.09         | N/A          | 1.22         | 0.59         | N/A          | 1.13        | 1.98         | 0.86         |
| Comments  |            |             |   |              |              |              |             |              |              |              |              |              |              |              |              |              |             |              |              |
| Action    |            |             |   |              |              |              |             |              |              |              |              |              |              |              |              |              |             |              |              |
| Result    |            |             |   |              |              |              |             |              |              |              |              |              |              |              |              |              |             |              |              |
| V15       | 9/23/2010  | M           | <0.03   | 7.00         | 0.60         | 46.30        | <300        | <0.05        | <0.03        | 410.00       | 1.74         | 0.55         | <0.5         | 2.40         | 36.00        |              | 6.50        | 0.02         | 428.00       |
| V15       | 9/23/2010  | DUPLICATE   | <0.03   | 7.00         | 0.70         | 46.50        | <300        | <0.05        | <0.03        | 394.00       | 1.61         | 0.34         | <0.5         | 2.10         | 15.00        |              | 6.40        | 0.02         | 424.00       |
| RPD (%)   |            |             | N/A   | 0.00         | 15.38        | 0.43         | N/A         | N/A          | N/A          | 3.98         | 7.76         | 47.19        | N/A          | 13.33        | 82.35        | N/A          | 1.55        | 4.26         | 0.94         |
| Comments  |            |             | Both values correctly entered into emLine; however, duplicate value not > PQL. Therefore, RPD analysis not valid in this case.  |              |              |              |             |              |              |              |              |              |              |              |              |              |             |              |              |
| Action    |            |             | Let Value Stand   |              |              |              |             |              |              |              |              |              |              |              |              |              |             |              |              |
| Result    |            |             | Discrepancy between values remains.   |              |              |              |             |              |              |              |              |              |              |              |              |              |             |              |              |
| V2A       | 10/21/2010 | M           | <0.03   | 4.00         | 0.90         | 59.00        | <300        | <0.05        | <0.03        | 299.00       | 0.59         | 0.04         | <0.5         | 1.30         | 10.00        |              | 4.10        | 0.01         | 234.00       |
| V2A       | 10/21/2010 | DUPLICATE   | <0.03   | 6.00         | 0.90         | 58.60        | <300        | <0.05        | <0.03        | 284.00       | 0.55         | 0.08         | <0.5         | 1.50         | 11.00        |              | 4.00        | 0.01         | 233.00       |
| RPD (%)   |            |             | N/A   | 40.00        | 0.00         | 0.68         | N/A         | N/A          | N/A          | 5.15         | 7.02         | 66.67        | N/A          | 14.29        | 9.52         | N/A          | 2.47        | 0.00         | 0.43         |
| Comments  |            |             | Both values correctly entered into emLine; however, neither value > PQL. Therefore, RPD analysis not valid in this case.  |              |              |              |             |              |              |              |              |              |              |              |              |              |             |              |              |
| Action    |            |             | Let Value Stand   |              |              |              |             |              |              |              |              |              |              |              |              |              |             |              |              |
| Result    |            |             | Discrepancy between values remains.   |              |              |              |             |              |              |              |              |              |              |              |              |              |             |              |              |
| V25 BSP   | 11/1/2010  | M           | <0.005  | 3.60         | 0.12         | 28.80        | <50         | <0.01        | <0.005       | 203.00       | 0.18         | 0.03         | <0.1         | 1.21         | 10.00        | <0.01        | 1.76        | 0.01         | 41.70        |
| V25 BSP   | 11/1/2010  | DUPLICATE   | <0.005  | 3.40         | 0.12         | 30.10        | <50         | <0.01        | <0.005       | 200.00       | 0.16         | 0.02         | <0.1         | 1.18         | 8.00         | <0.01        | 1.76        | 0.01         | 42.10        |
| RPD (%)   |            |             | N/A   | 5.71         | 0.00         | 4.41         | N/A         | N/A          | N/A          | 1.49         | 11.56        | 17.39        | N/A          | 2.51         | 22.22        | N/A          | 0.00        | 2.47         | 0.95         |
| Comments  |            |             |   |              |              |              |             |              |              |              |              |              |              |              |              |              |             |              |              |
| Action    |            |             |   |              |              |              |             |              |              |              |              |              |              |              |              |              |             |              |              |
| Result    |            |             |   |              |              |              |             |              |              |              |              |              |              |              |              |              |             |              |              |
| V8        | 12/1/2010  | M           | <0.005  | 2.40         | 0.37         | 63.50        | <50         | <0.01        | 0.43         | 81.60        | 0.05         | 0.05         | <0.1         | 0.60         | 15.00        |              | 1.17        | 0.01         | 35.50        |
| V8        | 12/1/2010  | DUPLICATE   | <0.005  | 1.60         | 0.38         | 64.00        | <50         | <0.01        | 0.05         | 80.40        | 0.05         | 0.05         | <0.1         | 0.58         | 13.00        |              | 1.20        | 0.01         | 35.60        |
| RPD (%)   |            |             | N/A   | 40.00        | 2.67         | 0.78         | N/A         | N/A          | 158.91       | 1.48         | 2.11         | 2.20         | N/A          | 3.39         | 14.29        | N/A          | 2.53        | 0.00         | 0.28         |
| Comments  |            |             | Both values > PQL and correctly entered into emLine. Lab noted on both samples that "Dissolved greater than total. Reanalysis yields similar results."  |              |              |              |             |              |              |              |              |              |              |              |              |              |             |              |              |
| Action    |            |             | Let Value Stand   |              |              |              |             |              |              |              |              |              |              |              |              |              |             |              |              |
| Result    |            |             | Discrepancy between values remains. Retest not requested because lab already reanalyzed.  |              |              |              |             |              |              |              |              |              |              |              |              |              |             |              |              |

RPD > 50%  
RPD > 100%

| Station   | Date      | Sample Type | Ag-d<br>µg/L | Al-d<br>µg/L | As-d<br>µg/L | Ba-d<br>µg/L | B-d<br>µg/L | Be-d<br>µg/L | Bi-d<br>µg/L | Ca-d<br>mg/L | Cd-d<br>µg/L | Co-d<br>µg/L | Cr-d<br>µg/L | Cu-d<br>µg/L | Fe-d<br>µg/L | Hg-d<br>µg/L | K-d<br>mg/L | Li-d<br>mg/L | Mg-d<br>mg/L |
|-----------|-----------|-------------|--------------|--------------|--------------|--------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|-------------|--------------|--------------|
| V8 Retest | 12/1/2010 | M           |              |              |              |              |             |              |              |              |              |              |              |              |              |              |             |              |              |
| V8 Retest | 12/1/2010 | DUPLICATE   |              |              |              |              |             |              |              |              |              |              |              |              |              |              |             |              |              |
|           |           | RPD (%)     | N/A          | N/A          | N/A          | N/A          | N/A         | N/A          | N/A          | N/A          | N/A          | N/A          | N/A          | N/A          | N/A          | N/A          | N/A         | N/A          | N/A          |
| Comments  |           |             |              |              |              |              |             |              |              |              |              |              |              |              |              |              |             |              |              |
| Action    |           |             |              |              |              |              |             |              |              |              |              |              |              |              |              |              |             |              |              |
| Result    |           |             |              |              |              |              |             |              |              |              |              |              |              |              |              |              |             |              |              |

RPD > 50%  
RPD > 100%

Table D-18: Vangorda Creek Drainage Water Quality  
2010 QA/QC Duplicates - Seepage - Dissolved Metals

| Station   | Date      | Sample Type | Mn-d<br>µg/L   | Mo-d<br>µg/L | Na-d<br>mg/L | Ni-d<br>µg/L | Pb-d<br>µg/L | Sb-d<br>µg/L | S-d<br>mg/L | Se-d<br>µg/L | Si-d<br>µg/L | Sn-d<br>µg/L | Sr-d<br>µg/L | Ti-d<br>µg/L | Ti-d<br>µg/L | U-d<br>µg/L | V-d<br>µg/L | Zn-d<br>µg/L | Zr-d<br>µg/L |
|-----------|-----------|-------------|--|--------------|--------------|--------------|--------------|--------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|-------------|-------------|--------------|--------------|
| V5        | 1/6/2010  | M           | 12.200   | 2.47         | 5.64         | 1.820        | 0.1920       | 0.17         | 70          | 4.8000       | 5980.00      | <0.01        | 424.00       | <0.5         | <0.002       | 7.1500      | <0.2        | 3.200        | <0.1         |
| V5        | 1/6/2010  | DUPLICATE   | 11.800   | 2.48         | 5.52         | 1.760        | 0.3850       | 0.17         | 67          | 4.6500       | 5620.00      | <0.01        | 428.00       | <0.5         | <0.002       | 7.1100      | <0.2        | 3.500        | <0.1         |
| RPD (%)   |           |             | 3.33   | 0.40         | 2.15         | 3.35         | 66.90        | 0.00         | 4.38        | 3.17         | 6.21         | N/A          | 0.94         | N/A          | N/A          | 0.56        | N/A         | 8.96         | N/A          |
| Comments  |           |             | Both values > PQL and correctly entered into emLine.   |              |              |              |              |              |             |              |              |              |              |              |              |             |             |              |              |
| Action    |           |             | Let Value Stand  |              |              |              |              |              |             |              |              |              |              |              |              |             |             |              |              |
| Result    |           |             | Discrepancy between values remains.  |              |              |              |              |              |             |              |              |              |              |              |              |             |             |              |              |
| V15       | 1/7/2010  | M           | 1.10   | 0.70         | 15.90        | 122.00       | 0.35         | <0.1         | 940.00      | 0.80         | 6750.00      | <0.05        | 1620.0       | <3.0         | <0.01        | 57.30       | <1.0        | 2910.00      | <0.5         |
| V15       | 1/7/2010  | DUPLICATE   | 1.20   | 0.70         | 15.80        | 123.00       | 0.69         | <0.1         | 941.00      | 0.80         | 6660.00      | 0.06         | 1620.0       | <3.0         | <0.01        | 56.80       | <1.0        | 2930.00      | <0.5         |
| RPD (%)   |           |             | 8.70   | 0.00         | 0.63         | 0.82         | 65.38        | N/A          | 0.11        | 0.00         | 1.34         | N/A          | 0.00         | N/A          | N/A          | 0.88        | N/A         | 0.68         | N/A          |
| Comments  |           |             | Both values > PQL and correctly entered into emLine.   |              |              |              |              |              |             |              |              |              |              |              |              |             |             |              |              |
| Action    |           |             | Let Value Stand  |              |              |              |              |              |             |              |              |              |              |              |              |             |             |              |              |
| Result    |           |             | Discrepancy between values remains.  |              |              |              |              |              |             |              |              |              |              |              |              |             |             |              |              |
| V2A       | 2/3/2010  | M           | 7.50   | 2.30         | 13.90        | 34.20        | 0.82         | 0.40         | 421.00      | 0.70         | 5860.00      | <0.05        | 1080.0       | <3.0         | 0.020        | 41.00       | <1.0        | 680.00       | <0.5         |
| V2A       | 2/3/2010  | DUPLICATE   | 7.30   | 2.40         | 13.60        | 33.50        | 0.91         | 0.40         | 419.00      | 0.70         | 5770.00      | <0.05        | 1130.0       | <3.0         | <0.01        | 40.80       | <1.0        | 687.00       | <0.5         |
| RPD (%)   |           |             | 2.70   | 4.26         | 2.18         | 2.07         | 10.40        | 0.00         | 0.48        | 0.00         | 1.55         | N/A          | 4.52         | N/A          | N/A          | 0.49        | N/A         | 1.02         | N/A          |
| Comments  |           |             |  |              |              |              |              |              |             |              |              |              |              |              |              |             |             |              |              |
| Action    |           |             |  |              |              |              |              |              |             |              |              |              |              |              |              |             |             |              |              |
| Result    |           |             |  |              |              |              |              |              |             |              |              |              |              |              |              |             |             |              |              |
| V1        | 2/18/2010 | M           | 0.09   | 0.72         | 2.32         | 0.22         | 0.05         | 0.05         | 4.00        | 0.19         | 5310.00      | <0.01        | 83.6         | <0.5         | <0.002       | 1.39        | <0.2        | 0.70         | <0.1         |
| V1        | 2/18/2010 | DUPLICATE   | <0.05  | 0.71         | 2.29         | 0.21         | 0.03         | 0.05         | 5.00        | 0.20         | 5220.00      | <0.01        | 84.9         | <0.5         | <0.002       | 1.41        | <0.2        | 1.00         | <0.1         |
| RPD (%)   |           |             | N/A  | 1.40         | 1.30         | 4.65         | 68.35        | 0.00         | 22.22       | 5.13         | 1.71         | N/A          | 1.54         | N/A          | N/A          | 1.43        | N/A         | 35.29        | N/A          |
| Comments  |           |             | Both values > PQL and correctly entered into emLine.   |              |              |              |              |              |             |              |              |              |              |              |              |             |             |              |              |
| Action    |           |             | Let Value Stand  |              |              |              |              |              |             |              |              |              |              |              |              |             |             |              |              |
| Result    |           |             | Discrepancy between values remains.  |              |              |              |              |              |             |              |              |              |              |              |              |             |             |              |              |
| V2        | 3/2/2010  | M           | 0.70   | 1.80         | 12.40        | 2.20         | 0.21         | 0.20         | 442.00      | 0.60         | 5760.00      | <0.05        | 959.0        | <3.0         | <0.01        | 29.90       | <1.0        | 23.20        | <0.5         |
| V2        | 3/2/2010  | DUPLICATE   | 0.50   | 1.70         | 11.50        | 2.40         | 0.27         | 0.20         | 432.00      | 0.60         | 5810.00      | <0.05        | 949.0        | <3.0         | <0.01        | 30.00       | <1.0        | 22.30        | <0.5         |
| RPD (%)   |           |             | 33.33  | 5.71         | 7.53         | 8.70         | 25.00        | 0.00         | 2.29        | 0.00         | 0.86         | N/A          | 1.05         | N/A          | N/A          | 0.33        | N/A         | 3.96         | N/A          |
| Comments  |           |             |  |              |              |              |              |              |             |              |              |              |              |              |              |             |             |              |              |
| Action    |           |             |  |              |              |              |              |              |             |              |              |              |              |              |              |             |             |              |              |
| Result    |           |             |  |              |              |              |              |              |             |              |              |              |              |              |              |             |             |              |              |
| V5        | 3/30/2010 | M           | 8.70   | 2.69         | 5.64         | 1.72         | 0.10         | 0.16         | 59.00       | 3.74         | 5290.00      | <0.01        | 404.0        | <0.5         | 0.003        | 7.59        | <0.2        | 2.90         | <0.1         |
| V5        | 3/30/2010 | DUPLICATE   | 8.65   | 2.62         | 5.74         | 1.74         | 0.17         | 0.16         | 57.00       | 3.58         | 5170.00      | <0.01        | 397.0        | <0.5         | 0.003        | 7.47        | <0.2        | 3.10         | <0.1         |
| RPD (%)   |           |             | 0.58   | 2.64         | 1.76         | 1.16         | 50.37        | 0.00         | 3.45        | 4.37         | 2.29         | N/A          | 1.75         | N/A          | 0.00         | 1.59        | N/A         | 6.67         | N/A          |
| Comments  |           |             | Both values > PQL and correctly entered into emLine.   |              |              |              |              |              |             |              |              |              |              |              |              |             |             |              |              |
| Action    |           |             | Let Value Stand  |              |              |              |              |              |             |              |              |              |              |              |              |             |             |              |              |
| Result    |           |             | Discrepancy between values remains.  |              |              |              |              |              |             |              |              |              |              |              |              |             |             |              |              |
| V8        | 3/30/2010 | M           | 5.69   | 1.47         | 5.55         | 2.27         | 0.20         | 0.16         | 67.00       | 1.94         | 5070.00      | <0.01        | 406.0        | <0.5         | 0.008        | 10.60       | <0.2        | 13.20        | <0.1         |
| V8        | 3/30/2010 | DUPLICATE   | 6.06   | 1.55         | 5.28         | 2.36         | 0.14         | 0.17         | 71.00       | 1.93         | 4340.00      | <0.01        | 408.0        | <0.5         | 0.007        | 10.50       | <0.2        | 13.30        | <0.1         |
| RPD (%)   |           |             | 6.30   | 5.30         | 4.99         | 3.89         | 36.90        | 6.06         | 5.80        | 0.52         | 15.52        | N/A          | 0.49         | N/A          | 13.33        | 0.95        | N/A         | 0.75         | N/A          |
| Comments  |           |             |  |              |              |              |              |              |             |              |              |              |              |              |              |             |             |              |              |
| Action    |           |             |  |              |              |              |              |              |             |              |              |              |              |              |              |             |             |              |              |
| Result    |           |             |  |              |              |              |              |              |             |              |              |              |              |              |              |             |             |              |              |
| V15       | 4/7/2010  | M           | 0.40   | 0.70         | 15.90        | 130.00       | 0.24         | <0.1         | 819.00      | 0.80         | 5870.00      | <0.05        | 1640.0       | 4.00         | <0.01        | 57.70       | <1          | 3500.00      | <0.5         |
| V15       | 4/7/2010  | DUPLICATE   | 0.50   | 0.90         | 15.40        | 118.00       | 0.25         | 0.20         | 788.00      | 0.80         | 5830.00      | <0.05        | 1550.0       | <3           | <0.01        | 55.30       | <1          | 3170.00      | <0.5         |
| RPD (%)   |           |             | 22.22  | 25.00        | 3.19         | 9.68         | 4.08         | N/A          | 3.86        | 0.00         | 0.68         | N/A          | 5.64         | N/A          | N/A          | 4.25        | N/A         | 9.90         | N/A          |
| Comments  |           |             |  |              |              |              |              |              |             |              |              |              |              |              |              |             |             |              |              |
| Action    |           |             |  |              |              |              |              |              |             |              |              |              |              |              |              |             |             |              |              |
| Result    |           |             |  |              |              |              |              |              |             |              |              |              |              |              |              |             |             |              |              |
| V1        | 4/20/2010 | M           | 1.35   | 0.71         | 2.21         | 0.26         | 1.02         | 0.05         | <10         | 0.19         | 5330.00      | <0.01        | 78.4         | <0.5         | <0.002       | 1.45        | <0.2        | 2.20         | <0.1         |
| V1        | 4/20/2010 | DUPLICATE   | 1.03   | 0.69         | 2.23         | 0.27         | 0.48         | 0.05         | <10         | 0.20         | 5110.00      | <0.01        | 79.7         | <0.5         | <0.002       | 1.47        | <0.2        | 44.90        | <0.1         |
| RPD (%)   |           |             | 26.89  | 2.86         | 0.90         | 3.77         | 72.18        | 0.00         | N/A         | 5.13         | 4.21         | N/A          | 1.64         | N/A          | N/A          | 1.37        | N/A         | 181.32       | N/A          |
| Comments  |           |             | Both values > PQL and correctly entered into emLine. Lab noted on both samples that "Dissolved greater than total. Reanalysis yields similar results."   |              |              |              |              |              |             |              |              |              |              |              |              |             |             |              |              |
| Action    |           |             | Request Retest   |              |              |              |              |              |             |              |              |              |              |              |              |             |             |              |              |
| Result    |           |             | Retest performed, see results below.   |              |              |              |              |              |             |              |              |              |              |              |              |             |             |              |              |
| V1 Retest | 4/20/2010 | M           | 1.30   | 0.66         | 1.91         | 0.19         | 1.63         | 0.05         | <10         | 0.19         | 4080.00      | <0.01        | 80.8         | <0.5         | <0.002       | 1.50        | <0.2        | 2.60         | <0.1         |
| V1 Retest | 4/20/2010 | DUPLICATE   | 1.03   | 0.69         | 2.23         | 0.27         | 0.48         | 0.05         | <10         | 0.20         | 5110.00      | <0.01        | 79.7         | <0.5         | <0.002       | 1.47        | <0.2        | 44.90        | <0.1         |
| RPD (%)   |           |             | 23.18  | 4.44         | 15.46        | 34.78        | 109.15       | 0.00         | N/A         | 5.13         | 22.42        | N/A          | 1.37         | N/A          | N/A          | 2.02        | N/A         | 178.11       | N/A          |
| Comments  |           |             | Retest of April 20 V1 sample and duplicate. Both values > PQL and correctly entered into emLine. Lab noted on both samples that "Dissolved greater than total. Reanalysis yields similar results." |              |              |              |              |              |             |              |              |              |              |              |              |             |             |              |              |
| Action    |           |             | Let Value Stand  |              |              |              |              |              |             |              |              |              |              |              |              |             |             |              |              |
| Result    |           |             | New values entered into emLine.  |              |              |              |              |              |             |              |              |              |              |              |              |             |             |              |              |

RPD > 50%  
RPD > 100%

| Station           | Date      | Sample Type | Mn-d<br>µg/L  | Mo-d<br>µg/L | Na-d<br>mg/L | Ni-d<br>µg/L | Pb-d<br>µg/L | Sb-d<br>µg/L | S-d<br>mg/L | Se-d<br>µg/L | Si-d<br>µg/L | Sn-d<br>µg/L | Sr-d<br>µg/L | Ti-d<br>µg/L | Ti-d<br>µg/L | U-d<br>µg/L | V-d<br>µg/L | Zn-d<br>µg/L | Zr-d<br>µg/L |
|-------------------|-----------|-------------|---|--------------|--------------|--------------|--------------|--------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|-------------|-------------|--------------|--------------|
| MOOSE SEEP        | 5/1/2010  | M           | 0.50  | 2.90         | 10.10        | 1.70         | 0.37         | 0.30         | 434.00      | 0.80         | 4400.00      | <0.05        | 810.0        | <3           | <0.01        | 35.50       | <1          | 7.70         | <0.5         |
| MOOSE SEEP        | 5/1/2010  | DUPLICATE   | 2.50  | 2.70         | 9.60         | 1.20         | 0.54         | 0.30         | 401.00      | 0.80         | 4380.00      | <0.05        | 767.0        | <3           | <0.01        | 33.50       | <1          | 8.30         | <0.5         |
| RPD (%)           |           |             | 133.33  | 7.14         | 5.08         | 34.48        | 37.36        | 0.00         | 7.90        | 0.00         | 0.46         | N/A          | 5.45         | N/A          | N/A          | 5.80        | N/A         | 7.50         | N/A          |
| Comments          |           |             | Both values correctly entered into emLine; however, main sample value not > PQL. Therefore, RPD analysis not valid in this case.  |              |              |              |              |              |             |              |              |              |              |              |              |             |             |              |              |
| Action            |           |             | Request Retest  |              |              |              |              |              |             |              |              |              |              |              |              |             |             |              |              |
| Result            |           |             | Retest performed, see results below.  |              |              |              |              |              |             |              |              |              |              |              |              |             |             |              |              |
| MOOSE SEEP Retest | 5/1/2010  | M           | 0.60  |              |              |              |              |              |             |              |              |              |              |              |              |             |             |              |              |
| MOOSE SEEP Retest | 5/1/2010  | DUPLICATE   | 2.50  |              |              |              |              |              |             |              |              |              |              |              |              |             |             |              |              |
| RPD (%)           |           |             | 122.58  | N/A          | N/A          | N/A          | N/A          | N/A          | N/A         | N/A          | N/A          | N/A          | N/A          | N/A          | N/A          | N/A         | N/A         | N/A          | N/A          |
| Comments          |           |             | Retest of May 1 Moose Seep sample and duplicate. Both values correctly entered into emLine; however, main sample value not > PQL. Therefore, RPD analysis not valid in this case. |              |              |              |              |              |             |              |              |              |              |              |              |             |             |              |              |
| Action            |           |             | Let Value Stand   |              |              |              |              |              |             |              |              |              |              |              |              |             |             |              |              |
| Result            |           |             | Discrepancy between values remains.   |              |              |              |              |              |             |              |              |              |              |              |              |             |             |              |              |
| LCD               | 5/12/2010 | M           | 78000.00  | <4           | 1.50         | 517.00       | 37.30        | <2           | 535.00      | <0.4         | 2650.00      | <20          | 410.0        | <20          | <0.2         | 8.70        | <20         | 224000.00    | <2           |
| LCD               | 5/12/2010 | DUPLICATE   | 81500.00  | <4           | 1.50         | 534.00       | 38.50        | <2           | 548.00      | <0.4         | 2660.00      | <20          | 423.0        | <20          | <0.2         | 9.00        | <20         | 237000.00    | <2           |
| RPD (%)           |           |             | 4.39  | N/A          | 0.00         | 3.24         | 3.17         | N/A          | 2.40        | N/A          | 0.38         | N/A          | 3.12         | N/A          | N/A          | 3.39        | N/A         | 5.64         | N/A          |
| Comments          |           |             |   |              |              |              |              |              |             |              |              |              |              |              |              |             |             |              |              |
| Action            |           |             |   |              |              |              |              |              |             |              |              |              |              |              |              |             |             |              |              |
| Result            |           |             |   |              |              |              |              |              |             |              |              |              |              |              |              |             |             |              |              |
| V2A               | 5/18/2010 | M           | 7.300   | 2.10         | 10.30        | 46.000       | 0.7700       | 0.50         | 367         | 0.5000       | 5030.00      | 0.08         | 945.00       | <3           | 0.03         | 35.7000     | <1          | 811.000      | <0.5         |
| V2A               | 5/18/2010 | DUPLICATE   | 8.000   | 2.00         | 10.20        | 45.900       | 0.9000       | 0.50         | 359         | 0.5000       | 5010.00      | 0.10         | 960.00       | <3           | 0.04         | 35.7000     | <1          | 799.000      | <0.5         |
| RPD (%)           |           |             | 9.15  | 4.88         | 0.98         | 0.22         | 15.57        | 0.00         | 2.20        | 0.00         | 0.40         | 22.22        | 1.57         | N/A          | 28.57        | 0.00        | N/A         | 1.49         | N/A          |
| Comments          |           |             |   |              |              |              |              |              |             |              |              |              |              |              |              |             |             |              |              |
| Action            |           |             |   |              |              |              |              |              |             |              |              |              |              |              |              |             |             |              |              |
| Result            |           |             |   |              |              |              |              |              |             |              |              |              |              |              |              |             |             |              |              |
| LCD               | 6/16/2010 | M           | 317000  | <20          | 4            | 1820         | 335          | <10          | 1720        | <2           | 7870         | <100         | 890          | <100         | <1           | 35          | <100        | 820000       | <10          |
| LCD               | 6/16/2010 | DUPLICATE   | 324000  | <20          | 4            | 1770         | 329          | <10          | 1690        | <2           | 8560         | <100         | 877          | <100         | <1           | 33          | <100        | 832000       | <10          |
| RPD (%)           |           |             | 2.18  | N/A          | 0.00         | 2.79         | 1.81         | N/A          | 1.76        | N/A          | 8.40         | N/A          | 1.47         | N/A          | N/A          | 5.88        | N/A         | 1.45         | N/A          |
| Comments          |           |             |   |              |              |              |              |              |             |              |              |              |              |              |              |             |             |              |              |
| Action            |           |             |   |              |              |              |              |              |             |              |              |              |              |              |              |             |             |              |              |
| Result            |           |             |   |              |              |              |              |              |             |              |              |              |              |              |              |             |             |              |              |
| V25               | 7/6/2010  | M           | 999.00  | 0.50         | 5.00         | 0.40         | 0.30         | 0.20         | 538.00      | <0.2         | <500         | <0.05        | 1400.0       | <3           | 1.530        | 0.15        | <1          | 4.90         | <0.5         |
| V25               | 7/6/2010  | DUPLICATE   | 990.00  | 0.40         | 5.00         | 0.30         | 0.32         | <0.1         | 514.00      | 0.40         | <500         | <0.05        | 1440.0       | <3           | 1.620        | 0.13        | <1          | 4.40         | <0.5         |
| RPD (%)           |           |             | 0.90  | 22.22        | 0.00         | 28.57        | 6.45         | N/A          | 4.56        | N/A          | N/A          | N/A          | 2.82         | N/A          | 5.71         | 14.29       | N/A         | 10.75        | N/A          |
| Comments          |           |             |   |              |              |              |              |              |             |              |              |              |              |              |              |             |             |              |              |
| Action            |           |             |   |              |              |              |              |              |             |              |              |              |              |              |              |             |             |              |              |
| Result            |           |             |   |              |              |              |              |              |             |              |              |              |              |              |              |             |             |              |              |
| V2A               | 7/7/2010  | M           | 2.70  | 2.40         | 10.70        | 51.10        | 4.79         | 0.60         | 452.00      | 0.50         | 4430.00      | <0.05        | 999.0        | <3           | 0.030        | 34.40       | <1          | 794.00       | <0.5         |
| V2A               | 7/7/2010  | DUPLICATE   | 2.70  | 2.00         | 10.50        | 50.30        | 2.51         | 0.50         | 444.00      | 0.50         | 4470.00      | 0.13         | 999.0        | <3           | 0.020        | 34.90       | <1          | 779.00       | <0.5         |
| RPD (%)           |           |             | 0.00  | 18.18        | 1.89         | 1.58         | 62.47        | 18.18        | 1.79        | 0.00         | 0.90         | N/A          | 0.00         | N/A          | 40.00        | 1.44        | N/A         | 1.91         | N/A          |
| Comments          |           |             | Both values > PQL and correctly entered into emLine. Lab noted on both samples that "Dissolved greater than total. Reanalysis yields similar results."                            |              |              |              |              |              |             |              |              |              |              |              |              |             |             |              |              |
| Action            |           |             | Let Value Stand   |              |              |              |              |              |             |              |              |              |              |              |              |             |             |              |              |
| Result            |           |             | Discrepancy between values remains.   |              |              |              |              |              |             |              |              |              |              |              |              |             |             |              |              |
| V25 BSP           | 7/13/2010 | M           | 825.00  | 0.50         | 5.20         | 2.50         | 0.72         | <0.1         | 500.00      | <0.2         | 1240.00      | <0.05        | 1380.0       | <3           | 1.030        | 0.27        | <1          | 51.10        | <0.5         |
| V25 BSP           | 7/13/2010 | DUPLICATE   | 799.00  | 0.50         | 5.10         | 2.30         | 0.45         | <0.1         | 476.00      | <0.2         | 1210.00      | <0.05        | 1330.0       | <3           | 1.010        | 0.24        | <1          | 48.30        | <0.5         |
| RPD (%)           |           |             | 3.20  | 0.00         | 1.94         | 8.33         | 46.15        | N/A          | 4.92        | N/A          | 2.45         | N/A          | 3.69         | N/A          | 1.96         | 11.76       | N/A         | 5.63         | N/A          |
| Comments          |           |             |   |              |              |              |              |              |             |              |              |              |              |              |              |             |             |              |              |
| Action            |           |             |   |              |              |              |              |              |             |              |              |              |              |              |              |             |             |              |              |
| Result            |           |             |   |              |              |              |              |              |             |              |              |              |              |              |              |             |             |              |              |
| V15               | 7/22/2010 | M           | 0.90  | 0.90         | 16.00        | 106.00       | 0.30         | 0.20         | 888.00      | 0.70         | 6800.00      | <0.05        | 1550.0       | <3           | <0.01        | 55.80       | <1          | 2700.00      | <0.5         |
| V15               | 7/22/2010 | DUPLICATE   | 0.80  | 0.90         | 15.50        | 105.00       | 0.24         | 0.20         | 861.00      | 0.70         | 6630.00      | <0.05        | 1530.0       | <3           | <0.01        | 56.20       | <1          | 2640.00      | <0.5         |
| RPD (%)           |           |             | 11.76   | 0.00         | 3.17         | 0.95         | 22.22        | 0.00         | 3.09        | 0.00         | 2.53         | N/A          | 1.30         | N/A          | N/A          | 0.71        | N/A         | 2.25         | N/A          |
| Comments          |           |             |   |              |              |              |              |              |             |              |              |              |              |              |              |             |             |              |              |
| Action            |           |             |   |              |              |              |              |              |             |              |              |              |              |              |              |             |             |              |              |
| Result            |           |             |   |              |              |              |              |              |             |              |              |              |              |              |              |             |             |              |              |
| V8                | 7/14/2010 | M           | 22.50   | 0.54         | 2.97         | 1.42         | 1.20         | 0.12         | 102.00      | 0.36         | 4300.00      | 0.02         | 378.0        | <0.5         | 0.051        | 2.59        | <0.2        | 37.10        | <0.1         |
| V8                | 7/14/2010 | DUPLICATE   | 103.00  | 0.53         | 3.00         | 1.71         | 0.48         | 0.12         | 100.00      | 0.39         | 4320.00      | 0.02         | 373.0        | <0.5         | 0.054        | 2.58        | <0.2        | 149.00       | <0.1         |
| RPD (%)           |           |             | 128.29  | 1.87         | 1.01         | 18.53        | 66.57        | 0.00         | 1.98        | 8.00         | 0.46         | 0.00         | 1.33         | N/A          | 5.71         | 0.39        | N/A         | 120.26       | N/A          |
| Comments          |           |             | Both values > PQL and correctly entered into emLine. Lab noted on duplicate sample that "Dissolved greater than total. Reanalysis yields similar results."                        |              |              |              |              |              |             |              |              |              |              |              |              |             |             |              |              |
| Action            |           |             | Request Retest  |              |              |              |              |              |             |              |              |              |              |              |              |             |             |              |              |
| Result            |           |             | Retest performed, see results below.  |              |              |              |              |              |             |              |              |              |              |              |              |             |             |              |              |

RPD > 50%  
RPD > 100%

| Station   | Date       | Sample Type | Mn-d<br>µg/L   | Mo-d<br>µg/L | Na-d<br>mg/L | Ni-d<br>µg/L | Pb-d<br>µg/L   | Sb-d<br>µg/L | S-d<br>mg/L | Se-d<br>µg/L | Si-d<br>µg/L | Sn-d<br>µg/L | Sr-d<br>µg/L | Ti-d<br>µg/L | Ti-d<br>µg/L | U-d<br>µg/L | V-d<br>µg/L | Zn-d<br>µg/L | Zr-d<br>µg/L |     |  |  |
|-----------|------------|-------------|--|--------------|--------------|--------------|--|--------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|-------------|-------------|--------------|--------------|-----|--|--|
| V8 Retest | 7/14/2010  | M           | 19.90  |              |              |              |  |              |             |              |              |              |              |              |              |             |             |              | 32.60        |     |  |  |
| V8 Retest | 7/14/2010  | DUPLICATE   | 96.80  |              |              |              |  |              |             |              |              |              |              |              |              |             |             |              | 142.00       |     |  |  |
| RPD (%)   |            |             | 131.79   | N/A          | N/A          | N/A          | N/A  | N/A          | N/A         | N/A          | N/A          | N/A          | N/A          | N/A          | N/A          | N/A         | N/A         | N/A          | 125.32       | N/A |  |  |
| Comments  |            |             | Retest for July 14 V8 sample and duplicate. Both values > PQL and correctly entered into emLine.   |              |              |              |  |              |             |              |              |              |              |              |              |             |             |              |              |     |  |  |
| Action    |            |             | Let Value Stand  |              |              |              |  |              |             |              |              |              |              |              |              |             |             |              |              |     |  |  |
| Result    |            |             | New values entered into emLine.  |              |              |              |  |              |             |              |              |              |              |              |              |             |             |              |              |     |  |  |
| V2A       | 8/18/2010  | M           | 1.80   | 2.00         | 11.70        | 62.70        | 0.43   | 0.70         | 468.00      | 0.50         | 5050.00      | <0.05        | 1040.0       | <3           | 0.030        | 46.20       | <1          | 875.00       | <0.5         |     |  |  |
| V2A       | 8/18/2010  | DUPLICATE   | 4.40   | 2.00         | 11.70        | 60.70        | 1.13   | 0.80         | 465.00      | 0.50         | 4930.00      | 0.37         | 1030.0       | <3           | 0.040        | 45.40       | <1          | 838.00       | <0.5         |     |  |  |
| RPD (%)   |            |             | 83.87  | 0.00         | 0.00         | 3.24         | 89.74  | 13.33        | 0.64        | 0.00         | 2.40         | N/A          | 0.97         | N/A          | 28.57        | 1.75        | N/A         | 4.32         | N/A          |     |  |  |
| Comments  |            |             | Both values > PQL and correctly entered into emLine. Lab noted on duplicate sample that "Dissolved greater than total. Reanalysis yields similar results." |              |              |              | Both values > PQL and correctly entered into emLine. |              |             |              |              |              |              |              |              |             |             |              |              |     |  |  |
| Action    |            |             | Let Value Stand  |              |              |              | Let Value Stand                                      |              |             |              |              |              |              |              |              |             |             |              |              |     |  |  |
| Result    |            |             | Discrepancy between values remains.  |              |              |              | Discrepancy between values remains.                  |              |             |              |              |              |              |              |              |             |             |              |              |     |  |  |
| V2A       | 9/7/2010   | M           | 3.30   | 1.80         | 10.30        | 57.00        | 1.08   | 0.50         | 430.00      | 0.40         | 4910.00      | <0.05        | 988.0        | <3           | 0.020        | 39.30       | <1          | 854.00       | <0.5         |     |  |  |
| V2A       | 9/7/2010   | DUPLICATE   | 2.10   | 1.80         | 10.60        | 58.40        | 1.15   | 0.50         | 431.00      | 0.40         | 5310.00      | <0.05        | 997.0        | <3           | 0.020        | 39.70       | <1          | 884.00       | <0.5         |     |  |  |
| RPD (%)   |            |             | 44.44  | 0.00         | 2.87         | 2.43         | 6.28   | 0.00         | 0.23        | 0.00         | 7.83         | N/A          | 0.91         | N/A          | 0.00         | 1.01        | N/A         | 3.45         | N/A          |     |  |  |
| Comments  |            |             |  |              |              |              |  |              |             |              |              |              |              |              |              |             |             |              |              |     |  |  |
| Action    |            |             |  |              |              |              |  |              |             |              |              |              |              |              |              |             |             |              |              |     |  |  |
| Result    |            |             |  |              |              |              |  |              |             |              |              |              |              |              |              |             |             |              |              |     |  |  |
| V22       | 9/7/2010   | M           | 49700.000  | <1           | 4.65         | 569.000      | 327.0000   | <0.5         | 539         | 0.2000       | 4520.00      | <5           | 1150.00      | <5           | 2.22         | 4.5000      | <5          | 175000.000   | <0.5         |     |  |  |
| V22       | 9/7/2010   | DUPLICATE   | 49900.000  | <1           | 4.64         | 573.000      | 335.0000   | <0.5         | 527         | 0.2000       | 4270.00      | <5           | 1170.00      | <5           | 2.30         | 4.5000      | <5          | 179000.000   | <0.5         |     |  |  |
| RPD (%)   |            |             | 0.40   | N/A          | 0.22         | 0.70         | 2.42   | N/A          | 2.25        | 0.00         | 5.69         | N/A          | 1.72         | N/A          | 3.54         | 0.00        | N/A         | 2.26         | N/A          |     |  |  |
| Comments  |            |             |  |              |              |              |  |              |             |              |              |              |              |              |              |             |             |              |              |     |  |  |
| Action    |            |             |  |              |              |              |  |              |             |              |              |              |              |              |              |             |             |              |              |     |  |  |
| Result    |            |             |  |              |              |              |  |              |             |              |              |              |              |              |              |             |             |              |              |     |  |  |
| V15       | 9/23/2010  | M           | 46.30  | 0.80         | 13.70        | 115.00       | 0.35   | <0.1         | 857.00      | 0.60         | 6300.00      | <0.05        | 1480.0       | <3           | <0.01        | 58.80       | <1          | 3050.00      | <0.5         |     |  |  |
| V15       | 9/23/2010  | DUPLICATE   | 28.90  | 0.80         | 13.50        | 112.00       | 0.97   | 0.20         | 825.00      | 0.70         | 6070.00      | <0.05        | 1470.0       | <3           | <0.01        | 57.70       | <1          | 3070.00      | <0.5         |     |  |  |
| RPD (%)   |            |             | 46.28  | 0.00         | 1.47         | 2.64         | 93.94  | N/A          | 3.80        | 15.38        | 3.72         | N/A          | 0.68         | N/A          | N/A          | 1.89        | N/A         | 0.65         | N/A          |     |  |  |
| Comments  |            |             | Both values > PQL and correctly entered into emLine.   |              |              |              |  |              |             |              |              |              |              |              |              |             |             |              |              |     |  |  |
| Action    |            |             | Let Value Stand  |              |              |              |  |              |             |              |              |              |              |              |              |             |             |              |              |     |  |  |
| Result    |            |             | Discrepancy between values remains.  |              |              |              |  |              |             |              |              |              |              |              |              |             |             |              |              |     |  |  |
| V2A       | 10/21/2010 | M           | 3.20   | 1.60         | 12.20        | 56.80        | 0.52   | 0.40         | 481.00      | 0.60         | 5670.00      | <0.05        | 989.0        | <3           | <0.01        | 37.70       | <1          | 1030.00      | <0.5         |     |  |  |
| V2A       | 10/21/2010 | DUPLICATE   | 4.20   | 1.70         | 12.00        | 56.10        | 0.88   | 0.40         | 483.00      | 0.50         | 5180.00      | <0.05        | 977.0        | <3           | <0.01        | 38.10       | <1          | 1100.00      | <0.5         |     |  |  |
| RPD (%)   |            |             | 27.03  | 6.06         | 1.65         | 1.24         | 51.43  | 0.00         | 0.41        | 18.18        | 9.03         | N/A          | 1.22         | N/A          | N/A          | 1.06        | N/A         | 6.57         | N/A          |     |  |  |
| Comments  |            |             | Both values > PQL and correctly entered into emLine.   |              |              |              |  |              |             |              |              |              |              |              |              |             |             |              |              |     |  |  |
| Action    |            |             | Let Value Stand  |              |              |              |  |              |             |              |              |              |              |              |              |             |             |              |              |     |  |  |
| Result    |            |             | Discrepancy between values remains.  |              |              |              |  |              |             |              |              |              |              |              |              |             |             |              |              |     |  |  |
| V25 BSP   | 11/1/2010  | M           | 3.45   | 0.35         | 6.45         | 0.74         | 0.71   | 0.13         | 222.00      | 0.50         | 5020.00      | 0.05         | 706.0        | <0.5         | 0.027        | 1.98        | <0.2        | 74.70        | <0.1         |     |  |  |
| V25 BSP   | 11/1/2010  | DUPLICATE   | 2.48   | 0.30         | 6.54         | 0.74         | 1.32   | 0.13         | 223.00      | 0.48         | 4960.00      | <0.01        | 701.0        | <0.5         | 0.028        | 1.99        | <0.2        | 75.20        | <0.1         |     |  |  |
| RPD (%)   |            |             | 32.72  | 15.38        | 1.39         | 0.00         | 60.61  | 0.00         | 0.45        | 4.08         | 1.20         | N/A          | 0.71         | N/A          | 3.64         | 0.50        | N/A         | 0.67         | N/A          |     |  |  |
| Comments  |            |             | Both values > PQL and correctly entered into emLine. Lab noted on both samples that "Dissolved greater than total. Reanalysis yields similar results."     |              |              |              |  |              |             |              |              |              |              |              |              |             |             |              |              |     |  |  |
| Action    |            |             | Let Value Stand  |              |              |              |  |              |             |              |              |              |              |              |              |             |             |              |              |     |  |  |
| Result    |            |             | Discrepancy between values remains.  |              |              |              |  |              |             |              |              |              |              |              |              |             |             |              |              |     |  |  |
| V8        | 12/1/2010  | M           | 6.06   | 1.07         | 4.36         | 1.84         | 0.12   | 0.14         | 55.00       | 1.05         | 4990.00      | <0.01        | 319.0        | <0.5         | 0.006        | 6.96        | <0.2        | 12.10        | <0.1         |     |  |  |
| V8        | 12/1/2010  | DUPLICATE   | 5.46   | 1.01         | 4.28         | 1.42         | 0.03   | 0.13         | 56.00       | 1.04         | 4940.00      | <0.01        | 317.0        | <0.5         | 0.005        | 6.76        | <0.2        | 9.70         | <0.1         |     |  |  |
| RPD (%)   |            |             | 10.42  | 5.77         | 1.85         | 25.77        | 122.76   | 7.41         | 1.80        | 0.96         | 1.01         | N/A          | 0.63         | N/A          | 18.18        | 2.92        | N/A         | 22.02        | N/A          |     |  |  |
| Comments  |            |             | Both values > PQL and correctly entered into emLine.   |              |              |              |  |              |             |              |              |              |              |              |              |             |             |              |              |     |  |  |
| Action    |            |             | Request Retest   |              |              |              |  |              |             |              |              |              |              |              |              |             |             |              |              |     |  |  |
| Result    |            |             | Retest performed, see results below.   |              |              |              |  |              |             |              |              |              |              |              |              |             |             |              |              |     |  |  |

RPD > 50%  
RPD > 100%



| Station   | Date      | Sample Type | Mn-d<br>µg/L | Mo-d<br>µg/L | Na-d<br>mg/L | Ni-d<br>µg/L | Pb-d<br>µg/L  | Sb-d<br>µg/L | S-d<br>mg/L | Se-d<br>µg/L | Si-d<br>µg/L | Sn-d<br>µg/L | Sr-d<br>µg/L | Ti-d<br>µg/L | Ti-d<br>µg/L | U-d<br>µg/L | V-d<br>µg/L | Zn-d<br>µg/L | Zr-d<br>µg/L |     |  |
|-----------|-----------|-------------|--------------|--------------|--------------|--------------|---|--------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|-------------|-------------|--------------|--------------|-----|--|
| V8 Retest | 12/1/2010 | M           |              |              |              |              | 0.11  |              |             |              |              |              |              |              |              |             |             |              |              |     |  |
| V8 Retest | 12/1/2010 | DUPLICATE   |              |              |              |              | 0.02  |              |             |              |              |              |              |              |              |             |             |              |              |     |  |
|           |           | RPD (%)     | N/A          | N/A          | N/A          | N/A          | 129.93  | N/A          | N/A         | N/A          | N/A          | N/A          | N/A          | N/A          | N/A          | N/A         | N/A         | N/A          | N/A          | N/A |  |
| Comments  |           |             |              |              |              |              | Retest for December 1 V8 sample and duplicate. Both values correctly entered into emLine; however, duplicate value not > PQL. Therefore, RPD analysis not valid in this case. |              |             |              |              |              |              |              |              |             |             |              |              |     |  |
| Action    |           |             |              |              |              |              | Let Value Stand   |              |             |              |              |              |              |              |              |             |             |              |              |     |  |
| Result    |           |             |              |              |              |              | New values entered into emLine.   |              |             |              |              |              |              |              |              |             |             |              |              |     |  |

RPD > 50%  
RPD > 100%

Table D-19: Vangorda Creek Drainage Water Quality  
2010 QA/QC Duplicates - Seepage - Total Metals



| Station   | Date      | Sample Type | Ag<br>µg/L   | Al<br>µg/L | As<br>µg/L | B<br>µg/L | Ba<br>µg/L | Be<br>µg/L | Bi<br>µg/L | Ca<br>mg/L | Cd<br>µg/L | Co<br>µg/L | Cr<br>µg/L | Cu<br>µg/L | Fe<br>µg/L | Hg<br>µg/L | K<br>mg/L | Li<br>mg/L | Mg<br>mg/L | Mn<br>µg/L |
|-----------|-----------|-------------|--|------------|------------|-----------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|-----------|------------|------------|------------|
| V5        | 1/6/2010  | M           | <0.005   | 133.00     | 0.59       | <50       | 92.90      | <0.01      | <0.005     | 108.00     | 0.06       | 0.2090     | 0.40       | 1.0200     | 248.00     |            | 1.45      | 0.007      | 47.70      | 24.700     |
| V5        | 1/6/2010  | DUPLICATE   | <0.005   | 101.00     | 0.58       | <50       | 91.50      | <0.01      | <0.005     | 109.00     | 0.07       | 0.1660     | 0.30       | 0.9200     | 203.00     |            | 1.47      | 0.007      | 48.60      | 21.000     |
| RPD (%)   |           |             | N/A  | 27.35      | 1.71       | N/A       | 1.52       | N/A        | N/A        | 0.92       | 15.38      | 22.93      | 28.57      | 10.31      | 19.96      | N/A        | 1.37      | 0.00       | 1.87       | 16.19      |
| Comments  |           |             |  |            |            |           |            |            |            |            |            |            |            |            |            |            |           |            |            |            |
| Action    |           |             |  |            |            |           |            |            |            |            |            |            |            |            |            |            |           |            |            |            |
| Result    |           |             |  |            |            |           |            |            |            |            |            |            |            |            |            |            |           |            |            |            |
| V2A       | 2/3/2010  | M           | <0.03  | 38.00      | 1.10       | <300      | 95.40      | <0.05      | <0.03      | 355.00     | 0.37       | 0.17       | <0.5       | 1.80       | 91.00      |            | 4.02      | 0.01       | 218.00     | 9.20       |
| V2A       | 2/3/2010  | DUPLICATE   | <0.03  | 28.00      | 1.00       | <300      | 95.80      | <0.05      | <0.03      | 360.00     | 0.40       | 0.15       | <0.5       | 1.90       | 63.00      |            | 4.15      | 0.01       | 225.00     | 8.80       |
| RPD (%)   |           |             | N/A  | 30.30      | 9.52       | N/A       | 0.42       | N/A        | N/A        | 1.40       | 7.79       | 12.50      | N/A        | 5.41       | 36.36      | N/A        | 3.18      | 0.00       | 3.16       | 4.44       |
| Comments  |           |             |  |            |            |           |            |            |            |            |            |            |            |            |            |            |           |            |            |            |
| Action    |           |             |  |            |            |           |            |            |            |            |            |            |            |            |            |            |           |            |            |            |
| Result    |           |             |  |            |            |           |            |            |            |            |            |            |            |            |            |            |           |            |            |            |
| V1        | 2/18/2010 | M           | <0.005   | 4.00       | 0.27       | <50.0     | 36.00      | <0.01      | <0.005     | 16.00      | <0.005     | 0.01       | <0.1       | 0.21       | 4.00       |            | 0.52      | 0.00       | 2.66       | 0.28       |
| V1        | 2/18/2010 | DUPLICATE   | <0.005   | 4.90       | 0.26       | <50.0     | 36.30      | <0.01      | <0.005     | 16.60      | 0.01       | 0.02       | <0.1       | 0.58       | 4.00       |            | 0.54      | 0.00       | 2.83       | 1.82       |
| RPD (%)   |           |             | N/A  | 20.22      | 3.77       | N/A       | 0.83       | N/A        | N/A        | 3.68       | N/A        | 48.28      | N/A        | 93.67      | 0.00       | N/A        | 3.77      | 15.38      | 6.19       | 146.67     |
| Comments  |           |             | Both values correctly entered into emLine; however, main sample value not > PQL. Therefore, RPD analysis not valid in this case.                               |            |            |           |            |            |            |            |            |            |            |            |            |            |           |            |            |            |
| Action    |           |             | Request Retest   |            |            |           |            |            |            |            |            |            |            |            |            |            |           |            |            |            |
| Result    |           |             | Retest performed, see results below.   |            |            |           |            |            |            |            |            |            |            |            |            |            |           |            |            |            |
| V1 Retest | 2/18/2010 | M           | <0.005   | 5.00       | 0.28       | <50       | 35.90      | <0.01      | <0.005     | 16.30      | <0.005     | 0.01       | <0.1       | 0.21       | 5.00       |            | 0.54      | 0.00       | 2.68       | 0.28       |
| V1 Retest | 2/18/2010 | DUPLICATE   | <0.005   | 5.10       | 0.28       | <50       | 36.30      | <0.01      | <0.005     | 16.50      | 0.01       | 0.02       | <0.1       | 0.58       | 5.00       |            | 0.54      | 0.00       | 2.73       | 1.74       |
| RPD (%)   |           |             | N/A  | 1.98       | 0.00       | N/A       | 1.11       | N/A        | N/A        | 1.22       | N/A        | 40.00      | N/A        | 93.67      | 0.00       | N/A        | 0.00      | 7.41       | 1.85       | 144.55     |
| Comments  |           |             | Retest for February 18 V1 sample and duplicate. Both values > PQL and correctly entered into emLine. Duplicate will be performed at V1 at next sampling event. |            |            |           |            |            |            |            |            |            |            |            |            |            |           |            |            |            |
| Action    |           |             | Let Value Stand  |            |            |           |            |            |            |            |            |            |            |            |            |            |           |            |            |            |
| Result    |           |             | New values entered into emLine.  |            |            |           |            |            |            |            |            |            |            |            |            |            |           |            |            |            |
| V2        | 3/2/2010  | M           | <0.03  | 6.00       | 0.90       | <300      | 65.70      | <0.05      | <0.03      | 324.00     | 0.19       | 0.05       | <0.5       | 0.80       | 16.00      |            | 2.58      | 0.00       | 182.00     | 1.00       |
| V2        | 3/2/2010  | DUPLICATE   | <0.03  | 6.00       | 0.90       | <300      | 63.80      | <0.05      | <0.03      | 309.00     | 0.22       | 0.05       | <0.5       | 0.90       | 14.00      |            | 2.47      | 0.01       | 179.00     | 1.10       |
| RPD (%)   |           |             | N/A  | 0.00       | 0.00       | N/A       | 2.93       | N/A        | N/A        | 4.74       | 14.63      | 0.00       | N/A        | 11.76      | 13.33      | N/A        | 4.36      | 22.22      | 1.66       | 9.52       |
| Comments  |           |             |  |            |            |           |            |            |            |            |            |            |            |            |            |            |           |            |            |            |
| Action    |           |             |  |            |            |           |            |            |            |            |            |            |            |            |            |            |           |            |            |            |
| Result    |           |             |  |            |            |           |            |            |            |            |            |            |            |            |            |            |           |            |            |            |
| V5        | 3/30/2010 | M           | <0.005   | 23.80      | 0.44       | <50       | 80.90      | <0.01      | <0.005     | 102.00     | 0.04       | 0.09       | <0.1       | 0.66       | 58.00      |            | 1.47      | 0.01       | 49.60      | 11.60      |
| V5        | 3/30/2010 | DUPLICATE   | <0.005   | 60.00      | 0.53       | <50       | 87.60      | <0.01      | <0.005     | 110.00     | 0.06       | 0.14       | 0.20       | 0.76       | 115.00     |            | 1.59      | 0.01       | 51.20      | 15.60      |
| RPD (%)   |           |             | N/A  | 86.40      | 18.56      | N/A       | 7.95       | N/A        | N/A        | 7.55       | 35.05      | 41.05      | N/A        | 14.08      | 65.90      | N/A        | 7.84      | 4.58       | 3.17       | 29.41      |
| Comments  |           |             | Both values > PQL and correctly entered into emLine.   |            |            |           |            |            |            |            |            |            |            |            |            |            |           |            |            |            |
| Action    |           |             | Let Value Stand  |            |            |           |            |            |            |            |            |            |            |            |            |            |           |            |            |            |
| Result    |           |             | Discrepancy between values remains.  |            |            |           |            |            |            |            |            |            |            |            |            |            |           |            |            |            |
| V8        | 3/30/2010 | M           | <0.005   | 7.30       | 0.42       | <50       | 73.70      | <0.01      | <0.005     | 97.20      | 0.06       | 0.07       | <0.1       | 0.64       | 30.00      |            | 1.42      | 0.01       | 45.20      | 6.66       |
| V8        | 3/30/2010 | DUPLICATE   | <0.005   | 7.30       | 0.45       | <50       | 72.80      | <0.01      | <0.005     | 101.00     | 0.07       | 0.08       | <0.1       | 0.74       | 30.00      |            | 1.42      | 0.01       | 47.80      | 6.90       |
| RPD (%)   |           |             | N/A  | 0.00       | 6.90       | N/A       | 1.23       | N/A        | N/A        | 3.83       | 16.13      | 5.33       | N/A        | 14.49      | 0.00       | N/A        | 0.00      | 1.50       | 5.59       | 3.54       |
| Comments  |           |             |  |            |            |           |            |            |            |            |            |            |            |            |            |            |           |            |            |            |
| Action    |           |             |  |            |            |           |            |            |            |            |            |            |            |            |            |            |           |            |            |            |
| Result    |           |             |  |            |            |           |            |            |            |            |            |            |            |            |            |            |           |            |            |            |
| V1        | 4/20/2010 | M           | <0.005   | 5.00       | 0.28       | <50       | 36.20      | <0.01      | <0.005     | 16.10      | 0.01       | 0.01       | <0.1       | 0.21       | 5.00       |            | 0.59      | 0.00       | 2.68       | 0.61       |
| V1        | 4/20/2010 | DUPLICATE   | <0.005   | 8.30       | 0.30       | <50       | 36.10      | <0.01      | <0.005     | 15.60      | <0.005     | 0.02       | <0.1       | 0.26       | 12.00      |            | 0.59      | 0.00       | 2.85       | 0.89       |
| RPD (%)   |           |             | N/A  | 49.62      | 6.90       | N/A       | 0.28       | N/A        | N/A        | 3.15       | N/A        | 48.65      | N/A        | 21.28      | 82.35      | N/A        | 0.00      | 0.00       | 6.15       | 37.33      |
| Comments  |           |             | Both values correctly entered into emLine; however, main sample value not > PQL. Therefore, RPD analysis not valid in this case.                               |            |            |           |            |            |            |            |            |            |            |            |            |            |           |            |            |            |
| Action    |           |             | Request Retest   |            |            |           |            |            |            |            |            |            |            |            |            |            |           |            |            |            |
| Result    |           |             | Retest performed, see results below.   |            |            |           |            |            |            |            |            |            |            |            |            |            |           |            |            |            |
| V1 Retest | 4/20/2010 | M           | <0.005   | 5.70       | 0.24       | <50       | 37.40      | <0.01      | <0.005     | 14.60      | 0.01       | 0.02       | <0.1       | 0.25       | 7.00       |            | 0.56      | 0.00       | 2.43       | 0.64       |
| V1 Retest | 4/20/2010 | DUPLICATE   | <0.005   | 15.10      | 0.32       | <50       | 37.80      | <0.01      | <0.005     | 14.60      | <0.005     | 0.02       | <0.1       | 0.33       | 25.00      |            | 0.57      | 0.00       | 2.46       | 0.96       |
| RPD (%)   |           |             | N/A  | 90.38      | 28.57      | N/A       | 1.06       | N/A        | N/A        | 0.00       | N/A        | 19.05      | N/A        | 27.59      | 112.50     | N/A        | 1.77      | 0.00       | 1.23       | 40.00      |
| Comments  |           |             | Retest for April 20 V1 sample and duplicate. Both values > PQL and correctly entered into emLine.  |            |            |           |            |            |            |            |            |            |            |            |            |            |           |            |            |            |
| Action    |           |             | Let Value Stand  |            |            |           |            |            |            |            |            |            |            |            |            |            |           |            |            |            |
| Result    |           |             | New values entered into emLine.  |            |            |           |            |            |            |            |            |            |            |            |            |            |           |            |            |            |

RPD > 50%  
RPD > 100%

| Station  | Date       | Sample Type | Ag<br>µg/L   | Al<br>µg/L | As<br>µg/L | B<br>µg/L | Ba<br>µg/L | Be<br>µg/L | Bi<br>µg/L | Ca<br>mg/L | Cd<br>µg/L | Co<br>µg/L | Cr<br>µg/L | Cu<br>µg/L | Fe<br>µg/L | Hg<br>µg/L | K<br>mg/L | Li<br>mg/L | Mg<br>mg/L | Mn<br>µg/L |
|----------|------------|-------------|--|------------|------------|-----------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|-----------|------------|------------|------------|
| LCD      | 5/12/2010  | M           | 0.27   | 3100.00    | 1.30       | <50       | 31.00      | 0.50       | <1         | 126.00     | 156.00     | 610.00     | <1         | 51.40      | 26100.00   | <0.02      | 1.98      | 0.02       | 171.00     | 84900.00   |
| LCD      | 5/12/2010  | DUPLICATE   | 0.30   | 3080.00    | 1.30       | <50       | 31.00      | 0.50       | <1         | 128.00     | 156.00     | 630.00     | <1         | 53.60      | 26600.00   | <0.02      | 2.02      | 0.02       | 174.00     | 87300.00   |
| RPD (%)  |            |             | 10.53  | 0.65       | 0.00       | N/A       | 0.00       | 0.00       | N/A        | 1.57       | 0.00       | 3.23       | N/A        | 4.19       | 1.90       | N/A        | 2.00      | 4.26       | 1.74       | 2.79       |
| Comments |            |             |  |            |            |           |            |            |            |            |            |            |            |            |            |            |           |            |            |            |
| Action   |            |             |  |            |            |           |            |            |            |            |            |            |            |            |            |            |           |            |            |            |
| Result   |            |             |  |            |            |           |            |            |            |            |            |            |            |            |            |            |           |            |            |            |
| V2A      | 5/18/2010  | M           | <0.03  | 8.00       | 1.20       | <300      | 54.00      | <0.05      | <0.03      | 250.00     | 0.33       | 0.26       | <0.5       | 1.20       | 17.00      |            | 3.30      | 0.01       | 181.00     | 7.30       |
| V2A      | 5/18/2010  | DUPLICATE   | <0.03  | 16.00      | 1.30       | <300      | 55.70      | <0.05      | <0.03      | 262.00     | 0.31       | 0.26       | <0.5       | 1.10       | 34.00      |            | 3.40      | 0.01       | 187.00     | 7.90       |
| RPD (%)  |            |             | N/A  | 66.67      | 8.00       | N/A       | 3.10       | N/A        | N/A        | 4.69       | 6.25       | 0.00       | N/A        | 8.70       | 66.67      | N/A        | 2.99      | 0.00       | 3.26       | 7.89       |
| Comments |            |             | Both values > PQL and correctly entered into emLine. |            |            |           |            |            |            |            |            |            |            |            |            |            |           |            |            |            |
| Action   |            |             | Let Value Stand                                      |            |            |           |            |            |            |            |            |            |            |            |            |            |           |            |            |            |
| Result   |            |             | Discrepancy between values remains.                  |            |            |           |            |            |            |            |            |            |            |            |            |            |           |            |            |            |
| LCD      | 6/16/2010  | M           | <0.4   | 11800      | 4          | <1000     | 22         | <2         | <20        | 212        | 544        | 2380.00    | <20        | 244        | 62400      |            | 3         | <0.1       | 583        | 318000     |
| LCD      | 6/16/2010  | DUPLICATE   | <0.4   | 12000      | 4          | <1000     | 23         | <2         | <20        | 214        | 564        | 2500.00    | <20        | 267        | 65400      |            | 3         | <0.1       | 606        | 331000     |
| RPD (%)  |            |             | N/A  | 1.68       | 0.00       | N/A       | 4.44       | N/A        | N/A        | 0.94       | 3.61       | 4.92       | N/A        | 9.00       | 4.69       | N/A        | 0.00      | N/A        | 3.87       | 4.01       |
| Comments |            |             |  |            |            |           |            |            |            |            |            |            |            |            |            |            |           |            |            |            |
| Action   |            |             |  |            |            |           |            |            |            |            |            |            |            |            |            |            |           |            |            |            |
| Result   |            |             |  |            |            |           |            |            |            |            |            |            |            |            |            |            |           |            |            |            |
| V25      | 7/6/2010   | M           | <0.03  | 9.00       | <0.1       | <300      | 20.00      | <0.05      | <0.03      | 462.00     | 1.07       | 0.47       | <0.5       | 0.40       | 15.00      |            | 2.90      | 0.05       | 98.30      | 1130.00    |
| V25      | 7/6/2010   | DUPLICATE   | <0.03  | 8.00       | <0.1       | <300      | 20.40      | <0.05      | <0.03      | 465.00     | 1.16       | 0.55       | <0.5       | 0.40       | 14.00      |            | 2.90      | 0.05       | 100.00     | 1130.00    |
| RPD (%)  |            |             | N/A  | 11.76      | N/A        | N/A       | 1.98       | N/A        | N/A        | 0.65       | 8.07       | 15.69      | N/A        | 0.00       | 6.90       | N/A        | 0.00      | 0.00       | 1.71       | 0.00       |
| Comments |            |             |  |            |            |           |            |            |            |            |            |            |            |            |            |            |           |            |            |            |
| Action   |            |             |  |            |            |           |            |            |            |            |            |            |            |            |            |            |           |            |            |            |
| Result   |            |             |  |            |            |           |            |            |            |            |            |            |            |            |            |            |           |            |            |            |
| V2A      | 7/7/2010   | M           | <0.03  | 9.00       | 1.00       | <300      | 55.20      | <0.05      | <0.03      | 292.00     | 0.50       | 0.0700     | <0.5       | 1.3000     | 23.00      |            | 4.10      | 0.014      | 227.00     | 2.500      |
| V2A      | 7/7/2010   | DUPLICATE   | <0.03  | 9.00       | 1.10       | <300      | 55.90      | <0.05      | <0.03      | 285.00     | 0.50       | 0.0700     | <0.5       | 1.2000     | 20.00      |            | 4.20      | 0.014      | 225.00     | 2.700      |
| RPD (%)  |            |             | N/A  | 0.00       | 9.52       | N/A       | 1.26       | N/A        | N/A        | 2.43       | 0.00       | 0.00       | N/A        | 8.00       | 13.95      | N/A        | 2.41      | 0.00       | 0.88       | 7.69       |
| Comments |            |             |  |            |            |           |            |            |            |            |            |            |            |            |            |            |           |            |            |            |
| Action   |            |             |  |            |            |           |            |            |            |            |            |            |            |            |            |            |           |            |            |            |
| Result   |            |             |  |            |            |           |            |            |            |            |            |            |            |            |            |            |           |            |            |            |
| V25 BSP  | 7/13/2010  | M           | <0.03  | 26.00      | 0.20       | <300      | 32.10      | <0.05      | <0.03      | 428.00     | 0.92       | 1.18       | <0.5       | 2.10       | 40.00      | <0.05      | 2.60      | 0.04       | 89.60      | 844.00     |
| V25 BSP  | 7/13/2010  | DUPLICATE   | <0.03  | 29.00      | 0.20       | <300      | 32.50      | <0.05      | <0.03      | 427.00     | 0.90       | 1.15       | <0.5       | 1.90       | 36.00      | <0.05      | 2.60      | 0.04       | 89.40      | 844.00     |
| RPD (%)  |            |             | N/A  | 10.91      | 0.00       | N/A       | 1.24       | N/A        | N/A        | 0.23       | 2.20       | 2.58       | N/A        | 10.00      | 10.53      | N/A        | 0.00      | 2.41       | 0.22       | 0.00       |
| Comments |            |             |  |            |            |           |            |            |            |            |            |            |            |            |            |            |           |            |            |            |
| Action   |            |             |  |            |            |           |            |            |            |            |            |            |            |            |            |            |           |            |            |            |
| Result   |            |             |  |            |            |           |            |            |            |            |            |            |            |            |            |            |           |            |            |            |
| V8       | 7/14/2010  | M           | <0.005   | 235.00     | 0.69       | <50.0     | 76.40      | 0.02       | <0.005     | 103.00     | 0.12       | 0.33       | 0.50       | 1.32       | 446.00     |            | 1.07      | 0.01       | 24.80      | 29.40      |
| V8       | 7/14/2010  | DUPLICATE   | <0.005   | 222.00     | 0.68       | <50.0     | 77.90      | 0.02       | <0.005     | 104.00     | 0.13       | 0.35       | 0.50       | 1.37       | 434.00     |            | 1.07      | 0.01       | 24.80      | 30.00      |
| RPD (%)  |            |             | N/A  | 5.69       | 1.46       | N/A       | 1.94       | 0.00       | N/A        | 0.97       | 7.35       | 6.75       | 0.00       | 3.72       | 2.73       | N/A        | 0.00      | 0.00       | 0.00       | 2.02       |
| Comments |            |             |  |            |            |           |            |            |            |            |            |            |            |            |            |            |           |            |            |            |
| Action   |            |             |  |            |            |           |            |            |            |            |            |            |            |            |            |            |           |            |            |            |
| Result   |            |             |  |            |            |           |            |            |            |            |            |            |            |            |            |            |           |            |            |            |
| V2A      | 8/18/2010  | M           | <0.03  | 27.00      | 1.10       | <300      | 60.60      | <0.05      | <0.03      | 310.00     | 0.51       | 0.07       | <0.5       | 1.40       | 63.00      |            | 4.80      | 0.02       | 258.00     | 3.00       |
| V2A      | 8/18/2010  | DUPLICATE   | <0.03  | 27.00      | 1.00       | <300      | 59.70      | <0.05      | <0.03      | 316.00     | 0.50       | 0.07       | <0.5       | 1.50       | 55.00      |            | 5.00      | 0.02       | 266.00     | 2.80       |
| RPD (%)  |            |             | N/A  | 0.00       | 9.52       | N/A       | 1.50       | N/A        | N/A        | 1.92       | 1.98       | 0.00       | N/A        | 6.90       | 13.56      | N/A        | 4.08      | 0.00       | 3.05       | 6.90       |
| Comments |            |             |  |            |            |           |            |            |            |            |            |            |            |            |            |            |           |            |            |            |
| Action   |            |             |  |            |            |           |            |            |            |            |            |            |            |            |            |            |           |            |            |            |
| Result   |            |             |  |            |            |           |            |            |            |            |            |            |            |            |            |            |           |            |            |            |
| V2A      | 9/7/2010   | M           | <0.03  | 9.00       | 1.00       | <300      | 57.30      | <0.05      | <0.03      | 304.00     | 0.56       | 0.06       | 0.80       | 1.30       | 19.00      |            | 4.70      | 0.02       | 247.00     | 2.30       |
| V2A      | 9/7/2010   | DUPLICATE   | <0.03  | 23.00      | 1.20       | <300      | 58.10      | <0.05      | <0.03      | 280.00     | 0.47       | 0.11       | <0.5       | 1.50       | 43.00      |            | 4.60      | 0.02       | 240.00     | 2.60       |
| RPD (%)  |            |             | N/A  | 87.50      | 18.18      | N/A       | 1.39       | N/A        | N/A        | 8.22       | 17.48      | 58.82      | N/A        | 14.29      | 77.42      | N/A        | 2.15      | 0.00       | 2.87       | 12.24      |
| Comments |            |             | Both values > PQL and correctly entered into emLine. |            |            |           |            |            |            |            |            |            |            |            |            |            |           |            |            |            |
| Action   |            |             | Let Value Stand                                      |            |            |           |            |            |            |            |            |            |            |            |            |            |           |            |            |            |
| Result   |            |             | Discrepancy between values remains.                  |            |            |           |            |            |            |            |            |            |            |            |            |            |           |            |            |            |
| V22      | 9/7/2010   | M           | 0.22   | 1600.00    | 3.60       | <50       | 44.00      | 0.30       | <1         | 222.00     | 127.00     | 710.00     | <1         | 495.00     | 51300.00   |            | 2.71      | 0.05       | 115.00     | 50000.00   |
| V22      | 9/7/2010   | DUPLICATE   | 0.22   | 1600.00    | 3.10       | <50       | 32.00      | 0.30       | <1         | 224.00     | 127.00     | 690.00     | <1         | 480.00     | 51300.00   |            | 2.66      | 0.05       | 113.00     | 48800.00   |
| RPD (%)  |            |             | 0.00   | 0.00       | 14.93      | N/A       | 31.58      | 0.00       | N/A        | 0.90       | 0.00       | 2.86       | N/A        | 3.08       | 0.00       | N/A        | 1.86      | 0.00       | 1.75       | 2.43       |
| Comments |            |             |  |            |            |           |            |            |            |            |            |            |            |            |            |            |           |            |            |            |
| Action   |            |             |  |            |            |           |            |            |            |            |            |            |            |            |            |            |           |            |            |            |
| Result   |            |             |  |            |            |           |            |            |            |            |            |            |            |            |            |            |           |            |            |            |
| V2A      | 10/21/2010 | M           | <0.03  | 25.00      | 1.00       | <300      | 59.40      | <0.05      | <0.03      | 288.00     | 0.58       | 0.11       | <0.5       | 1.30       | 47.00      |            | 3.80      | 0.01       | 214.00     | 2.70       |
| V2A      | 10/21/2010 | DUPLICATE   | <0.03  | 28.00      | 1.00       | <300      | 59.90      | <0.05      | <0.03      | 271.00     | 0.58       | 0.11       | <0.5       | 1.40       | 46.00      |            | 3.90      | 0.01       | 224.00     | 2.50       |
| RPD (%)  |            |             | N/A  | 11.32      | 0.00       | N/A       | 0.84       | N/A        | N/A        | 6.08       | 0.00       | 0.00       | N/A        | 7.41       | 2.15       | N/A        | 2.60      | 8.00       | 4.57       | 7.69       |
| Comments |            |             |  |            |            |           |            |            |            |            |            |            |            |            |            |            |           |            |            |            |
| Action   |            |             |  |            |            |           |            |            |            |            |            |            |            |            |            |            |           |            |            |            |
| Result   |            |             |  |            |            |           |            |            |            |            |            |            |            |            |            |            |           |            |            |            |

RPD > 50%  
RPD > 100%

Table D-19: Vangorda Creek Drainage Water Quality  
2010 QA/QC Duplicates - Seepage - Total Metals



| Station  | Date      | Sample Type | Ag<br>µg/L | Al<br>µg/L   | As<br>µg/L | B<br>µg/L | Ba<br>µg/L | Be<br>µg/L | Bi<br>µg/L | Ca<br>mg/L | Cd<br>µg/L   | Co<br>ug/L | Cr<br>µg/L | Cu<br>µg/L   | Fe<br>µg/L | Hg<br>µg/L | K<br>mg/L | Li<br>mg/L | Mg<br>mg/L | Mn<br>µg/L |  |
|----------|-----------|-------------|------------|--|------------|-----------|------------|------------|------------|------------|--|------------|------------|--|------------|------------|-----------|------------|------------|------------|--|
| V25 BSP  | 11/1/2010 | M           | <0.005     | 2.30   | 0.14       | <50       | 29.40      | <0.01      | <0.005     | 220.00     | 0.16   | 0.02       | <0.1       | 1.25   | 7.00       | 0.02       | 1.85      | 0.01       | 44.10      | 3.35       |  |
| V25 BSP  | 11/1/2010 | DUPLICATE   | <0.005     | 2.10   | 0.12       | <50       | 30.30      | <0.01      | <0.005     | 220.00     | 0.18   | 0.02       | <0.1       | 1.21   | 6.00       | 0.02       | 1.84      | 0.01       | 44.10      | 3.18       |  |
| RPD (%)  |           |             | N/A        | 9.09   | 15.38      | N/A       | 3.02       | N/A        | N/A        | 0.00       | 10.40  | 9.52       | N/A        | 3.25   | 15.38      | 12.50      | 0.54      | 0.79       | 0.00       | 5.21       |  |
| Comments |           |             |            |  |            |           |            |            |            |            |  |            |            |  |            |            |           |            |            |            |  |
| Action   |           |             |            |  |            |           |            |            |            |            |  |            |            |  |            |            |           |            |            |            |  |
| Result   |           |             |            |  |            |           |            |            |            |            |  |            |            |  |            |            |           |            |            |            |  |
| V8       | 12/1/2010 | M           | <0.005     | 24.20  | 0.41       | <50       | 66.90      | <0.01      | 0.01       | 81.40      | 0.06   | 0.10       | <0.1       | 0.63   | 65.00      |            | 1.18      | 0.01       | 35.00      | 10.50      |  |
| V8       | 12/1/2010 | DUPLICATE   | <0.005     | 10.60  | 0.37       | <50       | 64.50      | <0.01      | <0.005     | 83.70      | 0.05   | 0.05       | <0.1       | 0.57   | 31.00      |            | 1.24      | 0.01       | 35.40      | 6.37       |  |
| RPD (%)  |           |             | N/A        | 78.16  | 10.26      | N/A       | 3.65       | N/A        | N/A        | 2.79       | 10.53  | 68.53      | N/A        | 10.00  | 70.83      | N/A        | 4.96      | 3.85       | 1.14       | 48.96      |  |
| Comments |           |             |            | Both values > PQL and correctly entered into emLine. |            |           |            |            |            |            | Both values > PQL and correctly entered into emLine. |            |            | Both values > PQL and correctly entered into emLine. |            |            |           |            |            |            |  |
| Action   |           |             |            | Let Value Stand                                      |            |           |            |            |            |            | Let Value Stand                                      |            |            | Let Value Stand                                      |            |            |           |            |            |            |  |
| Result   |           |             |            | Discrepancy between values remains.                  |            |           |            |            |            |            | Discrepancy between values remains.                  |            |            | Discrepancy between values remains.                  |            |            |           |            |            |            |  |

RPD > 50%  
RPD > 100%





Table D-19: Vangorda Creek Drainage Water Quality  
2010 QA/QC Duplicates - Seepage - Total Metals



| Station  | Date      | Sample Type | Mo<br>µg/L   | Na<br>mg/L | Ni<br>µg/L | P<br>mg/L | Pb<br>µg/L | S<br>mg/L | Sb<br>µg/L | Se<br>µg/L | Si<br>µg/L | Sn<br>µg/L | Sr<br>µg/L | Ti<br>µg/L | Tl<br>µg/L | U<br>µg/L | V<br>µg/L | Zn<br>µg/L | Zr<br>µg/L |
|----------|-----------|-------------|--|------------|------------|-----------|------------|-----------|------------|------------|------------|------------|------------|------------|------------|-----------|-----------|------------|------------|
| V25 BSP  | 11/1/2010 | M           | 0.33   | 6.77       | 0.80       | <0.002    | 0.12       | 240.00    | 0.12       | 0.53       | 5640.00    | <0.01      | 702.00     | <0.5       | 0.03       | 2.01      | <0.2      | 78.90      | <0.1       |
| V25 BSP  | 11/1/2010 | DUPLICATE   | 0.31   | 6.72       | 0.73       | 0.00      | 0.27       | 237.00    | 0.13       | 0.51       | 5740.00    | <0.01      | 711.00     | <0.5       | 0.03       | 2.03      | <0.2      | 78.00      | <0.1       |
| RPD (%)  |           |             | 6.25   | 0.74       | 9.15       | N/A       | 75.65      | 1.26      | 8.00       | 3.85       | 1.76       | N/A        | 1.27       | N/A        | 3.64       | 0.99      | N/A       | 1.15       | N/A        |
| Comments |           |             | Both values > PQL and correctly entered into emLine. |            |            |           |            |           |            |            |            |            |            |            |            |           |           |            |            |
| Action   |           |             | Let Value Stand                                      |            |            |           |            |           |            |            |            |            |            |            |            |           |           |            |            |
| Result   |           |             | Discrepancy between values remains.                  |            |            |           |            |           |            |            |            |            |            |            |            |           |           |            |            |
| V8       | 12/1/2010 | M           | 1.03   | 4.20       | 1.51       |           | 0.22       | 53.00     | 0.13       | 1.01       | 5170.00    | <0.01      | 328.00     | 0.700      | 0.01       | 6.71      | <0.2      | 11.00      | <0.1       |
| V8       | 12/1/2010 | DUPLICATE   | 0.93   | 4.20       | 1.49       |           | 0.10       | 57.00     | 0.13       | 1.08       | 5340.00    | <0.01      | 316.00     | <0.5       | 0.01       | 6.21      | <0.2      | 10.20      | <0.1       |
| RPD (%)  |           |             | 10.20  | 0.00       | 1.33       | N/A       | 73.89      | 7.27      | 0.00       | 6.70       | 3.24       | N/A        | 3.73       | N/A        | 18.18      | 7.74      | N/A       | 7.55       | N/A        |
| Comments |           |             | Both values > PQL and correctly entered into emLine. |            |            |           |            |           |            |            |            |            |            |            |            |           |           |            |            |
| Action   |           |             | Let Value Stand                                      |            |            |           |            |           |            |            |            |            |            |            |            |           |           |            |            |
| Result   |           |             | Discrepancy between values remains.                  |            |            |           |            |           |            |            |            |            |            |            |            |           |           |            |            |

RPD > 50%  
RPD > 100%

| Station  | Date      | Sample Type | Acid(pH4.5)<br>mg/L | Acid(pH8.3)<br>mg/L | ALK<br>mg/L | ALKPP<br>mg/L | CaCO3<br>mg/L | CaCO3-d<br>mg/L | Chloride<br>mg/L | CN(wad)<br>mg/L | CNTHIO<br>mg/L | CO3<br>mg/L | Colour<br>TCU | COND<br>µmho/cm | DOC<br>mg/L | HCO3<br>mg/L | NH3<br>mg/L | OH<br>mg/L | pH   | SO4-d<br>mg/L | TDS<br>mg/L | TOC<br>mg/L  | TSS<br>mg/L | TURB<br>NTU |
|----------|-----------|-------------|---------------------|---------------------|-------------|---------------|---------------|-----------------|------------------|-----------------|----------------|-------------|---------------|-----------------|-------------|--------------|-------------|------------|------|---------------|-------------|--|-------------|-------------|
| V25 BSP  | 6/22/2010 | M           |                     |                     | 74          | <0.5          | 183           | 182             | <0.5             |                 | <0.0005        | <0.5        | <5            | 425             |             | 90           | <0.05       | <0.5       | 8    | 150           | 290         |  | 20          | 6.9         |
| V25 BSP  | 6/22/2010 | SPLIT       |                     |                     | 74          | <0.5          | 193           | 183.00          | <0.5             |                 |                | <0.5        | <5            | 426             |             | 91           | <0.05       | <0.5       | 8    | 130           | 280         |  | 52          | 10.7        |
| RPD (%)  |           |             | N/A                 | N/A                 | 0.00        | N/A           | 5.32          | 0.55            | N/A              | N/A             | N/A            | N/A         | N/A           | 0.24            | N/A         | 1.10         | N/A         | N/A        | 0.00 | 14.29         | 3.51        | N/A  | 88.89       | 43.18       |
| Comments |           |             |                     |                     |             |               |               |                 |                  |                 |                |             |               |                 |             |              |             |            |      |               |             | Both values > PQL and correctly entered into emLine.   |             |             |
| Action   |           |             |                     |                     |             |               |               |                 |                  |                 |                |             |               |                 |             |              |             |            |      |               |             | Let Value Stand  |             |             |
| Result   |           |             |                     |                     |             |               |               |                 |                  |                 |                |             |               |                 |             |              |             |            |      |               |             | Discrepancy between values remains. Retest not carried out because insufficient sample remaining to reanalyze.           |             |             |
| V1       | 7/14/2010 | M           |                     |                     | 26.00       | <0.5          | 23.80         | 27.20           | <0.5             |                 |                | <0.5        |               | 65.00           |             | 1.10         | 31.00       | <0.05      | <0.5 | 7.56          | 6.80        | 38.00  | 1.80        | <1.0        |
| V1       | 7/14/2010 | SPLIT       |                     |                     | 25.00       | <0.5          | 24.10         | 25.40           | <0.5             |                 |                | <0.5        |               | 65.00           |             | 1.80         | 30.00       | <0.05      | <0.5 | 7.52          | 8.30        | 44.00  | 1.80        | 2.00        |
| RPD (%)  |           |             | N/A                 | N/A                 | 3.92        | N/A           | 1.25          | 6.84            | N/A              | N/A             | N/A            | N/A         | N/A           | 0.00            | 48.28       | 3.28         | N/A         | N/A        | 0.04 | 19.87         | 14.63       | 0.00   | N/A         | N/A         |
| Comments |           |             |                     |                     |             |               |               |                 |                  |                 |                |             |               |                 |             |              |             |            |      |               |             |  |             |             |
| Action   |           |             |                     |                     |             |               |               |                 |                  |                 |                |             |               |                 |             |              |             |            |      |               |             |  |             |             |
| Result   |           |             |                     |                     |             |               |               |                 |                  |                 |                |             |               |                 |             |              |             |            |      |               |             |  |             |             |
| V5       | 8/4/2010  | M           |                     |                     | 180.00      | 3.00          | 240.00        | 264.00          | 1.00             |                 |                | 3.60        |               | 477.00          |             | 3.10         | 210.00      | <0.05      | <0.5 | 8.37          | 75.00       | 330.00   | 3.70        | 4.00        |
| V5       | 8/4/2010  | SPLIT       |                     |                     | 180.00      | 3.40          | 245.00        | 260.00          | 0.90             |                 |                | 4.10        |               | 478.00          |             | 3.40         | 210.00      | <0.05      | <0.5 | 8.38          | 74.00       | 310.00   | 3.10        | 5.00        |
| RPD (%)  |           |             | N/A                 | N/A                 | 0.00        | 12.50         | 2.06          | 1.53            | 10.53            | N/A             | N/A            | 12.99       | N/A           | 0.21            | 9.23        | 0.00         | N/A         | N/A        | 0.01 | 1.34          | 6.25        | 17.65  | 22.22       | N/A         |
| Comments |           |             |                     |                     |             |               |               |                 |                  |                 |                |             |               |                 |             |              |             |            |      |               |             |  |             |             |
| Action   |           |             |                     |                     |             |               |               |                 |                  |                 |                |             |               |                 |             |              |             |            |      |               |             |  |             |             |
| Result   |           |             |                     |                     |             |               |               |                 |                  |                 |                |             |               |                 |             |              |             |            |      |               |             |  |             |             |
| V25 BSP  | 8/5/2010  | M           |                     |                     | 56.00       | <0.5          | 773.00        | 844.00          | <0.5             |                 | <0.0005        | <0.5        | <5            | 1340.00         |             | 68.00        | <0.05       | <0.5       | 7.68 | 700.00        | 1100.00     |  | <1          | 0.30        |
| V25 BSP  | 8/5/2010  | SPLIT       |                     |                     | 57.00       | <0.5          | 767.00        | 834.00          | <0.5             |                 | <0.0005        | <0.5        | <5            | 1370.00         |             | 70.00        | <0.05       | <0.5       | 7.61 | 690.00        | 1200.00     |  | <1          | 0.20        |
| RPD (%)  |           |             | N/A                 | N/A                 | 1.77        | N/A           | 0.78          | 1.19            | N/A              | N/A             | N/A            | N/A         | N/A           | 2.21            | N/A         | 2.90         | N/A         | N/A        | 0.07 | 1.44          | 8.70        | N/A  | N/A         | 40.00       |
| Comments |           |             |                     |                     |             |               |               |                 |                  |                 |                |             |               |                 |             |              |             |            |      |               |             |  |             |             |
| Action   |           |             |                     |                     |             |               |               |                 |                  |                 |                |             |               |                 |             |              |             |            |      |               |             |  |             |             |
| Result   |           |             |                     |                     |             |               |               |                 |                  |                 |                |             |               |                 |             |              |             |            |      |               |             |  |             |             |
| V5       | 9/7/2010  | M           |                     |                     | 180.00      | 2.60          | 233.00        | 235.00          | 1.50             |                 |                | 3.10        |               | 479.00          |             | 5.60         | 220.00      | 0.20       | <0.5 | 8.39          | 82.00       | 330.00   | 5.70        | 6.00 2.50   |
| V5       | 9/7/2010  | SPLIT       |                     |                     | 180.00      | 2.20          | 239.00        | 238.00          | 1.60             |                 |                | 2.60        |               | 477.00          |             | 6.60         | 220.00      | 0.31       | <0.5 | 8.35          | 83.00       | 330.00   | 6.30        | 6.00 1.80   |
| RPD (%)  |           |             | N/A                 | N/A                 | 0.00        | 16.67         | 2.54          | 1.27            | 6.45             | N/A             | N/A            | 17.54       | N/A           | 0.42            | 16.39       | 0.00         | 43.14       | N/A        | 0.04 | 1.21          | 0.00        | 10.00  | 0.00        | 32.56       |
| Comments |           |             |                     |                     |             |               |               |                 |                  |                 |                |             |               |                 |             |              |             |            |      |               |             |  |             |             |
| Action   |           |             |                     |                     |             |               |               |                 |                  |                 |                |             |               |                 |             |              |             |            |      |               |             |  |             |             |
| Result   |           |             |                     |                     |             |               |               |                 |                  |                 |                |             |               |                 |             |              |             |            |      |               |             |  |             |             |
| V1       | 10/5/2010 | M           |                     |                     | 34.00       | <0.5          | 38.50         | 39.90           | <0.5             |                 |                | <0.5        |               | 88.00           |             | 1.10         | 41.00       | 0.36       | <0.5 | 7.58          | 9.60        | 82.00  | 1.70        | <1 0.20     |
| V1       | 10/5/2010 | SPLIT       |                     |                     | 32.00       | <0.5          | 38.80         | 39.50           | <0.5             |                 |                | <0.5        |               | 87.00           |             | 1.90         | 39.00       | <0.05      | <0.5 | 7.48          | 11.00       | 86.00  | 2.10        | <1 0.20     |
| RPD (%)  |           |             | N/A                 | N/A                 | 6.06        | N/A           | 0.78          | 1.01            | N/A              | N/A             | N/A            | N/A         | N/A           | 1.14            | 53.33       | 5.00         | N/A         | N/A        | 0.10 | 13.59         | 4.76        | 21.05  | N/A         | 0.00        |
| Comments |           |             |                     |                     |             |               |               |                 |                  |                 |                |             |               |                 |             |              |             |            |      |               |             | Both values correctly entered into emLine; however, neither value > PQL. Therefore, RPD analysis not valid in this case. |             |             |
| Action   |           |             |                     |                     |             |               |               |                 |                  |                 |                |             |               |                 |             |              |             |            |      |               |             | Let Value Stand  |             |             |
| Result   |           |             |                     |                     |             |               |               |                 |                  |                 |                |             |               |                 |             |              |             |            |      |               |             | Discrepancy between values remains.  |             |             |
| V15      | 10/7/2010 | M           | <0.5                | 52.20               | 560.00      | <0.5          |               | 2950.00         | 1.10             |                 |                | <0.5        |               | 3740.00         |             | 680.00       |             | <0.5       | 7.77 | 2500.00       |             |  | <1          |             |
| V15      | 10/7/2010 | SPLIT       | <0.5                | 58.00               | 560.00      | <0.5          |               | 2890.00         | 2.00             |                 |                | <0.5        |               | 3760.00         |             | 680.00       |             | <0.5       | 7.77 | 1900.00       |             |  | <1          |             |
| RPD (%)  |           |             | N/A                 | 10.53               | 0.00        | N/A           | N/A           | 2.05            | 58.06            | N/A             | N/A            | N/A         | N/A           | 0.53            | N/A         | 0.00         | N/A         | N/A        | 0.00 | 27.27         | N/A         | N/A  | N/A         | N/A         |
| Comments |           |             |                     |                     |             |               |               |                 |                  |                 |                |             |               |                 |             |              |             |            |      |               |             | Both values correctly entered into emLine; however, neither value > PQL. Therefore, RPD analysis not valid in this case. |             |             |
| Action   |           |             |                     |                     |             |               |               |                 |                  |                 |                |             |               |                 |             |              |             |            |      |               |             | Let Value Stand  |             |             |
| Result   |           |             |                     |                     |             |               |               |                 |                  |                 |                |             |               |                 |             |              |             |            |      |               |             | Discrepancy between values remains.  |             |             |

RPD > 50%



Table D-20: Vangorda Creek Drainage Water Quality  
2010 QA/QC Splits - General Parameters

| Station  | Date       | Sample Type | Acid(pH4.5)<br>mg/L  | Acid(pH8.3)<br>mg/L | ALK<br>mg/L | ALKPP<br>mg/L | CaCO3<br>mg/L | CaCO3-d<br>mg/L | Chloride<br>mg/L | CN(wad)<br>mg/L | CNTHIO<br>mg/L | CO3<br>mg/L | Colour<br>TCU | COND<br>µmho/cm | DOC<br>mg/L | HCO3<br>mg/L | NH3<br>mg/L | OH<br>mg/L | pH   | SO4-d<br>mg/L | TDS<br>mg/L | TOC<br>mg/L | TSS<br>mg/L | TURB<br>NTU |
|----------|------------|-------------|--|---------------------|-------------|---------------|---------------|-----------------|------------------|-----------------|----------------|-------------|---------------|-----------------|-------------|--------------|-------------|------------|------|---------------|-------------|-------------|-------------|-------------|
| V15      | 11/18/2010 | M           | <0.5   | 51.10               | 540.00      | <0.5          |               | 3060.00         | 2.20             |                 |                | <0.5        |               | 3880.00         |             | 660.00       |             | <0.5       | 7.75 | 2900.00       |             |             |             | <1          |
| V15      | 11/18/2010 | SPLIT       | <0.5   | 51.50               | 540.00      | <0.5          |               | 2960.00         |                  |                 |                | <0.5        |               | 3880.00         |             | 660.00       |             | <0.5       | 7.79 | 2500.00       |             |             |             | <1          |
| RPD (%)  |            |             | N/A  | 0.78                | 0.00        | N/A           | N/A           | 3.32            | N/A              | N/A             | N/A            | N/A         | N/A           | 0.00            | N/A         | 0.00         | N/A         | N/A        | 0.04 | 14.81         | N/A         | N/A         | N/A         | N/A         |
| Comments |            |             |  |                     |             |               |               |                 |                  |                 |                |             |               |                 |             |              |             |            |      |               |             |             |             |             |
| Action   |            |             |  |                     |             |               |               |                 |                  |                 |                |             |               |                 |             |              |             |            |      |               |             |             |             |             |
| Result   |            |             |  |                     |             |               |               |                 |                  |                 |                |             |               |                 |             |              |             |            |      |               |             |             |             |             |
| V15      | 12/16/2010 | M           | <0.5   | 61.40               | 560.00      | <0.5          |               | 3110.00         | 3.00             |                 |                | <0.5        |               | 4290.00         |             | 680.00       |             | <0.5       | 7.72 | 2700.00       |             |             |             | <1          |
| V15      | 12/16/2010 | SPLIT       | <0.5   | 53.20               | 560.00      | <0.5          |               | 3210.00         | 1.50             |                 |                | <0.5        |               | 4200.00         |             | 690.00       |             | <0.5       | 7.94 | 2700.00       |             |             |             | <1          |
| RPD (%)  |            |             | N/A  | 14.31               | 0.00        | N/A           | N/A           | 3.16            | 66.67            | N/A             | N/A            | N/A         | N/A           | 2.12            | N/A         | 1.46         | N/A         | N/A        | 0.22 | 0.00          | N/A         | N/A         | N/A         | N/A         |
| Comments |            |             | Both values correctly entered into emLine; however, split value not > PQL. Therefore, RPD analysis not valid in this case. |                     |             |               |               |                 |                  |                 |                |             |               |                 |             |              |             |            |      |               |             |             |             |             |
| Action   |            |             | Let Value Stand  |                     |             |               |               |                 |                  |                 |                |             |               |                 |             |              |             |            |      |               |             |             |             |             |
| Result   |            |             | Discrepancy between values remains.  |                     |             |               |               |                 |                  |                 |                |             |               |                 |             |              |             |            |      |               |             |             |             |             |
| V23      | 12/16/2010 | M           |  |                     | 220.00      | <0.5          | 773.00        | 705.00          | 1.40             |                 |                | <0.5        |               | 1300.00         |             | 270.00       |             | 0.03       | <0.5 | 8.06          | 530.00      | 970.00      |             | <4          |
| V23      | 12/16/2010 | SPLIT       |  |                     | 190.00      | <0.5          | 678.00        | 647.00          | 0.80             |                 |                | <0.5        |               | 1140.00         |             | 230.00       |             | 0.01       | <0.5 | 8.01          | 420.00      | 850.00      |             | <4          |
| RPD (%)  |            |             | N/A  | N/A                 | 14.63       | N/A           | 13.09         | 8.58            | 54.55            | N/A             | N/A            | N/A         | N/A           | 13.11           | N/A         | 16.00        | 60.00       | N/A        | 0.05 | 23.16         | 13.19       | N/A         | N/A         | N/A         |
| Comments |            |             | Both values correctly entered into emLine; however, neither value > PQL. Therefore, RPD analysis not valid in this case.   |                     |             |               |               |                 |                  |                 |                |             |               |                 |             |              |             |            |      |               |             |             |             |             |
| Action   |            |             | Let Value Stand  |                     |             |               |               |                 |                  |                 |                |             |               |                 |             |              |             |            |      |               |             |             |             |             |
| Result   |            |             | Discrepancy between values remains.  |                     |             |               |               |                 |                  |                 |                |             |               |                 |             |              |             |            |      |               |             |             |             |             |

RPD > 50%



| Station | Date       | Sample Type | Ag-d   | Al-d  | As-d  | Ba-d  | B-d  | Be-d  | Bi-d  | Ca-d   | Cd-d | Co-d  | Cr-d | Cu-d | Fe-d | Hg-d  | K-d  | Li-d  | Mg-d   | Mn-d | Mo-d   | Na-d | Ni-d  | Pb-d   | Sb-d | S-d  | Se-d   | Si-d | Sn-d    | Sr-d | Ti-d  | Tl-d   | U-d  | V-d   | Zn-d  | Zr-d |         |      |  |  |
|---------|------------|-------------|--------|-------|-------|-------|------|-------|-------|--------|------|-------|------|------|------|-------|------|-------|--------|------|--------|------|-------|--------|------|------|--------|------|---------|------|-------|--------|------|-------|-------|------|---------|------|--|--|
|         |            |             | µg/L   | µg/L  | µg/L  | µg/L  | µg/L | µg/L  | µg/L  | mg/L   | µg/L | µg/L  | µg/L | µg/L | µg/L | µg/L  | mg/L | mg/L  | mg/L   | mg/L | µg/L   | mg/L | µg/L  | µg/L   | µg/L | mg/L | µg/L   | µg/L | µg/L    | µg/L | µg/L  | µg/L   | µg/L | µg/L  | µg/L  |      |         |      |  |  |
| V15     | 10/7/2010  | M           | <0.03  | 6.00  | 0.40  | 45.90 | <300 | <0.05 | <0.03 | 430.00 |      | 1.57  | 0.05 | <0.5 | 2.10 | 8.00  | 6.60 | 0.03  | 457.00 |      | 0.70   | 0.80 | 15.10 | 121.00 | 0.23 | <0.1 | 862.00 | 0.70 | 6330.00 |      | <0.05 | 1520.0 | <3   | <0.01 | 58.30 | <1   | 3240.00 | <0.5 |  |  |
| V15     | 10/7/2010  | SPLIT       | <0.03  | 6.00  | 0.40  | 45.50 | <300 | <0.05 | <0.03 | 416.00 |      | 1.63  | 0.06 | <0.5 | 2.10 | 7.00  | 6.50 | 0.03  | 449.00 |      | 0.80   | 0.80 | 14.90 | 120.00 | 0.22 | <0.1 | 842.00 | 0.60 | 6170.00 |      | <0.05 | 1490.0 | <3   | <0.01 | 58.40 | <1   | 3150.00 | <0.5 |  |  |
|         |            | RPD (%)     | N/A    | 0.00  | 0.00  | 0.88  | N/A  | N/A   | N/A   | 3.31   |      | 3.75  |      |      |      | 18.18 | N/A  | 0.00  |        |      | 13.33  |      |       |        |      |      |        |      |         |      |       |        |      |       |       |      |         |      |  |  |
|         |            | Comments    |        |       |       |       |      |       |       |        |      |       |      |      |      |       |      |       |        |      |        |      |       |        |      |      |        |      |         |      |       |        |      |       |       |      |         |      |  |  |
|         |            | Action      |        |       |       |       |      |       |       |        |      |       |      |      |      |       |      |       |        |      |        |      |       |        |      |      |        |      |         |      |       |        |      |       |       |      |         |      |  |  |
|         |            | Result      |        |       |       |       |      |       |       |        |      |       |      |      |      |       |      |       |        |      |        |      |       |        |      |      |        |      |         |      |       |        |      |       |       |      |         |      |  |  |
| V15     | 11/18/2010 | M           | <0.03  | 8.00  | 0.50  | 44.20 | <300 | <0.05 | <0.03 | 453.00 |      | 2.02  | 0.06 | <0.5 | 2.60 | 20.00 | 6.70 | 0.02  | 469.00 |      | 1.60   | 0.70 | 15.00 | 136.00 | 0.41 | <0.1 | 899.00 | 0.30 | 6990.00 |      | 0.08  | 1530.0 | <3   | <0.01 | 52.30 | <1   | 3750.00 | <0.5 |  |  |
| V15     | 11/18/2010 | SPLIT       | <0.03  | 6.00  | 0.40  | 43.00 | <300 | <0.05 | <0.03 | 448.00 |      | 1.96  | 0.05 | <0.5 | 2.00 | 16.00 | 6.40 | 0.02  | 447.00 |      | 1.20   | 0.60 | 14.30 | 134.00 | 0.23 | <0.1 | 858.00 | <0.2 | 6910.00 |      | <0.05 | 1510.0 | <3   | <0.01 | 52.50 | <1   | 3620.00 | <0.5 |  |  |
|         |            | RPD (%)     | N/A    | 28.57 | 22.22 | 2.75  | N/A  | N/A   | N/A   | 1.11   |      | 3.02  |      |      |      | 18.18 | N/A  | 26.09 |        |      | 22.22  |      |       |        |      |      |        |      |         |      |       |        |      |       |       |      |         |      |  |  |
|         |            | Comments    |        |       |       |       |      |       |       |        |      |       |      |      |      |       |      |       |        |      |        |      |       |        |      |      |        |      |         |      |       |        |      |       |       |      |         |      |  |  |
|         |            | Action      |        |       |       |       |      |       |       |        |      |       |      |      |      |       |      |       |        |      |        |      |       |        |      |      |        |      |         |      |       |        |      |       |       |      |         |      |  |  |
|         |            | Result      |        |       |       |       |      |       |       |        |      |       |      |      |      |       |      |       |        |      |        |      |       |        |      |      |        |      |         |      |       |        |      |       |       |      |         |      |  |  |
|         |            |             |        |       |       |       |      |       |       |        |      |       |      |      |      |       |      |       |        |      |        |      |       |        |      |      |        |      |         |      |       |        |      |       |       |      |         |      |  |  |
| V15     | 12/16/2010 | M           | <0.03  | 4.00  | 0.50  | 47.10 | <300 | <0.05 | <0.03 | 425.00 |      | 1.95  | 0.07 | <0.5 | 2.40 | 9.00  | 7.00 | 0.03  | 498.00 |      | 2.10   | 0.60 | 15.40 | 163.00 | 0.28 | 0.20 | 965.00 | 0.60 | 5850.00 |      | <0.05 | 1650.0 | <3   | <0.01 | 63.40 | <1   | 4170.00 | <0.5 |  |  |
| V15     | 12/16/2010 | SPLIT       | <0.03  | 4.00  | 0.50  | 47.40 | <300 | <0.05 | <0.03 | 470.00 |      | 2.02  | 0.06 | <0.5 | 2.40 | 10.00 | 7.00 | 0.03  | 495.00 |      | 1.70   | 0.70 | 15.50 | 158.00 | 0.24 | <0.1 | 945.00 | 0.60 | 6510.00 |      | <0.05 | 1640.0 | <3   | <0.01 | 62.50 | <1   | 4090.00 | <0.5 |  |  |
|         |            | RPD (%)     | N/A    | 0.00  | 0.00  | 0.63  | N/A  | N/A   | N/A   | 10.06  |      | 3.53  |      |      |      | 15.38 | N/A  | 0.00  |        |      | 10.53  |      |       |        |      |      |        |      |         |      |       |        |      |       |       |      |         |      |  |  |
|         |            | Comments    |        |       |       |       |      |       |       |        |      |       |      |      |      |       |      |       |        |      |        |      |       |        |      |      |        |      |         |      |       |        |      |       |       |      |         |      |  |  |
|         |            | Action      |        |       |       |       |      |       |       |        |      |       |      |      |      |       |      |       |        |      |        |      |       |        |      |      |        |      |         |      |       |        |      |       |       |      |         |      |  |  |
|         |            | Result      |        |       |       |       |      |       |       |        |      |       |      |      |      |       |      |       |        |      |        |      |       |        |      |      |        |      |         |      |       |        |      |       |       |      |         |      |  |  |
|         |            |             |        |       |       |       |      |       |       |        |      |       |      |      |      |       |      |       |        |      |        |      |       |        |      |      |        |      |         |      |       |        |      |       |       |      |         |      |  |  |
| V23     | 12/16/2010 | M           | <0.005 | 1.70  | 1.59  | 56.30 | <50  | <0.1  | 0.01  | 137.00 |      | 1.08  | 5.67 | <0.1 | 1.48 | 17.00 | 4.63 | 0.03  | 88.00  |      | 149.00 | 3.23 | 13.10 | 142.00 | 1.12 | 4.21 | 206.00 | 1.83 | 3790.00 |      | 0.02  | 955.0  | <0.5 | 0.946 | 15.00 | <0.2 | 4960.00 | <0.1 |  |  |
| V23     | 12/16/2010 | SPLIT       | <0.02  | <3    | 1.40  | 55.00 | <50  | <0.1  | <1    | 129.00 |      | 0.94  | 4.70 | <1   | 1.10 | 17.00 | 3.62 | 0.03  | 78.80  |      | 112.00 | 2.00 | 11.30 | 127.00 | 0.90 | 3.70 | 173.00 | 1.50 | 3760.00 |      | <5    | 805.0  | <5   | 0.830 | 11.60 | <5   | 4910.00 | <0.5 |  |  |
|         |            | RPD (%)     | N/A    | N/A   | 12.71 | 2.34  | N/A  | N/A   | N/A   | 6.02   |      | 13.86 |      |      |      | 18.71 | N/A  | 29.46 |        |      | 0.00   |      |       |        |      |      |        |      |         |      |       |        |      |       |       |      |         |      |  |  |
|         |            | Comments    |        |       |       |       |      |       |       |        |      |       |      |      |      |       |      |       |        |      |        |      |       |        |      |      |        |      |         |      |       |        |      |       |       |      |         |      |  |  |
|         |            | Action      |        |       |       |       |      |       |       |        |      |       |      |      |      |       |      |       |        |      |        |      |       |        |      |      |        |      |         |      |       |        |      |       |       |      |         |      |  |  |
|         |            | Result      |        |       |       |       |      |       |       |        |      |       |      |      |      |       |      |       |        |      |        |      |       |        |      |      |        |      |         |      |       |        |      |       |       |      |         |      |  |  |

RPD > 50%  
RPD > 100%





Table D-23: Vangorda Creek Drainage Water Quality  
2010 QA/QC Lab vs. Field Comparison

| Station    | Date       | COND<br>µmho/cm | CONDF<br>µmho/cm | RPD<br>% | Comments   | Action | Result | pH   | pHF  | Difference | Comments  | Action          | Result  |
|------------|------------|-----------------|------------------|----------|--|--------|--------|------|------|------------|---|-----------------|---|
| LCD        | 5/12/2010  | 2400            | 2259             | 6.05     |  |        |        | 3.9  | 4.43 | 0.53       |   |                 |   |
| LCD        | 6/16/2010  | 5950            | >3999            | #VALUE!  | Field and lab values not comparable because conductivity greater than maximum measurable level for field meter used. |        |        | 3.49 | 3.13 | 0.36       |   |                 |   |
| LCD        | 7/14/2010  | 7090            | >3999            | #VALUE!  | Field and lab values not comparable because conductivity greater than maximum measurable level for field meter used. |        |        | 3.28 | 3.21 | 0.07       |   |                 |   |
| LCD        | 8/4/2010   | 7660            | >3999            | #VALUE!  | Field and lab values not comparable because conductivity greater than maximum measurable level for field meter used. |        |        | 3.19 | 2.67 | 0.52       |   |                 |   |
| LCD        | 9/7/2010   | 8210            | 9240             | 11.81    |  |        |        | 3.19 | 3.04 | 0.15       |   |                 |   |
| LCD        | 10/5/2010  | 7770            | >3999            | #VALUE!  | Field and lab values not comparable because conductivity greater than maximum measurable level for field meter used. |        |        | 3.3  | 2.15 | 1.15       | Field and lab values correctly entered into emLine. | Let Value Stand | Discrepancy between lab and field values remains. |
| MOOSE SEEP | 1/7/2010   | 2380            | 2500             | 4.92     |  |        |        | 7.9  | 7.45 | 0.45       |   |                 |   |
| MOOSE SEEP | 2/3/2010   | 2400            | 2260             | 6.01     |  |        |        | 8    | 7.45 | 0.55       |   |                 |   |
| MOOSE SEEP | 3/2/2010   | 2320            | 2170             | 6.68     |  |        |        | 8    | 7.81 | 0.19       |   |                 |   |
| MOOSE SEEP | 4/7/2010   | 2280            | 2350             | 3.02     |  |        |        | 8.3  | 7.72 | 0.58       |   |                 |   |
| MOOSE SEEP | 5/1/2010   | 2240            | 1920             | 15.38    |  |        |        | 8    | 8.51 | 0.51       |   |                 |   |
| MOOSE SEEP | 5/18/2010  | 1990            | 2028             | 1.89     |  |        |        | 8    | 7.89 | 0.11       |   |                 |   |
| MOOSE SEEP | 6/2/2010   | 1990            | 2045             | 2.73     |  |        |        | 8.5  | 7.87 | 0.63       |   |                 |   |
| MOOSE SEEP | 6/20/2010  | 2080            | 2030             | 2.43     |  |        |        | 8.3  | 7.76 | 0.54       |   |                 |   |
| MOOSE SEEP | 7/7/2010   | 2110            | 2290             | 8.18     |  |        |        | 7.95 | 7.72 | 0.23       |   |                 |   |
| MOOSE SEEP | 7/22/2010  | 2220            | 1854             | 17.97    |  |        |        | 8.08 | 7.71 | 0.37       |   |                 |   |
| MOOSE SEEP | 8/5/2010   | 2260            | 2278             | 0.79     |  |        |        | 8.05 | 7.76 | 0.29       |   |                 |   |
| MOOSE SEEP | 8/18/2010  | 2260            | 2164             | 4.34     |  |        |        | 8.19 | 7.72 | 0.47       |   |                 |   |
| MOOSE SEEP | 9/7/2010   | 2360            | 2312             | 2.05     |  |        |        | 8.22 | 7.55 | 0.67       |   |                 |   |
| MOOSE SEEP | 9/23/2010  | 2380            | 2006             | 17.05    |  |        |        | 7.85 | 7.68 | 0.17       |   |                 |   |
| MOOSE SEEP | 10/7/2010  | 2350            | 2320             | 1.28     |  |        |        | 8.11 | 7.74 | 0.37       |   |                 |   |
| MOOSE SEEP | 10/21/2010 | 2370            | 2243             | 5.51     |  |        |        | 8.22 | 7.91 | 0.31       |   |                 |   |
| MOOSE SEEP | 11/4/2010  | 2360            | 2313             | 2.01     |  |        |        | 8.18 | 7.84 | 0.34       |   |                 |   |
| MOOSE SEEP | 12/2/2010  | 2310            | 1470             | 44.44    |  |        |        | 8.24 | 7.91 | 0.33       |   |                 |   |

RPD > 50% or pH difference > 1.5 pH unit  
 RPD > 20% or pH difference > 1 pH unit

Table D-23: Vangorda Creek Drainage Water Quality  
2010 QA/QC Lab vs. Field Comparison

| Station  | Date      | COND<br>µmho/cm | CONDF<br>µmho/cm | RPD<br>% | Comments  | Action          | Result   | pH   | pHF  | Difference | Comments  | Action          | Result   |
|----------|-----------|-----------------|------------------|----------|---|-----------------|--|------|------|------------|---|-----------------|--|
| SRK GD01 | 12/1/2010 | 3480            | 2320             | 40.00    | Field and lab values correctly entered into emLine. | Let Value Stand | Discrepancy between lab and field values remains. Multiple flagged conductivity values on December 1, 2010 suggests calibration on field meter may have been off.  | 8.13 | 7.56 | 0.57       |   |                 |  |
| V1       | 1/7/2010  | 112             | 140              | 22.22    | Field and lab values correctly entered into emLine. | Let Value Stand | Discrepancy between lab and field values remains.  | 7.7  | 7.76 | 0.06       |   |                 |  |
| V1       | 2/18/2010 | 118             | 80               | 38.38    | Field and lab values correctly entered into emLine. | Let Value Stand | Discrepancy between lab and field values remains. Multiple flagged conductivity values on February 18, 2010 suggests calibration on field meter may have been off. | 7.8  | 8.34 | 0.54       |   |                 |  |
| V1       | 3/29/2010 | 121             | 122              | 0.82     |   |                 |  | 7.9  | 7.91 | 0.01       |   |                 |  |
| V1       | 4/20/2010 | 113             | 101              | 11.21    |   |                 |  | 7.8  | 7.9  | 0.1        |   |                 |  |
| V1       | 5/12/2010 | 86              | 99               | 14.05    |   |                 |  | 7.4  | 7.94 | 0.54       |   |                 |  |
| V1       | 6/16/2010 | 46              | 54               | 16.00    |   |                 |  | 7.42 | 7.16 | 0.26       |   |                 |  |
| V1       | 7/14/2010 | 65              | 60               | 8.00     |   |                 |  | 7.56 | 8.2  | 0.64       |   |                 |  |
| V1       | 7/14/2010 | 65              | 60               | 8.00     |   |                 |  | 7.52 | 8.2  | 0.68       |   |                 |  |
| V1       | 8/4/2010  | 84              | 81               | 3.64     |   |                 |  | 7.8  | 8.29 | 0.49       |   |                 |  |
| V1       | 9/7/2010  | 78              | 30               | 88.89    | Field and lab values correctly entered into emLine. | Let Value Stand | Retest request would be filed past sample hold time. Discrepancy between values remains.   | 7.61 | 8.38 | 0.77       |   |                 |  |
| V1       | 10/5/2010 | 88              | 103              | 15.71    |   |                 |  | 7.58 | 5.23 | 2.35       | Field and lab values correctly entered into emLine. | Let Value Stand | Retest request would be filed past sample hold time. Discrepancy between values remains. |
| V1       | 11/1/2010 | 99              | 89               | 10.64    |   |                 |  | 7.72 | 8.67 | 0.95       |   |                 |  |
| V1       | 12/1/2010 | 101             | 140              | 32.37    | Field and lab values correctly entered into emLine. | Let Value Stand | Discrepancy between lab and field values remains. Multiple flagged conductivity values on December 1, 2010 suggests calibration on field meter may have been off.  | 7.22 | 8.19 | 0.97       |   |                 |  |
| V14      | 6/1/2010  | 3610            | 3791             | 4.89     |   |                 |  | 8.3  | 8.12 | 0.18       |   |                 |  |
| V14      | 10/6/2010 |                 |                  | #DIV/0!  |   |                 |  |      |      | 0          |   |                 |  |

RPD > 50% or pH difference > 1.5 pH unit  
 RPD > 20% or pH difference > 1 pH unit

Table D-23: Vangorda Creek Drainage Water Quality  
2010 QA/QC Lab vs. Field Comparison

| Station | Date      | COND<br>µmho/cm | CONDF<br>µmho/cm | RPD<br>% | Comments   | Action          | Result  | pH   | pHF  | Difference | Comments   | Action          | Result  |  |
|---------|-----------|-----------------|------------------|----------|--|-----------------|---|------|------|------------|--|-----------------|---|--|
| V15     | 1/7/2010  | 4020            | 3840             | 4.58     |  |                 |   | 7.5  | 6.62 | 0.88       |  |                 |   |  |
| V15     | 1/21/2010 | 4030            | 3710             | 8.27     |  |                 |   | 7.5  | 6.76 | 0.74       |  |                 |   |  |
| V15     | 2/3/2010  | 4030            | 2954             | 30.81    | Field and lab values correctly entered into emLine.                        | Let Value Stand | Discrepancy between lab and field values remains. Multiple flagged conductivity values on February 3, 2010 suggests calibration on field meter may have been off.   | 7.7  | 6.99 | 0.71       |  |                 |   |  |
| V15     | 2/18/2010 | 4040            | 1780             | 77.66    | Field and lab values correctly entered into emLine.                        | Request Retest  | Retest not possible because was requested too late. Remainder of sample had been discarded. Therefore, discrepancy between lab and field values remains. Multiple flagged conductivity values on February 18, 2010 suggests calibration on field meter may have been off. | 7.8  | 7.06 | 0.74       |  |                 |   |  |
| V15     | 3/2/2010  | 3990            | 3630             | 9.45     |  |                 |   | 7.6  | 7.03 | 0.57       |  |                 |   |  |
| V15     | 3/23/2010 | 4070            | 3590             | 12.53    |  |                 |   | 8.1  | 7    | 1.1        | Field and lab values correctly entered into emLine.                        | Let Value Stand | Discrepancy between lab and field values remains. |  |
| V15     | 4/7/2010  | 3990            | 2788             | 35.47    | Field and lab values correctly entered into emLine.                        | Let Value Stand | Discrepancy between lab and field values remains.   | 8.0  | 6.97 | 1.03       | Field and lab values correctly entered into emLine.                        | Let Value Stand | Discrepancy between lab and field values remains. |  |
| V15     | 4/19/2010 | 2550            | 2800             | 9.35     |  |                 |   | 7.9  | 7.19 | 0.71       |  |                 |   |  |
| V15     | 5/1/2010  | 2920            | 2560             | 13.14    |  |                 |   | 7.8  | 7.79 | 0.01       |  |                 |   |  |
| V15     | 5/18/2010 | 3690            | 3535             | 4.29     |  |                 |   | 8.3  | 7.15 | 1.15       | Field and lab values correctly entered into emLine.                        | Let Value Stand | Discrepancy between lab and field values remains. |  |
| V15     | 6/2/2010  | 3910            | 3948             | 0.97     |  |                 |   | 8.2  | 6.88 | 1.32       | Field and lab values correctly entered into emLine.                        | Let Value Stand | Discrepancy between lab and field values remains. |  |
| V15     | 6/15/2010 | 3820            | 3249             | 16.16    |  |                 |   | 8.2  | 6.91 | 1.29       | Field and lab values correctly entered into emLine.                        | Let Value Stand | Discrepancy between lab and field values remains. |  |
| V15     | 7/7/2010  | 3830            | 3541             | 7.84     |  |                 |   | 7.8  | 7.44 | 0.36       |  |                 |   |  |
| V15     | 7/22/2010 | 3930            | 3101             | 23.58    | Field and lab values correctly entered into emLine.                        | Let Value Stand | Discrepancy between lab and field values remains.   | 7.7  | 7.21 | 0.49       |  |                 |   |  |
| V15     | 8/5/2010  | 3990            | 3958             | 0.81     |  |                 |   | 7.66 | 6.99 | 0.67       |  |                 |   |  |
| V15     | 8/18/2010 | 3910            | 3527             | 10.30    |  |                 |   | 7.84 | 6.93 | 0.91       |  |                 |   |  |
| V15     | 9/7/2010  | 3820            | 3531             | 7.86     |  |                 |   | 7.94 | 6.87 | 1.07       | Field and lab values correctly entered into emLine.                        | Let Value Stand | Discrepancy between lab and field values remains. |  |
| V15     | 9/23/2010 | 3800            |                  | 200.00   | Lab value correctly entered into emLine. However, field value not entered. | Change Value    | Field value entered into emLine. (see below)  | 7.69 |      | 7.69       | Lab value correctly entered into emLine. However, field value not entered. | Change Value    | Field value entered into emLine. (see below)      |  |
| V15     | 9/23/2010 | 3800            | 2500             | 41.27    | Field and lab values ocrrectly entered into emLine.                        | Let Value Stand | Discrepancy between lab and field values remains.   | 7.69 | 6.8  | 0.89       |  |                 |   |  |

RPD > 50% or pH difference > 1.5 pH unit

RPD > 20% or pH difference > 1 pH unit



Table D-23: Vangorda Creek Drainage Water Quality  
2010 QA/QC Lab vs. Field Comparison

| Station | Date       | COND<br>µmho/cm | CONDF<br>µmho/cm | RPD<br>% | Comments  | Action          | Result   | pH   | pHF  | Difference | Comments  | Action          | Result   |
|---------|------------|-----------------|------------------|----------|---|-----------------|--|------|------|------------|---|-----------------|--|
| V15     | 10/7/2010  | 3740            | 3435             | 8.50     |   |                 |  | 7.77 | 7.45 | 0.32       |   |                 |  |
| V15     | 10/21/2010 | 3750            | 3484             | 7.35     |   |                 |  | 7.88 | 7.04 | 0.84       |   |                 |  |
| V15     | 11/4/2010  | 3810            | 3568             | 6.56     |   |                 |  | 7.82 | 7.19 | 0.63       |   |                 |  |
| V15     | 11/18/2010 | 3880            | 2220             | 54.43    | Field and lab values correctly entered into emLine. | Let Value Stand | Retest request would be filed past sample hold time. Discrepancy between values remains. | 7.75 | 6.96 | 0.79       |   |                 |  |
| V15     | 12/1/2010  | 3860            | 2271             | 51.83    | Field and lab values correctly entered into emLine. | Let Value Stand | Retest request would be filed past sample hold time. Discrepancy between values remains. | 7.93 | 6.99 | 0.94       |   |                 |  |
| V15     | 12/16/2010 | 4290            | 4150             | 3.32     |   |                 |  | 7.72 | 7.22 | 0.5        |   |                 |  |
| V16     | 10/6/2010  | 2140            | 2521             | 16.35    |   |                 |  | 8.17 | 6.56 | 1.61       | Field and lab values correctly entered into emLine. | Let Value Stand | Retest request would be filed past sample hold time. Discrepancy between values remains. |
| V17A    | 6/16/2010  | 104             | 104              | 0.00     |   |                 |  | 7.5  | 8.05 | 0.55       |   |                 |  |

RPD > 50% or pH difference > 1.5 pH unit  
 RPD > 20% or pH difference > 1 pH unit

Table D-23: Vangorda Creek Drainage Water Quality  
2010 QA/QC Lab vs. Field Comparison

| Station | Date       | COND<br>µmho/cm | CONDF<br>µmho/cm | RPD<br>% | Comments  | Action          | Result   | pH   | pHF  | Difference | Comments | Action | Result |
|---------|------------|-----------------|------------------|----------|---|-----------------|--|------|------|------------|----------|--------|--------|
| V2      | 1/7/2010   | 2270            | 2190             | 3.59     |   |                 |  | 7.9  | 7.56 | 0.34       |          |        |        |
| V2      | 2/3/2010   | 2540            | 825              | 101.93   | Field and lab values correctly entered into emLine. | Request Retest  | Retest not possible because was requested too late. Remainder of sample had been discarded. Therefore, discrepancy between lab and field values remains. Multiple flagged conductivity values on February 3, 2010 suggests calibration on field meter may have been off. | 8.1  | 7.87 | 0.23       |          |        |        |
| V2      | 3/2/2010   | 2230            | 2089             | 6.53     |   |                 |  | 8.1  | 7.17 | 0.93       |          |        |        |
| V2      | 4/7/2010   | 2200            | 2250             | 2.25     |   |                 |  | 7.9  | 7.9  | 0          |          |        |        |
| V2      | 5/1/2010   | 1910            | 1680             | 12.81    |   |                 |  | 8.1  | 8.46 | 0.36       |          |        |        |
| V2      | 5/18/2010  | 1990            | 1905             | 4.36     |   |                 |  | 7.9  | 8.1  | 0.2        |          |        |        |
| V2      | 6/2/2010   | 2000            | 2155             | 7.46     |   |                 |  | 8.4  | 8.03 | 0.37       |          |        |        |
| V2      | 6/20/2010  | 1930            | 1980             | 2.56     |   |                 |  | 8.2  | 7.98 | 0.22       |          |        |        |
| V2      | 7/7/2010   | 1890            | 2080             | 9.57     |   |                 |  | 8.23 | 7.97 | 0.26       |          |        |        |
| V2      | 7/22/2010  | 1930            | 1730             | 10.93    |   |                 |  | 8.2  | 8    | 0.2        |          |        |        |
| V2      | 8/5/2010   | 2080            | 2109             | 1.38     |   |                 |  | 8.11 | 8.1  | 0.01       |          |        |        |
| V2      | 8/18/2010  | 2050            | 1972             | 3.88     |   |                 |  | 8.26 | 8.02 | 0.24       |          |        |        |
| V2      | 9/7/2010   | 2050            | 2042             | 0.39     |   |                 |  | 8.26 | 7.97 | 0.29       |          |        |        |
| V2      | 9/23/2010  | 2040            | 1146             | 56.12    | Field and lab values correctly entered into emLine. | Let Value Stand | Retest request would be filed past sample hold time. Discrepancy between values remains.   | 8.18 | 7.99 | 0.19       |          |        |        |
| V2      | 10/7/2010  | 1950            | 1960             | 0.51     |   |                 |  | 8.12 | 7.94 | 0.18       |          |        |        |
| V2      | 10/21/2010 | 1940            | 1850             | 4.75     |   |                 |  | 8.28 | 8.19 | 0.09       |          |        |        |
| V2      | 11/4/2010  | 1940            | 1938             | 0.10     |   |                 |  | 8.23 | 8.23 | 0          |          |        |        |
| V2      | 12/2/2010  | 2330            | 2180             | 6.65     |   |                 |  | 8.07 | 8.38 | 0.31       |          |        |        |
| V20     | 6/1/2010   | 104             | 218              | 70.81    | Field and lab values correctly entered into emLine. | Request Retest  | Retest not possible because was requested too late. Remainder of sample had been discarded. Discrepancy between values remains.  | 7.8  | 8.19 | 0.39       |          |        |        |

RPD > 50% or pH difference > 1.5 pH unit  
 RPD > 20% or pH difference > 1 pH unit

Table D-23: Vangorda Creek Drainage Water Quality  
2010 QA/QC Lab vs. Field Comparison

| Station | Date       | COND<br>µmho/cm | CONDF<br>µmho/cm | RPD<br>% | Comments  | Action          | Result  | pH   | pHF  | Difference | Comments   | Action          | Result  |
|---------|------------|-----------------|------------------|----------|---|-----------------|---|------|------|------------|--|-----------------|---|
| V22     | 3/4/2010   | 2160            | 2060             | 4.74     |   |                 |   | 5.1  | 5.72 | 0.62       |  |                 |   |
| V22     | 6/16/2010  | 2160            | 2166             | 0.28     |   |                 |   | 3.2  | 3.13 | 0.07       |  |                 |   |
| V22     | 9/7/2010   | 2380            | 2424             | 1.83     |   |                 |   | 3.58 | 3.46 | 0.12       |  |                 |   |
| V22     | 12/16/2010 | 1850            | 20               | 195.72   | Field and lab values correctly entered into emLine. | Let Value Stand | Retest request would be filed past sample hold time. Measurement re-checked with same meter, gave same result. V23, sampled right after V22 with same meter, showed no issues with CONDF. | 6.51 | 8.06 | 1.55       | Lab value correctly entered into emLine. However, field value incorrectly entered. | Change Value    | Field value entered into emLine. (see below)      |
| V22     | 12/16/2010 | 1850            | 20               | 195.72   | Field and lab values correctly entered into emLine. | Let Value Stand | Retest request would be filed past sample hold time. Measurement re-checked with same meter, gave same result. V23, sampled right after V22 with same meter, showed no issues with CONDF. | 6.51 | 7.17 | 0.66       |  |                 |   |
| V23     | 3/4/2010   | 1030            | 950              | 8.08     |   |                 |   | 8.1  | 7.63 | 0.47       |  |                 |   |
| V23     | 6/16/2010  | 978             | 990              | 1.22     |   |                 |   | 8.1  | 7.99 | 0.11       |  |                 |   |
| V23     | 9/7/2010   | 992             | 1007             | 1.50     |   |                 |   | 8.38 | 7.73 | 0.65       |  |                 |   |
| V23     | 12/16/2010 | 1300            | 1190             | 8.84     |   |                 |   | 8.06 | 7.17 | 0.89       | Lab value correctly entered into emLine. However, field value incorrectly entered. | Change Value    | Field value entered into emLine. (see below)      |
| V23     | 12/16/2010 | 1300            | 1190             | 8.84     |   |                 |   | 8.06 | 8.06 | 0          |  |                 |   |
| V24     | 6/22/2010  | 2140            | 1915             | 11.10    |   |                 |   | 3.4  | 3.2  | 0.2        |  |                 |   |
| V24     | 6/29/2010  | 2170            | 2052             | 5.59     |   |                 |   | 3.28 | 3.43 | 0.15       |  |                 |   |
| V24     | 7/6/2010   | 2170            | 2046             | 5.88     |   |                 |   | 3.38 | 3.2  | 0.18       |  |                 |   |
| V24     | 7/13/2010  | 2270            | 2346             | 3.29     |   |                 |   | 3.51 | 3.44 | 0.07       |  |                 |   |
| V25     | 6/22/2010  | 2010            | 1872             | 7.11     |   |                 |   | 8.3  | 9.19 | 0.89       |  |                 |   |
| V25     | 6/29/2010  | 2180            | 2065             | 5.42     |   |                 |   | 7.74 | 8.83 | 1.09       | Field and lab values correctly entered into emLine.                                | Let Value Stand | Discrepancy between lab and field values remains. |
| V25     | 7/6/2010   | 2280            | 2089             | 8.74     |   |                 |   | 7.71 | 9.11 | 1.4        | Field and lab values correctly entered into emLine.                                | Let Value Stand | Discrepancy between lab and field values remains. |
| V25     | 7/13/2010  | 2360            | 2049             | 14.11    |   |                 |   | 8.06 | 8.86 | 0.8        |  |                 |   |
| V25     | 8/12/2010  | 2340            | 2003             | 15.52    |   |                 |   | 7.72 | 8.11 | 0.39       |  |                 |   |

RPD > 50% or pH difference > 1.5 pH unit

RPD > 20% or pH difference > 1 pH unit

Table D-23: Vangorda Creek Drainage Water Quality  
2010 QA/QC Lab vs. Field Comparison

| Station | Date      | COND<br>µmho/cm | CONDF<br>µmho/cm | RPD<br>% | Comments  | Action          | Result  | pH   | pHF  | Difference | Comments  | Action          | Result   |
|---------|-----------|-----------------|------------------|----------|---|-----------------|---|------|------|------------|---|-----------------|--|
| V25BSP  | 4/27/2010 | 625             | 597              | 4.58     |   |                 |   | 7.6  | 8.34 | 0.74       |   |                 |  |
| V25BSP  | 5/11/2010 | 299             | 230              | 26.09    | Field and lab values correctly entered into emLine. | Let Value Stand | Discrepancy between lab and field values remains.   | 7.8  | 7.67 | 0.13       |   |                 |  |
| V25BSP  | 6/15/2010 | 452             | 451              | 0.22     |   |                 |   | 7.9  | 7.93 | 0.03       |   |                 |  |
| V25BSP  | 6/22/2010 | 425             | 403              | 5.31     |   |                 |   | 8    | 8.14 | 0.14       |   |                 |  |
| V25BSP  | 6/29/2010 | 1910            | 1814             | 5.16     |   |                 |   | 7.53 | 7.91 | 0.38       |   |                 |  |
| V25BSP  | 7/6/2010  | 1850            | 1772             | 4.31     |   |                 |   | 7.8  | 7.28 | 0.52       |   |                 |  |
| V25BSP  | 7/13/2010 | 2080            | 2160             | 3.77     |   |                 |   | 7.65 | 7.93 | 0.28       |   |                 |  |
| V25BSP  | 7/13/2010 | 2080            | 2160             | 3.77     |   |                 |   | 7.59 | 7.93 | 0.34       |   |                 |  |
| V25BSP  | 8/5/2010  | 1340            | 1411             | 5.16     |   |                 |   | 7.68 | 7.51 | 0.17       |   |                 |  |
| V25BSP  | 8/12/2010 | 1820            | 1594             | 13.24    |   |                 |   | 7.76 | 7.79 | 0.03       |   |                 |  |
| V25BSP  | 9/7/2010  | 1440            | 1600             | 10.53    |   |                 |   | 7.72 | 8.04 | 0.32       |   |                 |  |
| V25BSP  | 10/5/2010 | 1260            | 1310             | 3.89     |   |                 |   | 7.53 | 8.95 | 1.42       | Field and lab values correctly entered into emLine. | Let Value Stand | Discrepancy between lab and field values remains.  |
| V25BSP  | 11/1/2010 | 1230            | 1140             | 7.59     |   |                 |   | 7.66 | 7.92 | 0.26       |   |                 |  |
| V25BSP  | 12/2/2010 | 1110            | 1124             | 1.25     |   |                 |   | 7.58 | 7.89 | 0.31       |   |                 |  |
| V27     | 1/18/2010 | 572             | 630              | 9.65     |   |                 |   | 8    | 7.82 | 0.18       |   |                 |  |
| V27     | 2/24/2010 | 632             | 565              | 11.19    |   |                 |   | 8.1  | 6.94 | 1.16       | Field and lab values correctly entered into emLine. | Let Value Stand | Discrepancy between lab and field values remains.  |
| V27     | 3/29/2010 | 676             | 666              | 1.49     |   |                 |   | 8.2  | 8.68 | 0.48       |   |                 |  |
| V27     | 4/20/2010 | 694             | 666              | 4.12     |   |                 |   | 8    | 8.3  | 0.3        |   |                 |  |
| V27     | 5/12/2010 | 416             | 431              | 3.54     |   |                 |   | 7.8  | 8.35 | 0.55       |   |                 |  |
| V27     | 6/16/2010 | 168             | 168              | 0.00     |   |                 |   | 7.72 | 8.07 | 0.35       |   |                 |  |
| V27     | 7/14/2010 | 852             | 867              | 1.75     |   |                 |   | 7.59 | 7.94 | 0.35       |   |                 |  |
| V27     | 8/4/2010  | 311             | 291              | 6.64     |   |                 |   | 8.02 | 8.14 | 0.12       |   |                 |  |
| V27     | 9/7/2010  | 272             | 290              | 6.41     |   |                 |   | 7.89 | 5.75 | 2.14       | Field and lab values correctly entered into emLine. | Let Value Stand | Retest request would be filed past sample hold time. Discrepancy between values remains. |
| V27     | 10/5/2010 | 389             | 411              | 5.50     |   |                 |   | 7.9  | 8.67 | 0.77       |   |                 |  |
| V27     | 11/1/2010 | 466             | 434              | 7.11     |   |                 |   | 8.06 | 8.3  | 0.24       |   |                 |  |
| V27     | 12/1/2010 | 517             | 330              | 44.16    | Field and lab values correctly entered into emLine. | Let Value Stand | Discrepancy between lab and field values remains. Multiple flagged conductivity values on December 1, 2010 suggests calibration on field meter may have been off. | 8.01 | 8.03 | 0.02       |   |                 |  |

RPD > 50% or pH difference > 1.5 pH unit  
 RPD > 20% or pH difference > 1 pH unit

Table D-23: Vangorda Creek Drainage Water Quality  
2010 QA/QC Lab vs. Field Comparison

| Station    | Date       | COND<br>µmho/cm | CONDF<br>µmho/cm | RPD<br>% | Comments   | Action          | Result  | pH   | pHF  | Difference | Comments  | Action          | Result  |
|------------|------------|-----------------|------------------|----------|--|-----------------|---|------|------|------------|---|-----------------|---|
| V2A        | 2/3/2010   | 2550            | 1070             | 81.77    | Field and lab values correctly entered into emLine.  | Request Retest  | Retest not possible because was requested too late. Remainder of sample had been discarded. | 8.1  | 8.02 | 0.08       |   |                 |   |
| V2A        | 3/2/2010   | 2290            | 2180             | 4.92     |  |                 |   | 8.1  | 7.88 | 0.22       |   |                 |   |
| V2A        | 4/7/2010   | 2180            | 2310             | 5.79     |  |                 |   | 7.9  | 7.77 | 0.13       |   |                 |   |
| V2A        | 5/1/2010   | 1790            | 1620             | 9.97     |  |                 |   | 8.1  | 8.67 | 0.57       |   |                 |   |
| V2A        | 5/18/2010  | 2240            | 2184             | 2.53     |  |                 |   | 8.2  | 8.31 | 0.11       |   |                 |   |
| V2A        | 6/2/2010   | 2350            | 2451             | 4.21     |  |                 |   | 8.4  | 8.23 | 0.17       |   |                 |   |
| V2A        | 6/15/2010  | 2360            | 2118             | 10.81    |  |                 |   | 8.5  | 8.26 | 0.24       |   |                 |   |
| V2A        | 7/7/2010   | 2370            | 2238             | 5.73     |  |                 |   | 8.35 | 8.2  | 0.15       |   |                 |   |
| V2A        | 7/22/2010  | 2490            | 2097             | 17.14    |  |                 |   | 8.24 | 8.16 | 0.08       |   |                 |   |
| V2A        | 8/5/2010   | 2800            | 2728             | 2.60     |  |                 |   | 8.24 | 8.25 | 0.01       |   |                 |   |
| V2A        | 8/18/2010  | 2610            | 2351             | 10.44    |  |                 |   | 8.4  | 8.27 | 0.13       |   |                 |   |
| V2A        | 9/7/2010   | 2530            | 2360             | 6.95     |  |                 |   | 8.45 | 8.17 | 0.28       |   |                 |   |
| V2A        | 9/23/2010  | 2490            | 1510             | 49.00    | Field and lab values correctly entered into emLine.  | Let Value Stand | Discrepancy between lab and field values remains.   | 8.29 | 8    | 0.29       |   |                 |   |
| V2A        | 10/7/2010  | 2410            | 2389             | 0.88     |  |                 |   | 8.19 | 8.35 | 0.16       |   |                 |   |
| V2A        | 10/21/2010 | 2450            | 50               | 192.00   | Field and lab values correctly entered into emLine.  | Request Retest  | Retest performed, see results below.  | 8.32 | 8.52 | 0.2        |   |                 |   |
| V2A        | 11/4/2010  | 2360            | 2240             | 5.22     |  |                 |   | 8.25 | 8.03 | 0.22       |   |                 |   |
| V2A Retest | 10/21/2010 | 1870            | 50               | 189.58   | Retest for October 21 V2A EC. Field and lab values correctly entered into emLine.                                    | Let Value Stand | Discrepancy between lab and field values remains.   | 8.32 | 8.52 | 0.2        |   |                 |   |
| V30        | 6/1/2010   | 6210            | >3999            | #VALUE!  | Field and lab values not comparable because conductivity greater than maximum measurable level for field meter used. |                 |   | 6.2  | 6.07 | 0.13       |   |                 |   |
| V30        | 10/6/2010  | 7200            | >3999            | #VALUE!  | Field and lab values not comparable because conductivity greater than maximum measurable level for field meter used. |                 |   | 6.27 | 5.8  | 0.47       |   |                 |   |
| V31        | 10/6/2010  |                 |                  | #DIV/0!  |  |                 |   |      |      | 0          |   |                 |   |
| V32        | 10/6/2010  |                 |                  | #DIV/0!  |  |                 |   |      |      | 0          |   |                 |   |
| V33        | 6/1/2010   | 39800           | >3999            | #VALUE!  | Field and lab values not comparable because conductivity greater than maximum measurable level for field meter used. |                 |   | 3.7  | 5.11 | 1.41       | Field and lab values correctly entered into emLine. | Let Value Stand | Discrepancy between lab and field values remains. |
| V33        | 10/6/2010  | 43700           | >3999            | #VALUE!  | Field and lab values not comparable because conductivity greater than maximum measurable level for field meter used. |                 |   | 3.71 | 4.83 | 1.12       | Field and lab values correctly entered into emLine. | Let Value Stand | Discrepancy between lab and field values remains. |

RPD > 50% or pH difference > 1.5 pH unit  
 RPD > 20% or pH difference > 1 pH unit

Table D-23: Vangorda Creek Drainage Water Quality  
2010 QA/QC Lab vs. Field Comparison

| Station | Date      | COND<br>µmho/cm | CONDF<br>µmho/cm | RPD<br>% | Comments  | Action          | Result | pH   | pHF  | Difference | Comments   | Action          | Result   |
|---------|-----------|-----------------|------------------|----------|---|-----------------|--------|------|------|------------|--|-----------------|--|
| V4      | 1/18/2010 | 709             | 810              | 13.30    |   |                 |        | 8.1  | 7.89 | 0.21       |  |                 |  |
| V4      | 2/24/2010 | 724             | 638              | 12.63    |   |                 |        | 8.1  | 7.32 | 0.78       |  |                 |  |
| V4      | 3/29/2010 | 709             | 724              | 2.09     |   |                 |        | 8.1  | 7.9  | 0.2        |  |                 |  |
| V4      | 4/20/2010 | 506             | 491              | 3.01     |   |                 |        | 8.2  | 8.3  | 0.1        |  |                 |  |
| V4      | 5/12/2010 | 349             | 312              | 11.20    |   |                 |        | 8.1  | 8.03 | 0.07       |  |                 |  |
| V4      | 6/16/2010 | 518             | 545              | 5.08     |   |                 |        | 8.24 | 8.37 | 0.13       |  |                 |  |
| V4      | 7/14/2010 | 588             | 609              | 3.51     |   |                 |        | 8.26 | 8.31 | 0.05       |  |                 |  |
| V4      | 8/4/2010  | 620             | 572              | 8.05     |   |                 |        | 8.31 | 8.33 | 0.02       |  |                 |  |
| V4      | 9/7/2010  | 637             | 690              | 7.99     |   |                 |        | 8.45 | 6.68 | 1.77       | Field and lab values correctly entered into emLine.  | Let Value Stand | Retest request would be filed past sample hold time. Discrepancy between values remains. |
| V4      | 10/5/2010 | 615             | 652              | 5.84     |   |                 |        | 8.28 | 8.43 | 0.15       |  |                 |  |
| V4      | 11/1/2010 | 676             | 636              | 6.10     |   |                 |        | 8.31 | 8.11 | 0.2        |  |                 |  |
| V4      | 12/1/2010 | 651             | 430              | 40.89    | Field and lab values correctly entered into emLine. | Let Value Stand |        | 8.22 | 7.88 | 0.34       | Discrepancy between lab and field values remains. Multiple flagged conductivity values on December 1, 2010 suggests calibration on field meter may have been off.    |                 |  |
| V5      | 1/6/2010  | 841             | 715              | 16.20    |   |                 |        | 8    | 7.45 | 0.55       |  |                 |  |
| V5      | 2/18/2010 | 790             | 1717             | 73.95    | Field and lab values correctly entered into emLine. | Request Retest  |        | 8.2  | 8.3  | 0.1        | Retest not possible because was requested too late. Remainder of sample had been discarded. Therefore discrepancy between lab and field values remains.              |                 |  |
| V5      | 3/30/2010 | 837             | 777              | 7.43     |   |                 |        | 8.2  | 8.86 | 0.66       |  |                 |  |
| V5      | 4/20/2010 | 491             | 499              | 1.62     |   |                 |        | 8.2  | 8.44 | 0.24       |  |                 |  |
| V5      | 5/12/2010 | 473             | 449              | 5.21     |   |                 |        | 8.1  | 8.52 | 0.42       |  |                 |  |
| V5      | 6/17/2010 | 388             | 394              | 1.53     |   |                 |        | 8.25 | 8.28 | 0.03       |  |                 |  |
| V5      | 7/14/2010 | 335             | 351              | 4.66     |   |                 |        | 8.21 | 8.21 | 0          |  |                 |  |
| V5      | 8/4/2010  | 477             | 446              | 6.72     |   |                 |        | 8.37 | 8.46 | 0.09       |  |                 |  |
| V5      | 9/7/2010  | 479             | 520              | 8.21     |   |                 |        | 8.39 | 7.58 | 0.81       |  |                 |  |
| V5      | 10/5/2010 | 499             | 580              | 15.01    |   |                 |        | 8.21 | 6.89 | 1.32       | Field and lab values correctly entered into emLine.  | Let Value Stand | Discrepancy between lab and field values remains.  |
| V5      | 11/2/2010 | 587             | 552              | 6.15     |   |                 |        | 8.31 | 8.25 | 0.06       |  |                 |  |
| V5      | 12/1/2010 | 638             | 350              | 58.30    | Field and lab values correctly entered into emLine. | Let Value Stand |        | 8.24 | 7.86 | 0.38       | Retest request would be filed past sample hold time. Multiple flagged conductivity values on December 1, 2010 suggests calibration on field meter may have been off. |                 |  |

RPD > 50% or pH difference > 1.5 pH unit  
 RPD > 20% or pH difference > 1 pH unit

Table D-23: Vangorda Creek Drainage Water Quality  
2010 QA/QC Lab vs. Field Comparison

| Station | Date      | COND<br>µmho/cm | CONDF<br>µmho/cm | RPD<br>% | Comments  | Action          | Result   | pH   | pHF  | Difference | Comments | Action | Result |
|---------|-----------|-----------------|------------------|----------|---|-----------------|--|------|------|------------|----------|--------|--------|
| V8      | 1/6/2010  | 781             | 675              | 14.56    |   |                 |  | 8.1  | 7.2  | 0.9        |          |        |        |
| V8      | 2/18/2010 | 772             | 720              | 6.97     |   |                 |  | 8.2  | 8.17 | 0.03       |          |        |        |
| V8      | 3/30/2010 | 802             | 552              | 36.93    | Field and lab values correctly entered into emLine. | Let Value Stand | Discrepancy between lab and field values remains.  | 8.3  | 8.72 | 0.42       |          |        |        |
| V8      | 4/20/2010 | 619             | 720              | 15.09    |   |                 |  | 8.1  | 8.37 | 0.27       |          |        |        |
| V8      | 5/12/2010 | 463             | 420              | 9.74     |   |                 |  | 8    | 8.52 | 0.52       |          |        |        |
| V8      | 6/17/2010 | 308             | 286              | 7.41     |   |                 |  | 8.18 | 8.31 | 0.13       |          |        |        |
| V8      | 7/14/2010 | 684             | 700              | 2.31     |   |                 |  | 8.07 | 7.93 | 0.14       |          |        |        |
| V8      | 7/14/2010 | 686             | 700              | 2.02     |   |                 |  | 8.05 | 7.93 | 0.12       |          |        |        |
| V8      | 8/4/2010  | 460             | 443              | 3.77     |   |                 |  | 8.32 | 8.24 | 0.08       |          |        |        |
| V8      | 9/7/2010  | 426             | 460              | 7.67     |   |                 |  | 8.29 | 7.32 | 0.97       |          |        |        |
| V8      | 10/5/2010 | 488             | 559              | 13.56    |   |                 |  | 8.06 | 7.35 | 0.71       |          |        |        |
| V8      | 11/2/2010 | 564             | 531              | 6.03     |   |                 |  | 8.26 | 8.75 | 0.49       |          |        |        |
| V8      | 12/1/2010 | 627             | 350              | 56.70    | Field and lab values correctly entered into emLine. | Let Value Stand | Retest request would be filed past sample hold time. Multiple flagged conductivity values on December 1, 2010 suggests calibration on field meter may have been off. | 8.25 | 7.81 | 0.44       |          |        |        |

RPD > 50% or pH difference > 1.5 pH unit


RPD > 20% or pH difference > 1 pH unit

Table D-24: Vangorda Creek Drainage Groundwater Quality  
2010 QA/QC Field Blanks - General Parameters

| Station  | Date       | Sample Type                 | Acid(pH4.5)<br>mg/L | Acid(pH8.3)<br>mg/L | ALK<br>mg/L | ALKPP<br>mg/L | CaCO3<br>mg/L | CaCO3-d<br>mg/L | Cl-d<br>mg/L | CO3<br>mg/L | Colour<br>TCU | COND<br>µmho/cm | DOC<br>mg/L | HCO3<br>mg/L | NH3<br>mg/L | OH<br>mg/L | pH   | SO4-d<br>mg/L | TDS<br>mg/L | TOC<br>mg/L | TSS<br>mg/L | TURB<br>NTU |
|----------|------------|-----------------------------|---------------------|---------------------|-------------|---------------|---------------|-----------------|--------------|-------------|---------------|-----------------|-------------|--------------|-------------|------------|------|---------------|-------------|-------------|-------------|-------------|
| P2001-2A | 6/13/2010  | FIELD BLANK                 | <0.5                | <0.5                | <0.5        | <0.5          |               | <0.5            |              | <0.5        |               | <1              |             | <0.5         |             | <0.5       | 5.30 | <0.5          |             |             | <1          |             |
|          |            | Deionized Water             | <0.5                | <0.5                | <0.5        | <0.5          | <0.5          | <0.5            | <0.5         | <0.5        | <0.5          | <1.0            | <0.5        | <0.5         | <0.005      | <0.5       | 5.95 | <0.5          | <10.0       | <0.5        | <4.0        | <0.1        |
|          |            | Times greater than DI water | 1                   | 1                   | 1           | 1             | 0             | 1               | 0            | 1           | 0             | 1               | 0           | 1            | 0           | 1          | 0.65 | 1             | 0           | 0           | 0.25        | 0           |
|          |            | Comments                    |                     |                     |             |               |               |                 |              |             |               |                 |             |              |             |            |      |               |             |             |             |             |
|          |            | Action                      |                     |                     |             |               |               |                 |              |             |               |                 |             |              |             |            |      |               |             |             |             |             |
|          |            | Result                      |                     |                     |             |               |               |                 |              |             |               |                 |             |              |             |            |      |               |             |             |             |             |
| V37      | 6/13/2010  | FIELD BLANK                 | <0.5                | <0.5                | 1.90        | <0.5          |               | <0.5            |              | <0.5        |               | 2.0             |             | 2.30         |             | <0.5       | 5.80 | <0.5          |             |             | <1          |             |
|          |            | Deionized Water             | <0.5                | <0.5                | <0.5        | <0.5          | <0.5          | <0.5            | <0.5         | <0.5        | <0.5          | <1.0            | <0.5        | <0.5         | <0.005      | <0.5       | 5.95 | <0.5          | <10.0       | <0.5        | <4.0        | <0.1        |
|          |            | Times greater than DI water | 1                   | 1                   | 3.8         | 1             | 0             | 1               | 0            | 1           | 0             | 2               | 0           | 4.6          | 0           | 1          | 0.15 | 1             | 0           | 0           | 0.25        | 0           |
|          |            | Comments                    |                     |                     |             |               |               |                 |              |             |               |                 |             |              |             |            |      |               |             |             |             |             |
|          |            | Action                      |                     |                     |             |               |               |                 |              |             |               |                 |             |              |             |            |      |               |             |             |             |             |
|          |            | Result                      |                     |                     |             |               |               |                 |              |             |               |                 |             |              |             |            |      |               |             |             |             |             |
| SRK05-9  | 8/5/2010   | FIELD BLANK                 | <0.5                | <0.5                | 1.30        | <0.5          |               | <0.5            | <0.5         | <0.5        |               | 2.0             |             | 1.60         |             | <0.5       | 5.91 | <0.5          |             |             | <1          |             |
|          |            | Deionized Water             | <0.5                | <0.5                | <0.5        | <0.5          | <0.5          | <0.5            | <0.5         | <0.5        | <0.5          | <1.0            | <0.5        | <0.5         | <0.005      | <0.5       | 5.95 | <0.5          | <10.0       | <0.5        | <4.0        | <0.1        |
|          |            | Times greater than DI water | 1                   | 1                   | 2.6         | 1             | 0             | 1               | 1            | 1           | 0             | 2               | 0           | 3.2          | 0           | 1          | 0.04 | 1             | 0           | 0           | 0.25        | 0           |
|          |            | Comments                    |                     |                     |             |               |               |                 |              |             |               |                 |             |              |             |            |      |               |             |             |             |             |
|          |            | Action                      |                     |                     |             |               |               |                 |              |             |               |                 |             |              |             |            |      |               |             |             |             |             |
|          |            | Result                      |                     |                     |             |               |               |                 |              |             |               |                 |             |              |             |            |      |               |             |             |             |             |
| SRK05-9  | 10/7/2010  | FIELD BLANK                 | <0.5                | <0.5                | <0.5        | <0.5          |               | <0.5            | <0.5         | <0.5        |               | 2.0             |             | <0.5         |             | <0.5       | 5.07 | 1.1           |             |             | <1          |             |
|          |            | Deionized Water             | <0.5                | <0.5                | <0.5        | <0.5          | <0.5          | <0.5            | <0.5         | <0.5        | <0.5          | <1.0            | <0.5        | <0.5         | <0.005      | <0.5       | 5.95 | <0.5          | <10.0       | <0.5        | <4.0        | <0.1        |
|          |            | Times greater than DI water | 1                   | 1                   | 1           | 1             | 0             | 1               | 1            | 1           | 0             | 2               | 0           | 1            | 0           | 1          | 0.88 | 2.2           | 0           | 0           | 0.25        | 0           |
|          |            | Comments                    |                     |                     |             |               |               |                 |              |             |               |                 |             |              |             |            |      |               |             |             |             |             |
|          |            | Action                      |                     |                     |             |               |               |                 |              |             |               |                 |             |              |             |            |      |               |             |             |             |             |
|          |            | Result                      |                     |                     |             |               |               |                 |              |             |               |                 |             |              |             |            |      |               |             |             |             |             |
| SRK05-9  | 11/18/2010 | FIELD BLANK                 | <0.5                | <0.5                | 1.10        | <0.5          |               | <0.5            | 1            | <0.5        |               | <1              |             | 1.30         |             | <0.5       | 5.65 | <0.5          |             |             | <1          |             |
|          |            | Deionized Water             | <0.5                | <0.5                | <0.5        | <0.5          | <0.5          | <0.5            | <0.5         | <0.5        | <0.5          | <1.0            | <0.5        | <0.5         | <0.005      | <0.5       | 5.95 | <0.5          | <10.0       | <0.5        | <4.0        | <0.1        |
|          |            | Times greater than DI water | 1                   | 1                   | 2.2         | 1             | 0             | 1               | 1.4          | 1           | 0             | 1               | 0           | 2.6          | 0           | 1          | 0.30 | 1             | 0           | 0           | 0.25        | 0           |
|          |            | Comments                    |                     |                     |             |               |               |                 |              |             |               |                 |             |              |             |            |      |               |             |             |             |             |
|          |            | Action                      |                     |                     |             |               |               |                 |              |             |               |                 |             |              |             |            |      |               |             |             |             |             |
|          |            | Result                      |                     |                     |             |               |               |                 |              |             |               |                 |             |              |             |            |      |               |             |             |             |             |
| SRK05-9  | 12/16/2010 | FIELD BLANK                 | <0.5                | <0.5                | 1.30        | <0.5          |               | 1               | <0.5         | <0.5        |               | 2.0             |             | 1.60         |             | <0.5       | 5.89 | <0.5          |             |             | <1          |             |
|          |            | Deionized Water             | <0.5                | <0.5                | <0.5        | <0.5          | <0.5          | <0.5            | <0.5         | <0.5        | <0.5          | <1.0            | <0.5        | <0.5         | <0.005      | <0.5       | 5.95 | <0.5          | <10.0       | <0.5        | <4.0        | <0.1        |
|          |            | Times greater than DI water | 1                   | 1                   | 2.6         | 1             | 0             | 1.2             | 1            | 1           | 0             | 2               | 0           | 3.2          | 0           | 1          | 0.06 | 1             | 0           | 0           | 0.25        | 0           |
|          |            | Comments                    |                     |                     |             |               |               |                 |              |             |               |                 |             |              |             |            |      |               |             |             |             |             |
|          |            | Action                      |                     |                     |             |               |               |                 |              |             |               |                 |             |              |             |            |      |               |             |             |             |             |
|          |            | Result                      |                     |                     |             |               |               |                 |              |             |               |                 |             |              |             |            |      |               |             |             |             |             |

Blank value < PQL

 Blank value is a detection limit higher than that of DI water

 Blank value > PQL and < retest limit

 Blank value > retest limit (20X DI Water Detection Limit, or >1 pH unit difference from DI Water)





| Station         | Date       | Sample Type                 | Ag-d<br>µg/L | Al-d<br>µg/L   | As-d<br>µg/L | Ba-d<br>µg/L  | B-d<br>µg/L | Be-d<br>µg/L | Bi-d<br>µg/L | Ca-d<br>mg/L | Cd-d<br>µg/L | Co-d<br>µg/L   | Cr-d<br>µg/L | Cu-d<br>µg/L   | Fe-d<br>µg/L   | K-d<br>mg/L | Li-d<br>mg/L | Mg-d<br>mg/L |
|-----------------|------------|-----------------------------|--------------|--|--------------|---|-------------|--------------|--------------|--------------|--------------|--|--------------|--|--|-------------|--------------|--------------|
| P2001-2A        | 6/13/2010  | FIELD BLANK                 | <0.005       | 1.50   | <0.02        | 0.770   | <50         | <0.01        | <0.005       | <0.05        | <0.005       | <0.005   | <0.1         | <0.05  | 8.00   | <0.05       | <0.0005      | <0.05        |
|                 |            | Deionized Water             | <0.005       | <0.2   | <0.02        | <0.02   | <50         | <0.01        | <0.005       | <0.05        | <0.005       | <0.005   | <0.1         | <0.05  | <1   | <0.05       | <0.5         | <0.05        |
|                 |            | Times greater than DI water | 1            | 7.5  | 1            | 38.5  | 1           | 1            | 1            | 1            | 1            | 1  | 1            | 8  | 1  | 0.001       | 1            |              |
|                 |            | Comments                    |              | Blank concentration > PQL and correctly entered into emLine. |              | Blank concentration > PQL and correctly entered into emLine.                                    |             |              |              |              |              |  |              |  | Blank concentration > PQL and correctly entered into emLine. |             |              |              |
|                 |            | Action                      |              | Let Value Stand  |              | Request Retest  |             |              |              |              |              |  |              |  | Let Value Stand  |             |              |              |
|                 |            | Result                      |              | High blank value remains.                                    |              | Retest performed, see results below.  |             |              |              |              |              |  |              |  | High blank value remains.                                    |             |              |              |
| P2001-2A Retest | 6/13/2010  | FIELD BLANK                 | <0.005       | <0.2   | <0.02        | 0.720   | <50         | <0.01        | <0.005       | <0.05        | <0.005       | <0.005   | <0.1         | <0.05  | <1   | <0.05       | <0.5         | <0.05        |
|                 |            | Deionized Water             | <0.005       | <0.2   | <0.02        | <0.02   | <50         | <0.01        | <0.005       | <0.05        | <0.005       | <0.005   | <0.1         | <0.05  | <1   | <0.05       | <0.5         | <0.05        |
|                 |            | Times greater than DI water | 0            | 0  | 0            | 36  | 0           | 0            | 0            | 0            | 0            | 0  | 0            | 0  | 0  | 0           | 0            | 0            |
|                 |            | Comments                    |              |  |              | Retest for June 13 P2001-2A blank. Blank concentration > PQL and correctly entered into emLine. |             |              |              |              |              |  |              |  |  |             |              |              |
|                 |            | Action                      |              |  |              | Let Value Stand   |             |              |              |              |              |  |              |  |  |             |              |              |
|                 |            | Result                      |              |  |              | New blank value entered into emLine.  |             |              |              |              |              |  |              |  |  |             |              |              |
| V37             | 6/13/2010  | FIELD BLANK                 | <0.005       | 12.40  | <0.02        | 0.510   | <50         | <0.01        | 0.01         | <0.05        | <0.005       | 0.0250   | <0.1         | 3.7200   | 45.00  | <0.05       | <0.0005      | <0.05        |
|                 |            | Deionized Water             | <0.005       | <0.2   | <0.02        | <0.02   | <50         | <0.01        | <0.005       | <0.05        | <0.005       | <0.005   | <0.1         | <0.05  | <1   | <0.05       | <0.5         | <0.05        |
|                 |            | Times greater than DI water | 1            | 62   | 1            | 25.5  | 1           | 1            | 1.6          | 1            | 1            | 5  | 1            | 74.4   | 45   | 1           | 0.001        | 1            |
|                 |            | Comments                    |              | Blank concentration > PQL and correctly entered into emLine. |              | Blank concentration > PQL and correctly entered into emLine.                                    |             |              |              |              |              | Blank concentration > PQL and correctly entered into emLine. |              | Blank concentration > PQL and correctly entered into emLine. | Blank concentration > PQL and correctly entered into emLine. |             |              |              |
|                 |            | Action                      |              | Request Retest   |              | Request Retest  |             |              |              |              |              | Request Retest   |              | Request Retest   | Request Retest   |             |              |              |
|                 |            | Result                      |              | Retest performed, see results below.                         |              | Retest performed, see results below.  |             |              |              |              |              | Retest performed, see results below.                         |              | Retest performed, see results below.                         | Retest performed, see results below.                         |             |              |              |
| V37 Retest      | 6/13/2010  | FIELD BLANK                 | <0.005       | 9.10   | <0.02        | 0.460   | <50         | <0.01        | 0.01         | <0.06        | <0.008       | 0.0210   | <0.1         | 4.3100   | 21.00  | <0.05       | <0.0005      | <0.05        |
|                 |            | Deionized Water             | <0.005       | <0.2   | <0.02        | <0.02   | <50         | <0.01        | <0.005       | <0.05        | <0.005       | <0.005   | <0.1         | <0.05  | <1   | <0.05       | <0.5         | <0.05        |
|                 |            | Times greater than DI water | 1            | 45.5   | 1            | 23  | 1           | 1            | 2.8          | 1.2          | 1.2          | 4.2  | 1            | 86.2   | 21   | 1           | 0.001        | 1            |
|                 |            | Comments                    |              | Retest for June 13 V37 blank.                                |              | Retest for June 13 V37 blank.   |             |              |              |              |              | Retest for June 13 V37 blank.                                |              | Retest for June 13 V37 blank.                                | Retest for June 13 V37 blank.                                |             |              |              |
|                 |            | Action                      |              | Let Value Stand  |              | Let Value Stand   |             |              |              |              |              | Let Value Stand  |              | Let Value Stand  | Let Value Stand  |             |              |              |
|                 |            | Result                      |              | New blank value entered into emLine.                         |              | New blank value entered into emLine.  |             |              |              |              |              | New blank value entered into emLine.                         |              | New blank value entered into emLine.                         | New blank value entered into emLine.                         |             |              |              |
| SRK05-9         | 8/5/2010   | FIELD BLANK                 | <0.005       | 1.50   | <0.02        | 0.170   | <50         | <0.01        | <0.005       | <0.05        | <0.005       | 0.0080   | <0.1         | <0.05  | 2.00   | <0.05       | <0.0005      | <0.05        |
|                 |            | Deionized Water             | <0.005       | <0.2   | <0.02        | <0.02   | <50         | <0.01        | <0.005       | <0.05        | <0.005       | <0.005   | <0.1         | <0.05  | <1   | <0.05       | <0.5         | <0.05        |
|                 |            | Times greater than DI water | 1            | 7.5  | 1            | 8.5   | 1           | 1            | 1            | 1            | 1            | 1.6  | 1            | 2  | 1  | 0.001       | 1            |              |
|                 |            | Comments                    |              | Blank concentration > PQL and correctly entered into emLine. |              | Blank concentration > PQL and correctly entered into emLine.                                    |             |              |              |              |              |  |              |  |  |             |              |              |
|                 |            | Action                      |              | Let Value Stand  |              | Let Value Stand   |             |              |              |              |              |  |              |  |  |             |              |              |
|                 |            | Result                      |              | High blank value remains.                                    |              | High blank value remains.   |             |              |              |              |              |  |              |  |  |             |              |              |
| SRK05-9 Retest  | 8/5/2010   | FIELD BLANK                 | <0.005       | <0.2   | <0.02        | <0.02   | <50         | <0.01        | <0.005       | <0.05        | <0.005       | <0.005   | <0.1         | <0.05  | <1   | <0.05       | <0.5         | <0.05        |
|                 |            | Deionized Water             | <0.005       | <0.2   | <0.02        | <0.02   | <50         | <0.01        | <0.005       | <0.05        | <0.005       | <0.005   | <0.1         | <0.05  | <1   | <0.05       | <0.5         | <0.05        |
|                 |            | Times greater than DI water | 0            | 0  | 0            | 0   | 0           | 0            | 0            | 0            | 0            | 0  | 0            | 0  | 0  | 0           | 0            | 0            |
|                 |            | Comments                    |              |  |              |   |             |              |              |              |              |  |              |  |  |             |              |              |
|                 |            | Action                      |              |  |              |   |             |              |              |              |              |  |              |  |  |             |              |              |
|                 |            | Result                      |              |  |              |   |             |              |              |              |              |  |              |  |  |             |              |              |
| SRK05-9         | 10/7/2010  | FIELD BLANK                 | <0.005       | 1.90   | <0.02        | 0.160   | <50         | <0.01        | <0.005       | <0.05        | <0.005       | <0.005   | <0.1         | 0.0600   | 2.00   | <0.05       | <0.0005      | <0.05        |
|                 |            | Deionized Water             | <0.005       | <0.2   | <0.02        | <0.02   | <50         | <0.01        | <0.005       | <0.05        | <0.005       | <0.005   | <0.1         | <0.05  | <1   | <0.05       | <0.5         | <0.05        |
|                 |            | Times greater than DI water | 1            | 9.5  | 1            | 8   | 1           | 1            | 1            | 1            | 1            | 1  | 1            | 1.2  | 2  | 1           | 0.001        | 1            |
|                 |            | Comments                    |              | Blank concentration > PQL and correctly entered into emLine. |              | Blank concentration > PQL and correctly entered into emLine.                                    |             |              |              |              |              |  |              |  |  |             |              |              |
|                 |            | Action                      |              | Let Value Stand  |              | Let Value Stand   |             |              |              |              |              |  |              |  |  |             |              |              |
|                 |            | Result                      |              | High blank value remains.                                    |              | High blank value remains.   |             |              |              |              |              |  |              |  |  |             |              |              |
| SRK05-9 Retest  | 10/7/2010  | FIELD BLANK                 | <0.005       | <0.2   | <0.02        | <0.02   | <50         | <0.01        | <0.005       | <0.05        | <0.005       | <0.005   | <0.1         | <0.05  | <1   | <0.05       | <0.5         | <0.05        |
|                 |            | Deionized Water             | <0.005       | <0.2   | <0.02        | <0.02   | <50         | <0.01        | <0.005       | <0.05        | <0.005       | <0.005   | <0.1         | <0.05  | <1   | <0.05       | <0.5         | <0.05        |
|                 |            | Times greater than DI water | 0            | 0  | 0            | 0   | 0           | 0            | 0            | 0            | 0            | 0  | 0            | 0  | 0  | 0           | 0            | 0            |
|                 |            | Comments                    |              |  |              |   |             |              |              |              |              |  |              |  |  |             |              |              |
|                 |            | Action                      |              |  |              |   |             |              |              |              |              |  |              |  |  |             |              |              |
|                 |            | Result                      |              |  |              |   |             |              |              |              |              |  |              |  |  |             |              |              |
| SRK05-9         | 11/18/2010 | FIELD BLANK                 | <0.005       | 0.90   | <0.02        | 0.160   | <50         | <0.01        | <0.005       | <0.05        | <0.005       | <0.005   | <0.1         | <0.05  | <1   | <0.05       | <0.0005      | <0.05        |
|                 |            | Deionized Water             | <0.005       | <0.2   | <0.02        | <0.02   | <50         | <0.01        | <0.005       | <0.05        | <0.005       | <0.005   | <0.1         | <0.05  | <1   | <0.05       | <0.5         | <0.05        |
|                 |            | Times greater than DI water | 1            | 4.5  | 1            | 8   | 1           | 1            | 1            | 1            | 1            | 1  | 1            | 1  | 1  | 0.001       | 1            |              |
|                 |            | Comments                    |              |  |              | Blank concentration > PQL and correctly entered into emLine.                                    |             |              |              |              |              |  |              |  |  |             |              |              |
|                 |            | Action                      |              |  |              | Let Value Stand   |             |              |              |              |              |  |              |  |  |             |              |              |
|                 |            | Result                      |              |  |              | High blank value remains.   |             |              |              |              |              |  |              |  |  |             |              |              |
| SRK05-9 Retest  | 11/18/2010 | FIELD BLANK                 | <0.005       | <0.2   | <0.02        | <0.02   | <50         | <0.01        | <0.005       | <0.05        | <0.005       | <0.005   | <0.1         | <0.05  | <1   | <0.05       | <0.5         | <0.05        |
|                 |            | Deionized Water             | <0.005       | <0.2   | <0.02        | <0.02   | <50         | <0.01        | <0.005       | <0.05        | <0.005       | <0.005   | <0.1         | <0.05  | <1   | <0.05       | <0.5         | <0.05        |
|                 |            | Times greater than DI water | 0            | 0  | 0            | 0   | 0           | 0            | 0            | 0            | 0            | 0  | 0            | 0  | 0  | 0           | 0            | 0            |
|                 |            | Comments                    |              |  |              |   |             |              |              |              |              |  |              |  |  |             |              |              |
|                 |            | Action                      |              |  |              |   |             |              |              |              |              |  |              |  |  |             |              |              |
|                 |            | Result                      |              |  |              |   |             |              |              |              |              |  |              |  |  |             |              |              |

Blank value < PQL  
 Blank value is a detection limit higher than that of DI water  
 Blank value > PQL and < retest limit  
 Blank value > retest limit (20X DI Water Detection Limit)

| Station        | Date       | Sample Type                 | Ag-d<br>µg/L | Al-d<br>µg/L | As-d<br>µg/L | Ba-d<br>µg/L | B-d<br>µg/L | Be-d<br>µg/L | Bi-d<br>µg/L   | Ca-d<br>mg/L | Cd-d<br>µg/L | Co-d<br>µg/L | Cr-d<br>µg/L | Cu-d<br>µg/L | Fe-d<br>µg/L  | K-d<br>mg/L | Li-d<br>mg/L | Mg-d<br>mg/L |
|----------------|------------|-----------------------------|--------------|--------------|--------------|--------------|-------------|--------------|--|--------------|--------------|--------------|--------------|--------------|---|-------------|--------------|--------------|
| SRK05-9        | 12/16/2010 | FIELD BLANK                 | <0.005       | 0.70         | <0.02        | 0.060        | <50         | <0.01        | 0.17   | 0.12         | <0.005       | 0.0170       | <0.1         | 0.1000       | 5.00  | <0.05       | <0.0005      | 0.06         |
|                |            | Deionized Water             | <0.005       | <0.2         | <0.02        | <0.02        | <50         | <0.01        | <0.005   | <0.05        | <0.005       | <0.01        | <0.1         | <0.05        | <1  | <0.05       | <0.5         | <0.05        |
|                |            | Times greater than DI water | 1            | 3.5          | 1            | 3            | 1           | 1            | 33.8   | 2.4          | 1            | 3.4          | 1            | 2            | 5   | 1           | 0.001        | 1.2          |
|                |            | Comments                    |              |              |              |              |             |              | Blank concentration > PQL and correctly entered into emLine.                                       |              |              |              |              |              | Blank concentration equal to PQL and correctly entered into emLine. |             |              |              |
|                |            | Action                      |              |              |              |              |             |              | Request Retest   |              |              |              |              |              | Let Value Stand   |             |              |              |
|                |            | Result                      |              |              |              |              |             |              | Retest performed, see results below.   |              |              |              |              |              | High blank value remains.   |             |              |              |
| SRK05-9 Retest | 12/16/2010 | FIELD BLANK                 |              |              |              |              |             |              | 0.19   |              |              |              |              |              |   |             |              |              |
|                |            | Deionized Water             | <0.005       | <0.2         | <0.02        | <0.02        | <50         | <0.01        | <0.005   | <0.05        | <0.005       | <0.005       | <0.1         | <0.05        | <1  | <0.05       | <0.5         | <0.05        |
|                |            | Times greater than DI water | 0            | 0            | 0            | 0            | 0           | 0            | 37.8   | 0            | 0            | 0            | 0            | 0            | 0   | 0           | 0            | 0            |
|                |            | Comments                    |              |              |              |              |             |              | Retest for December 16 SRK05-9 blank. Blank concentration > PQL and correctly entered into emLine. |              |              |              |              |              |   |             |              |              |
|                |            | Action                      |              |              |              |              |             |              | Let Value Stand  |              |              |              |              |              |   |             |              |              |
|                |            | Result                      |              |              |              |              |             |              | New blank value entered into emLine.   |              |              |              |              |              |   |             |              |              |

Blank value < PQL  
 Blank value is a detection limit higher than that of DI water  
 Blank value > PQL and < retest limit  
 Blank value > retest limit (20X DI Water Detection Limit)

| Station         | Date       | Sample Type                 | Mn-d<br>µg/L   | Mo-d<br>µg/L | Na-d<br>mg/L   | Ni-d<br>µg/L                         | Pb-d<br>µg/L   | Sb-d<br>µg/L | Se-d<br>µg/L   | Si-d<br>µg/L | Sn-d<br>µg/L   | Sr-d<br>µg/L                         | Ti-d<br>µg/L   | Ti-d<br>µg/L | U-d<br>µg/L  | V-d<br>µg/L | Zn-d<br>µg/L  | Zr-d<br>µg/L                         |                               |  |
|-----------------|------------|-----------------------------|--|--------------|--|--------------------------------------|--|--------------|--|--------------|--|--------------------------------------|--|--------------|--|-------------|---|--------------------------------------|-------------------------------|--|
| P2001-2A        | 6/13/2010  | FIELD BLANK                 | 0.400  | <0.05        | <0.05  | 0.030                                | 0.1440   | <0.02        | <0.04  | <100         | <0.01  | 0.12                                 | <0.5   | <0.002       | <0.002   | <0.2        | 1.700   | <0.1                                 |                               |  |
|                 |            | Deionized Water             | <0.05  | <0.05        | <0.05  | <0.02                                | <0.005   | <0.02        | <0.04  | <100         | <0.01  | <0.05                                | <0.5   | <0.002       | <0.002   | <0.2        | <0.1  | <0.1                                 |                               |  |
|                 |            | Times greater than DI water | 8  | 1            | 1  | 1.5                                  | 28.8   | 1            | 1  | 1            | 1  | 2.4                                  | 1  | 1            | 1  | 1           | 17  | 1                                    |                               |  |
|                 |            | Comments                    | Blank concentration > PQL and correctly entered into emLine.                               |              |  |                                      | Blank concentration > PQL and correctly entered into emLine.                                       |              |  |              |  |                                      |  |              |  |             | Blank concentration > PQL and correctly entered into emLine.                                    |                                      |                               |  |
|                 |            |                             | Let Value Stand  |              |  | Request Retest                       |  |              |  |              |  |                                      |  |              | Let Value Stand  |             |   |                                      |                               |  |
|                 |            | Result                      | High blank value remains.  |              |  | Retest performed, see results below. |  |              |  |              |  |                                      |  |              | High blank value remains.                                    |             |   |                                      |                               |  |
| P2001-2A Retest | 6/13/2010  | FIELD BLANK                 |  |              |  |                                      | 0.1440   |              |  |              |  |                                      |  |              |  |             |   |                                      |                               |  |
|                 |            | Deionized Water             | <0.05  | <0.05        | <0.05  | <0.02                                | <0.005   | <0.02        | <0.04  | <100         | <0.01  | <0.05                                | <0.5   | <0.002       | <0.002   | <0.2        | <0.1  | <0.1                                 |                               |  |
|                 |            | Times greater than DI water | 0  | 0            | 0  | 0                                    | 28.8   | 0            | 0  | 0            | 0  | 0                                    | 0  | 0            | 0  | 0           | 0   | 0                                    |                               |  |
|                 |            | Comments                    |  |              |  |                                      | Retest for June 13 P2001-2A blank. Blank concentration > PQL and correctly entered into emLine.    |              |  |              |  |                                      |  |              |  |             |   |                                      |                               |  |
|                 |            |                             | Let Value Stand  |              |  | Let Value Stand                      |  |              |  |              |  |                                      |  |              | Let Value Stand  |             |   |                                      |                               |  |
|                 |            | Result                      | New blank value entered into emLine.   |              |  | New blank value entered into emLine. |  |              |  |              |  |                                      |  |              | New blank value entered into emLine.                         |             |   |                                      |                               |  |
| V37             | 6/13/2010  | FIELD BLANK                 | 1.340  | <0.05        | <0.05  | 0.120                                | 2.0100   | <0.02        | <0.04  | <100         | 0.07   | 0.18                                 | <0.5   | <0.002       | <0.002   | <0.2        | 5.500   | <0.1                                 |                               |  |
|                 |            | Deionized Water             | <0.05  | <0.05        | <0.05  | <0.02                                | <0.005   | <0.02        | <0.04  | <100         | <0.01  | <0.05                                | <0.5   | <0.002       | <0.002   | <0.2        | <0.1  | <0.1                                 |                               |  |
|                 |            | Times greater than DI water | 26.8   | 1            | 1  | 6                                    | 402  | 1            | 1  | 1            | 7  | 3.6                                  | 1  | 1            | 1  | 1           | 55  | 1                                    |                               |  |
|                 |            | Comments                    | Blank concentration > PQL and correctly entered into emLine.                               |              | Blank concentration > PQL and correctly entered into emLine. |                                      | Blank concentration > PQL and correctly entered into emLine.                                       |              | Blank concentration > PQL and correctly entered into emLine. |              | Blank concentration > PQL and correctly entered into emLine. |                                      | Blank concentration > PQL and correctly entered into emLine. |              | Blank concentration > PQL and correctly entered into emLine. |             | Blank concentration > PQL and correctly entered into emLine.                                    |                                      |                               |  |
|                 |            |                             | Request Retest   |              |  | Request Retest                       |  |              | Request Retest   |              |  | Request Retest                       |  |              | Request Retest   |             |   | Request Retest                       |                               |  |
|                 |            | Result                      | Retest performed, see results below.   |              |  | Retest performed, see results below. |  |              | Retest performed, see results below.                         |              |  | Retest performed, see results below. |  |              | Retest performed, see results below.                         |             |   | Retest performed, see results below. |                               |  |
| V37 Retest      | 6/13/2010  | FIELD BLANK                 | 1.060  | <0.05        | <0.05  | 0.090                                | 1.3500   | <0.02        | <0.04  | <100         | 0.10   | 0.19                                 | <0.5   | <0.002       | <0.002   | <0.2        | 4.400   | <0.1                                 |                               |  |
|                 |            | Deionized Water             | <0.05  | <0.05        | <0.05  | <0.02                                | <0.005   | <0.02        | <0.04  | <100         | <0.01  | <0.05                                | <0.5   | <0.002       | <0.002   | <0.2        | <0.1  | <0.1                                 |                               |  |
|                 |            | Times greater than DI water | 21.2   | 1            | 1  | 4.5                                  | 270  | 1            | 1  | 1            | 10   | 3.8                                  | 1  | 1            | 1  | 1           | 44  | 1                                    |                               |  |
|                 |            | Comments                    | Retest for June 13 V37 blank. Blank concentration > PQL and correctly entered into emLine. |              | Retest for June 13 V37 blank.                                |                                      | Retest for June 13 V37 blank.  |              | Retest for June 13 V37 blank.                                |              | Retest for June 13 V37 blank.                                |                                      | Retest for June 13 V37 blank.                                |              | Retest for June 13 V37 blank.                                |             | Retest for June 13 V37 blank.   |                                      | Retest for June 13 V37 blank. |  |
|                 |            |                             | Let Value Stand  |              |  | Let Value Stand                      |  |              | Let Value Stand  |              |  | Let Value Stand                      |  |              | Let Value Stand  |             |   | Let Value Stand                      |                               |  |
|                 |            | Result                      | New blank value entered into emLine.   |              |  | New blank value entered into emLine. |  |              | New blank value entered into emLine.                         |              |  | New blank value entered into emLine. |  |              | New blank value entered into emLine.                         |             |   | New blank value entered into emLine. |                               |  |
| SRK05-9         | 8/5/2010   | FIELD BLANK                 | 0.580  | <0.05        | <0.05  | 0.040                                | 0.4360   | <0.02        | <0.04  | <100         | <0.01  | 0.09                                 | <0.5   | <0.002       | 0.0030   | <0.2        | 2.200   | <0.1                                 |                               |  |
|                 |            | Deionized Water             | <0.05  | <0.05        | <0.05  | <0.02                                | <0.005   | <0.02        | <0.04  | <100         | <0.01  | <0.05                                | <0.5   | <0.002       | <0.002   | <0.2        | <0.1  | <0.1                                 |                               |  |
|                 |            | Times greater than DI water | 11.6   | 1            | 1  | 2                                    | 87.2   | 1            | 1  | 1            | 1  | 1.8                                  | 1  | 1            | 1.5  | 1           | 22  | 1                                    |                               |  |
|                 |            | Comments                    | Blank concentration > PQL and correctly entered into emLine.                               |              |  |                                      | Blank concentration > PQL and correctly entered into emLine.                                       |              |  |              |  |                                      |  |              |  |             | Blank concentration > PQL and correctly entered into emLine.                                    |                                      |                               |  |
|                 |            |                             | Let Value Stand  |              |  | Request Retest                       |  |              |  |              |  |                                      |  |              | Request Retest   |             |   |                                      |                               |  |
|                 |            | Result                      | High blank value remains.  |              |  | Retest performed, see results below. |  |              |  |              |  |                                      |  |              | Retest performed, see results below.                         |             |   |                                      |                               |  |
| SRK05-9 Retest  | 8/5/2010   | FIELD BLANK                 |  |              |  |                                      | 0.4880   |              |  |              |  |                                      |  |              |  |             | 2.300   |                                      |                               |  |
|                 |            | Deionized Water             | <0.05  | <0.05        | <0.05  | <0.02                                | <0.005   | <0.02        | <0.04  | <100         | <0.01  | <0.05                                | <0.5   | <0.002       | <0.002   | <0.2        | <0.1  | <0.1                                 |                               |  |
|                 |            | Times greater than DI water | 0  | 0            | 0  | 0                                    | 97.6   | 0            | 0  | 0            | 0  | 0                                    | 0  | 0            | 0  | 0           | 23  | 0                                    |                               |  |
|                 |            | Comments                    |  |              |  |                                      | Retest for August 5 SRK05-9 blank. Blank concentration > PQL and correctly entered into emLine.    |              |  |              |  |                                      |  |              |  |             | Retest for August 5 SRK05-9 blank. Blank concentration > PQL and correctly entered into emLine. |                                      |                               |  |
|                 |            |                             | Let Value Stand  |              |  | Let Value Stand                      |  |              |  |              |  |                                      |  |              | Let Value Stand  |             |   |                                      |                               |  |
|                 |            | Result                      | New blank value entered into emLine.   |              |  | New blank value entered into emLine. |  |              |  |              |  |                                      |  |              | New blank value entered into emLine.                         |             |   |                                      |                               |  |
| SRK05-9         | 10/7/2010  | FIELD BLANK                 | 0.510  | <0.05        | <0.05  | 0.030                                | 0.2610   | <0.02        | <0.04  | <100         | <0.01  | 0.08                                 | <0.5   | <0.002       | 0.0050   | <0.2        | 1.500   | <0.1                                 |                               |  |
|                 |            | Deionized Water             | <0.05  | <0.05        | <0.05  | <0.02                                | <0.005   | <0.02        | <0.04  | <100         | <0.01  | <0.05                                | <0.5   | <0.002       | <0.002   | <0.2        | <0.1  | <0.1                                 |                               |  |
|                 |            | Times greater than DI water | 10.2   | 1            | 1  | 1.5                                  | 52.2   | 1            | 1  | 1            | 1  | 1.6                                  | 1  | 1            | 2.5  | 1           | 15  | 1                                    |                               |  |
|                 |            | Comments                    | Blank concentration > PQL and correctly entered into emLine.                               |              |  |                                      | Blank concentration > PQL and correctly entered into emLine.                                       |              |  |              |  |                                      |  |              |  |             | Blank concentration > PQL and correctly entered into emLine.                                    |                                      |                               |  |
|                 |            |                             | Let Value Stand  |              |  | Request Retest                       |  |              |  |              |  |                                      |  |              | Let Value Stand  |             |   |                                      |                               |  |
|                 |            | Result                      | High blank value remains.  |              |  | Retest performed, see results below. |  |              |  |              |  |                                      |  |              | High blank value remains.                                    |             |   |                                      |                               |  |
| SRK05-9 Retest  | 10/7/2010  | FIELD BLANK                 |  |              |  |                                      | 0.2730   |              |  |              |  |                                      |  |              |  |             |   |                                      |                               |  |
|                 |            | Deionized Water             | <0.05  | <0.05        | <0.05  | <0.02                                | <0.005   | <0.02        | <0.04  | <100         | <0.01  | <0.05                                | <0.5   | <0.002       | <0.002   | <0.2        | <0.1  | <0.1                                 |                               |  |
|                 |            | Times greater than DI water | 0  | 0            | 0  | 0                                    | 54.6   | 0            | 0  | 0            | 0  | 0                                    | 0  | 0            | 0  | 0           | 0   | 0                                    |                               |  |
|                 |            | Comments                    |  |              |  |                                      | Retest for October 7 SRK05-9 blank. Blank concentration > PQL and correctly entered into emLine.   |              |  |              |  |                                      |  |              |  |             |   |                                      |                               |  |
|                 |            |                             | Let Value Stand  |              |  | Let Value Stand                      |  |              |  |              |  |                                      |  |              | Let Value Stand  |             |   |                                      |                               |  |
|                 |            | Result                      | New blank value entered into emLine.   |              |  | New blank value entered into emLine. |  |              |  |              |  |                                      |  |              | New blank value entered into emLine.                         |             |   |                                      |                               |  |
| SRK05-9         | 11/18/2010 | FIELD BLANK                 | 0.130  | <0.05        | <0.05  | 0.030                                | 0.1510   | <0.02        | <0.04  | <100         | <0.01  | <0.05                                | <0.5   | <0.002       | <0.002   | <0.2        | 0.500   | <0.1                                 |                               |  |
|                 |            | Deionized Water             | <0.05  | <0.05        | <0.05  | <0.02                                | <0.005   | <0.02        | <0.04  | <100         | <0.01  | <0.05                                | <0.5   | <0.002       | <0.002   | <0.2        | <0.1  | <0.1                                 |                               |  |
|                 |            | Times greater than DI water | 2.6  | 1            | 1  | 1.5                                  | 30.2   | 1            | 1  | 1            | 1  | 1                                    | 1  | 1            | 1  | 1           | 5   | 1                                    |                               |  |
|                 |            | Comments                    | Blank concentration > PQL and correctly entered into emLine.                               |              |  |                                      | Blank concentration > PQL and correctly entered into emLine.                                       |              |  |              |  |                                      |  |              |  |             | Blank concentration equal to PQL and correctly entered into emLine.                             |                                      |                               |  |
|                 |            |                             | Let Value Stand  |              |  | Request Retest                       |  |              |  |              |  |                                      |  |              | Let Value Stand  |             |   |                                      |                               |  |
|                 |            | Result                      | High blank value remains.  |              |  | Retest performed, see results below. |  |              |  |              |  |                                      |  |              | High blank value remains.                                    |             |   |                                      |                               |  |
| SRK05-9 Retest  | 11/18/2010 | FIELD BLANK                 |  |              |  |                                      | 0.1710   |              |  |              |  |                                      |  |              |  |             |   |                                      |                               |  |
|                 |            | Deionized Water             | <0.05  | <0.05        | <0.05  | <0.02                                | <0.005   | <0.02        | <0.04  | <100         | <0.01  | <0.05                                | <0.5   | <0.002       | <0.002   | <0.2        | <0.1  | <0.1                                 |                               |  |
|                 |            | Times greater than DI water | 0  | 0            | 0  | 0                                    | 34.2   | 0            | 0  | 0            | 0  | 0                                    | 0  | 0            | 0  | 0           | 0   | 0                                    |                               |  |
|                 |            | Comments                    |  |              |  |                                      | Retest for November 18 SRK05-9 blank. Blank concentration > PQL and correctly entered into emLine. |              |  |              |  |                                      |  |              |  |             |   |                                      |                               |  |
|                 |            |                             | Let Value Stand  |              |  | Let Value Stand                      |  |              |  |              |  |                                      |  |              | Let Value Stand  |             |   |                                      |                               |  |
|                 |            | Result                      | New blank value entered into emLine.   |              |  | New blank value entered into emLine. |  |              |  |              |  |                                      |  |              | New blank value entered into emLine.                         |             |   |                                      |                               |  |

Blank value < PQL  
 Blank value is a detection limit higher than that of DI water  
 Blank value > PQL and < retest limit  
 Blank value > retest limit (20X DI Water Detection Limit)

| Station        | Date       | Sample Type                 | Mn-d<br>µg/L   | Mo-d<br>µg/L | Na-d<br>mg/L | Ni-d<br>µg/L   | Pb-d<br>µg/L | Sb-d<br>µg/L | Se-d<br>µg/L   | Si-d<br>µg/L | Sn-d<br>µg/L | Sr-d<br>µg/L   | Ti-d<br>µg/L | Ti-d<br>µg/L | U-d<br>µg/L  | V-d<br>µg/L | Zn-d<br>µg/L | Zr-d<br>µg/L |
|----------------|------------|-----------------------------|--|--------------|--------------|--|--------------|--------------|--|--------------|--------------|--|--------------|--------------|--|-------------|--------------|--------------|
| SRK05-9        | 12/16/2010 | FIELD BLANK                 | 1.300  | <0.05        | <0.05        | 0.090  | 0.0450       | <0.02        | <0.04  | <100         | <0.01        | 0.43   | <0.5         | <0.002       | 0.0070   | <0.2        | 4.800        | <0.1         |
|                |            | Deionized Water             | <0.05  | <0.05        | <0.05        | <0.02  | <0.005       | <0.02        | <0.04  | <100         | <0.01        | <0.05  | <0.5         | <0.002       | <0.002   | <0.2        | <0.1         | <0.1         |
|                |            | Times greater than DI water | 26   | 1            | 1            | 4.5  | 9            | 1            | 1  | 1            | 1            | 8.6  | 1            | 1            | 3.5  | 1           | 48           | 1            |
|                |            | Comments                    | Blank concentration > PQL and correctly entered into emLine.                                       |              |              | Blank concentration > PQL and correctly entered into emLine.                                       |              |              | Blank concentration > PQL and correctly entered into emLine.                                       |              |              | Blank concentration > PQL and correctly entered into emLine.                                       |              |              | Blank concentration > PQL and correctly entered into emLine. |             |              |              |
|                |            | Action                      | Request Retest   |              |              | Let Value Stand  |              |              | Let Value Stand  |              |              | Request Retest   |              |              |  |             |              |              |
|                |            | Result                      | Retest performed, see results below.   |              |              | High blank value remains.  |              |              | High blank value remains.  |              |              | Retest performed, see results below.   |              |              |  |             |              |              |
| SRK05-9 Retest | 12/16/2010 | FIELD BLANK                 | 1.240  |              |              |  |              |              |  |              |              |  |              |              |  |             | 4.600        |              |
|                |            | Deionized Water             | <0.05  | <0.05        | <0.05        | <0.02  | <0.005       | <0.02        | <0.04  | <100         | <0.01        | <0.05  | <0.5         | <0.002       | <0.002   | <0.2        | <0.1         | <0.1         |
|                |            | Times greater than DI water | 24.8   | 0            | 0            | 0  | 0            | 0            | 0  | 0            | 0            | 0  | 0            | 0            | 0  | 0           | 48           | 0            |
|                |            | Comments                    | Retest for December 16 SRK05-9 blank. Blank concentration > PQL and correctly entered into emLine. |              |              | Retest for December 16 SRK05-9 blank. Blank concentration > PQL and correctly entered into emLine. |              |              | Retest for December 16 SRK05-9 blank. Blank concentration > PQL and correctly entered into emLine. |              |              | Retest for December 16 SRK05-9 blank. Blank concentration > PQL and correctly entered into emLine. |              |              |  |             |              |              |
|                |            | Action                      | Let Value Stand  |              |              | Let Value Stand  |              |              | Let Value Stand  |              |              | Let Value Stand  |              |              |  |             |              |              |
|                |            | Result                      | New blank value entered into emLine.   |              |              | New blank value entered into emLine.   |              |              | New blank value entered into emLine.   |              |              | New blank value entered into emLine.   |              |              |  |             |              |              |

Blank value < PQL  
 Blank value is a detection limit higher than that of DI water  
 Blank value > PQL and < retest limit  
 Blank value > retest limit (20X DI Water Detection Limit)

Table D-26: Vangorda Creek Drainage Groundwater Quality  
2010 QA/QC Duplicates - General Parameters

| Station  | Date      | Sample Type | Acid(pH4.5)<br>mg/L  | Acid(pH8.3)<br>mg/L | ALK<br>mg/L | ALKPP<br>mg/L | CaCO3<br>mg/L | CaCO3-d<br>mg/L | Chloride<br>mg/L | CN(wad)<br>mg/L | CNTHIO<br>mg/L | CO3<br>mg/L | Colour<br>TCU | COND<br>µmho/cm | DOC<br>mg/L | HCO3<br>mg/L | NH3<br>mg/L | OH<br>mg/L | pH   | SO4-d<br>mg/L | TDS<br>mg/L | TOC<br>mg/L | TSS<br>mg/L | TURB<br>NTU |
|----------|-----------|-------------|--|---------------------|-------------|---------------|---------------|-----------------|------------------|-----------------|----------------|-------------|---------------|-----------------|-------------|--------------|-------------|------------|------|---------------|-------------|-------------|-------------|-------------|
| V37      | 6/13/2010 | M           | <0.5   | 3.3                 | 440         | 14            |               | 490             | 1.2              |                 |                | 16          |               | 956             |             | 500          |             | <0.5       | 8.5  | 160           |             |             |             | 70          |
| V37      | 6/13/2010 | DUPLICATE   | <0.5   | 3                   | 430         | 12            |               | 475             | 1                |                 |                | 14          |               | 943             |             | 500          |             | <0.5       | 8.4  | 130           |             |             |             | 63          |
| RPD (%)  |           |             | N/A  | 9.52                | 2.30        | 15.38         | N/A           | 3.11            | 18.18            | N/A             | N/A            | 13.33       | N/A           | 1.37            | N/A         | 0.00         | N/A         | N/A        | 0.10 | 20.69         | N/A         | N/A         | 10.53       | N/A         |
| Comments |           |             |  |                     |             |               |               |                 |                  |                 |                |             |               |                 |             |              |             |            |      |               |             |             |             |             |
| Action   |           |             |  |                     |             |               |               |                 |                  |                 |                |             |               |                 |             |              |             |            |      |               |             |             |             |             |
| Result   |           |             |  |                     |             |               |               |                 |                  |                 |                |             |               |                 |             |              |             |            |      |               |             |             |             |             |
| P2001-2A | 6/13/2010 | M           | <0.5   | 39.1                | 450         | <0.5          |               | 971             | 1.7              |                 |                | <0.5        |               | 1630            |             | 550          |             | <0.5       | 7.5  | 550           |             |             |             | 3300        |
| P2001-2A | 6/13/2010 | DUPLICATE   | <0.5   | 26.9                | 400         | <0.5          |               | 985             | 1.9              |                 |                | <0.5        |               | 1560            |             | 490          |             | <0.5       | 7.8  | 550           |             |             |             | 1000        |
| RPD (%)  |           |             | N/A  | 36.97               | 11.76       | N/A           | N/A           | 1.43            | 11.11            | N/A             | N/A            | N/A         | N/A           | 4.39            | N/A         | 11.54        | N/A         | N/A        | 0.30 | 0.00          | N/A         | N/A         | 106.98      | N/A         |
| Comments |           |             | Both values > PQL and correctly entered into emLine.   |                     |             |               |               |                 |                  |                 |                |             |               |                 |             |              |             |            |      |               |             |             |             |             |
| Action   |           |             | Let Value Stand  |                     |             |               |               |                 |                  |                 |                |             |               |                 |             |              |             |            |      |               |             |             |             |             |
| Result   |           |             | Discrepancy between values remains. Retest not carried out because insufficient sample remaining to reanalyze. |                     |             |               |               |                 |                  |                 |                |             |               |                 |             |              |             |            |      |               |             |             |             |             |
| P2001-2B | 6/13/2010 | M           | <0.5   | 27.1                | 410         | <0.5          |               | 790             | 1.5              |                 |                | <0.5        |               | 1430            |             | 500          |             | <0.5       | 7.8  | 450           |             |             |             | 2200        |
| P2001-2B | 6/13/2010 | DUPLICATE   | <0.5   | 27.4                | 420         | <0.5          |               | 855             | 1.9              |                 |                | <0.5        |               | 1450            |             | 510          |             | <0.5       | 7.7  | 460           |             |             |             | 3500        |
| RPD (%)  |           |             | N/A  | 1.10                | 2.41        | N/A           | N/A           | 7.90            | 23.53            | N/A             | N/A            | N/A         | N/A           | 1.39            | N/A         | 1.98         | N/A         | N/A        | 0.10 | 2.20          | N/A         | N/A         | 45.61       | N/A         |
| Comments |           |             |  |                     |             |               |               |                 |                  |                 |                |             |               |                 |             |              |             |            |      |               |             |             |             |             |
| Action   |           |             |  |                     |             |               |               |                 |                  |                 |                |             |               |                 |             |              |             |            |      |               |             |             |             |             |
| Result   |           |             |  |                     |             |               |               |                 |                  |                 |                |             |               |                 |             |              |             |            |      |               |             |             |             |             |
| P09-LCD1 | 9/20/2010 | M           | <0.5   | 16.90               | 270.00      | <0.5          |               | 441.00          | 0.50             |                 |                | <0.5        |               | 843.00          |             | 330.00       |             | <0.5       | 7.90 | 160.00        |             |             |             | 580.00      |
| P09-LCD1 | 9/20/2010 | DUPLICATE   | <0.5   | 16.30               | 270.00      | <0.5          |               | 439.00          | <0.5             |                 |                | <0.5        |               | 838.00          |             | 330.00       |             | <0.5       | 7.84 | 160.00        |             |             |             | 540.00      |
| RPD (%)  |           |             | N/A  | 3.61                | 0.00        | N/A           | N/A           | 0.45            | N/A              | N/A             | N/A            | N/A         | N/A           | 0.59            | N/A         | 0.00         | N/A         | N/A        | 0.06 | 0.00          | N/A         | N/A         | 7.14        | N/A         |
| Comments |           |             |  |                     |             |               |               |                 |                  |                 |                |             |               |                 |             |              |             |            |      |               |             |             |             |             |
| Action   |           |             |  |                     |             |               |               |                 |                  |                 |                |             |               |                 |             |              |             |            |      |               |             |             |             |             |
| Result   |           |             |  |                     |             |               |               |                 |                  |                 |                |             |               |                 |             |              |             |            |      |               |             |             |             |             |
| V36      | 9/18/2010 | M           | <0.5   | 40.30               | 500.00      | <0.5          |               | 1760.00         | 0.60             |                 |                | <0.5        |               | 2720.00         |             | 600.00       |             | <0.5       | 7.58 | 1300.00       |             |             |             | 42.00       |
| V36      | 9/19/2010 | DUPLICATE   | <0.5   | 46.70               | 500.00      | <0.5          |               | 1780.00         | <0.5             |                 |                | <0.5        |               | 2760.00         |             | 610.00       |             | <0.5       | 7.62 | 1300.00       |             |             |             | 21.00       |
| RPD (%)  |           |             | N/A  | 14.71               | 0.00        | N/A           | N/A           | 1.13            | N/A              | N/A             | N/A            | N/A         | N/A           | 1.46            | N/A         | 1.65         | N/A         | N/A        | 0.04 | 0.00          | N/A         | N/A         | 66.67       | N/A         |
| Comments |           |             | Both values > PQL and correctly entered into emLine.   |                     |             |               |               |                 |                  |                 |                |             |               |                 |             |              |             |            |      |               |             |             |             |             |
| Action   |           |             | Let Value Stand  |                     |             |               |               |                 |                  |                 |                |             |               |                 |             |              |             |            |      |               |             |             |             |             |
| Result   |           |             | Discrepancy between values remains. Retest not carried out because remainder of samples had been discarded.    |                     |             |               |               |                 |                  |                 |                |             |               |                 |             |              |             |            |      |               |             |             |             |             |

RPD > 50%



Table D-27: Vangorda Creek Drainage Groundwater Quality  
2010 QA/QC Duplicates - Dissolved Metals



| Station    | Date      | Sample Type | Ag-d<br>µg/L   | Al-d<br>µg/L | As-d<br>µg/L | Ba-d<br>µg/L | B-d<br>µg/L | Be-d<br>µg/L | Bi-d<br>µg/L | Ca-d<br>mg/L | Cd-d<br>µg/L | Co-d<br>µg/L | Cr-d<br>µg/L | Cu-d<br>µg/L   | Fe-d<br>µg/L | Hg-d<br>µg/L | K-d<br>mg/L | Li-d<br>mg/L | Mg-d<br>mg/L | Mn-d<br>µg/L | Mo-d<br>µg/L | Na-d<br>mg/L | Ni-d<br>µg/L | Pb-d<br>µg/L | Sb-d<br>µg/L | S-d<br>mg/L | Se-d<br>µg/L | Si-d<br>µg/L | Sn-d<br>µg/L | Sr-d<br>µg/L | Ti-d<br>µg/L | Tl-d<br>µg/L | U-d<br>µg/L | V-d<br>µg/L | Zn-d<br>µg/L | Zr-d<br>µg/L |
|------------|-----------|-------------|--|--------------|--------------|--------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|--|--------------|--------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|-------------|-------------|--------------|--------------|
| V37        | 6/13/2010 | M           | <0.005   | 24.3         | 1.96         | 77.6         | <50         | <0.01        | 0.026        | 59.7         | 0.016        | 0.558        | 0.2          | 1.01   | 359          |              | 5.95        | 0.0259       | 82.7         | 103          | 18           | 29.8         | 1.59         | 0.624        | 0.06         | 50          | <0.04        | 2620         | 0.06         | 546          | 1.2          | <0.002       | 1.09        | <0.2        | 4.5          | 0.2          |
| V37        | 6/13/2010 | DUPLICATE   | <0.005   | 17.4         | 1.74         | 77.3         | <50         | <0.01        | <0.005       | 62.6         | 0.013        | 0.486        | 0.2          | 0.24   | 393          |              | 5.75        | 0.0267       | 77.5         | 97.8         | 17.3         | 27.7         | 1.36         | 0.279        | 0.04         | 47          | <0.04        | 2850         | 0.05         | 541          | 0.9          | <0.002       | 0.983       | <0.2        | 3.9          | <0.1         |
| RPD (%)    |           |             | N/A  | 33.09        | 11.89        | 0.39         | N/A         | N/A          | N/A          | 4.74         | 20.69        | 13.79        | 0.00         | 123.20   | 9.04         | N/A          | 3.42        | 3.04         | 6.49         | 5.18         | 3.97         | 7.30         | 15.59        | 76.41        | 40.00        | 6.19        | N/A          | 8.41         | 18.18        | 0.92         | 28.57        | N/A          | 10.32       | N/A         | 14.29        | N/A          |
| Comments   |           |             | Both values correctly entered into emLine; however, duplicate value not > PQL. Therefore, RPD analysis not valid in this case. |              |              |              |             |              |              |              |              |              |              | Both values > PQL and correctly entered into emLine. |              |              |             |              |              |              |              |              |              |              |              |             |              |              |              |              |              |              |             |             |              |              |
| Action     |           |             | Let Value Stand  |              |              |              |             |              |              |              |              |              |              | Let Value Stand                                      |              |              |             |              |              |              |              |              |              |              |              |             |              |              |              |              |              |              |             |             |              |              |
| Result     |           |             | Discrepancy between values remains.  |              |              |              |             |              |              |              |              |              |              | Discrepancy between values remains.                  |              |              |             |              |              |              |              |              |              |              |              |             |              |              |              |              |              |              |             |             |              |              |
| P2001-2A   | 6/13/2010 | M           | <0.03  | 9            | 10.1         | 16.1         | <300        | <0.05        | <0.03        | 218          | <0.03        | 0.47         | <0.5         | 1.7  | 430          |              | 5.7         | 0.029        | 104          | 94.2         | 2            | 11.3         | 2.8          | 0.27         | 0.2          | 175         | <0.2         | 5000         | <0.05        | 1190         | <3           | <0.01        | 33.4        | <1          | 11.2         | <0.5         |
| P2001-2A   | 6/13/2010 | DUPLICATE   | <0.03  | 3            | 9.8          | 15.5         | <300        | <0.05        | <0.03        | 223          | <0.03        | 0.42         | <0.5         | <0.3   | 387          |              | 4.1         | 0.028        | 104          | 93.2         | 1.3          | 6.4          | 3.4          | 0.37         | 0.2          | 173         | <0.2         | 5190         | <0.05        | 1180         | <3           | <0.01        | 32.8        | <1          | 5.7          | <0.5         |
| RPD (%)    |           |             | N/A  | 100.00       | 3.02         | 3.80         | N/A         | N/A          | N/A          | 2.27         | N/A          | 11.24        | N/A          | N/A  | 10.53        | N/A          | 32.65       | 3.51         | 0.00         | 1.07         | 42.42        | 55.37        | 19.35        | 31.25        | 0.00         | 1.15        | N/A          | 3.73         | N/A          | 0.84         | N/A          | N/A          | 1.81        | N/A         | 65.09        | N/A          |
| Comments   |           |             | Both values correctly entered into emLine; however, duplicate value not > PQL. Therefore, RPD analysis not valid in this case. |              |              |              |             |              |              |              |              |              |              | Both values > PQL and correctly entered into emLine. |              |              |             |              |              |              |              |              |              |              |              |             |              |              |              |              |              |              |             |             |              |              |
| Action     |           |             | Let Value Stand  |              |              |              |             |              |              |              |              |              |              | Let Value Stand                                      |              |              |             |              |              |              |              |              |              |              |              |             |              |              |              |              |              |              |             |             |              |              |
| Result     |           |             | Discrepancy between values remains.  |              |              |              |             |              |              |              |              |              |              | Discrepancy between values remains.                  |              |              |             |              |              |              |              |              |              |              |              |             |              |              |              |              |              |              |             |             |              |              |
| P2001-2B   | 6/13/2010 | M           | <0.005   | 7.4          | 14.4         | 23.4         | <50         | <0.01        | <0.005       | 177          | 0.016        | 1.13         | <0.1         | 0.4  | 107          |              | 4.34        | 0.029        | 84.8         | 178          | 6.88         | 13.3         | 4.39         | 1.25         | 0.71         | 145         | 0.15         | 4980         | 0.06         | 1010         | <0.5         | 0.004        | 23.6        | 0.3         | 2.9          | 0.2          |
| P2001-2B   | 6/13/2010 | DUPLICATE   | <0.005   | 3.2          | 17.2         | 22.7         | <50         | <0.01        | <0.005       | 175          | 0.019        | 1.32         | <0.1         | 0.07   | 95           |              | 4.94        | 0.0321       | 102          | 201          | 6.92         | 15.9         | 4.96         | 2.73         | 0.69         | 169         | 0.13         | 4740         | 0.03         | 970          | <0.5         | 0.004        | 23.1        | 0.4         | 3.6          | 0.2          |
| RPD (%)    |           |             | N/A  | 79.25        | 17.72        | 3.04         | N/A         | N/A          | N/A          | 1.14         | 17.14        | 15.51        | N/A          | 140.43   | 11.88        | N/A          | 12.93       | 10.15        | 18.42        | 12.14        | 0.58         | 17.81        | 12.19        | 74.37        | 2.86         | 15.29       | 14.29        | 4.94         | 66.67        | 4.04         | N/A          | 0.00         | 2.14        | 28.57       | 21.54        | 0.00         |
| Comments   |           |             | Both values > PQL and correctly entered into emLine.   |              |              |              |             |              |              |              |              |              |              | Both values > PQL and correctly entered into emLine. |              |              |             |              |              |              |              |              |              |              |              |             |              |              |              |              |              |              |             |             |              |              |
| Action     |           |             | Let Value Stand  |              |              |              |             |              |              |              |              |              |              | Let Value Stand                                      |              |              |             |              |              |              |              |              |              |              |              |             |              |              |              |              |              |              |             |             |              |              |
| Result     |           |             | Discrepancy between values remains.  |              |              |              |             |              |              |              |              |              |              | Discrepancy between values remains.                  |              |              |             |              |              |              |              |              |              |              |              |             |              |              |              |              |              |              |             |             |              |              |
| P09-LCD1   | 9/20/2010 | M           | 0.04   | 186.00       | 89.00        | 68.00        | <50         | <0.01        | 0.01         | 122.00       | 0.07         | 0.62         | 0.70         | 1.02   | 3850.00      |              | 2.82        | 0.01         | 33.30        | 530.00       | 5.59         | 16.80        | 1.29         | 39.50        | 0.12         | 74.00       | <0.04        | 7290.00      | 0.06         | 762.00       | 5.20         | 0.020        | 6.95        | 0.40        | 10.80        | <0.1         |
| P09-LCD1   | 9/20/2010 | DUPLICATE   | 0.02   | 159.00       | 88.50        | 66.70        | <50         | <0.01        | 0.01         | 121.00       | 0.06         | 0.62         | 0.60         | 0.99   | 3850.00      |              | 2.85        | 0.01         | 33.10        | 530.00       | 5.71         | 17.20        | 1.28         | 41.40        | 0.11         | 75.00       | <0.04        | 7120.00      | 0.06         | 785.00       | 5.00         | 0.019        | 7.04        | 0.30        | 9.20         | <0.1         |
| RPD (%)    |           |             | 54.55  | 15.65        | 0.56         | 1.93         | N/A         | N/A          | 13.33        | 0.82         | 19.85        | 0.00         | 15.38        | 2.99   | 0.00         | N/A          | 1.06        | 4.69         | 0.60         | 0.00         | 2.12         | 2.35         | 0.78         | 4.70         | 8.70         | 1.34        | N/A          | 2.36         | 0.00         | 2.97         | 3.92         | 5.13         | 1.29        | 28.57       | 16.00        | N/A          |
| Comments   |           |             | Both values correctly entered into emLine; however, duplicate value not > PQL. Therefore, RPD analysis not valid in this case. |              |              |              |             |              |              |              |              |              |              | Both values > PQL and correctly entered into emLine. |              |              |             |              |              |              |              |              |              |              |              |             |              |              |              |              |              |              |             |             |              |              |
| Action     |           |             | Let Value Stand  |              |              |              |             |              |              |              |              |              |              | Let Value Stand                                      |              |              |             |              |              |              |              |              |              |              |              |             |              |              |              |              |              |              |             |             |              |              |
| Result     |           |             | Discrepancy between values remains.  |              |              |              |             |              |              |              |              |              |              | Discrepancy between values remains.                  |              |              |             |              |              |              |              |              |              |              |              |             |              |              |              |              |              |              |             |             |              |              |
| V36        | 9/18/2010 | M           | <0.005   | 2.40         | 2.55         | 8.24         | <50.0       | <0.01        | <0.005       | 368.00       | 0.39         | 1.87         | <0.1         | 1.96   | 14.00        |              | 4.71        | 0.04         | 204.00       | 132.00       | 1.31         | 7.54         | 12.10        | 2.41         | 0.15         | 409.00      | 0.70         | 5510.00      | 0.08         | 1790.00      | <0.5         | 0.087        | 46.60       | 0.60        | 49.80        | 0.20         |
| V36        | 9/19/2010 | DUPLICATE   | <0.005   | 3.30         | 2.41         | 8.12         | <50.0       | <0.01        | 0.01         | 367.00       | 0.31         | 1.91         | <0.1         | 2.11   | 12.00        |              | 4.71        | 0.04         | 209.00       | 131.00       | 1.05         | 7.56         | 12.00        | 2.39         | 0.12         | 435.00      | 0.58         | 5460.00      | 0.03         | 1770.00      | <0.5         | 0.083        | 47.10       | 0.60        | 41.10        | <0.1         |
| RPD (%)    |           |             | N/A  | 31.58        | 5.65         | 1.47         | N/A         | N/A          | N/A          | 0.27         | 22.35        | 2.12         | N/A          | 7.37   | 15.38        | N/A          | 0.00        | 6.41         | 2.42         | 0.76         | 22.03        | 0.26         | 0.83         | 0.83         | 22.22        | 6.16        | 18.75        | 0.91         | 90.91        | 1.12         | N/A          | 4.71         | 1.07        | 0.00        | 19.14        | N/A          |
| Comments   |           |             | Both values correctly entered into emLine; however, duplicate value not > PQL. Therefore, RPD analysis not valid in this case. |              |              |              |             |              |              |              |              |              |              | Both values > PQL and correctly entered into emLine. |              |              |             |              |              |              |              |              |              |              |              |             |              |              |              |              |              |              |             |             |              |              |
| Action     |           |             | Let Value Stand  |              |              |              |             |              |              |              |              |              |              | Let Value Stand                                      |              |              |             |              |              |              |              |              |              |              |              |             |              |              |              |              |              |              |             |             |              |              |
| Result     |           |             | Discrepancy between values remains.  |              |              |              |             |              |              |              |              |              |              | Discrepancy between values remains.                  |              |              |             |              |              |              |              |              |              |              |              |             |              |              |              |              |              |              |             |             |              |              |
| RPD > 50%  |           |             |  |              |              |              |             |              |              |              |              |              |              |  |              |              |             |              |              |              |              |              |              |              |              |             |              |              |              |              |              |              |             |             |              |              |
| RPD > 100% |           |             |  |              |              |              |             |              |              |              |              |              |              |  |              |              |             |              |              |              |              |              |              |              |              |             |              |              |              |              |              |              |             |             |              |              |





Table D-28: Vangorda Creek Drainage Groundwater Quality  
2010 QA/QC Splits - General Parameters

| Station  | Date      | Sample Type | Acid(pH4.5)<br>mg/L | Acid(pH8.3)<br>mg/L | ALK<br>mg/L | ALKPP<br>mg/L | CaCO3<br>mg/L | CaCO3-d<br>mg/L | Chloride<br>mg/L | CN(wad)<br>mg/L | CNTHIO<br>mg/L | CO3<br>mg/L | Colour<br>TCU | COND<br>µmho/cm | DOC<br>mg/L | HCO3<br>mg/L | NH3<br>mg/L | OH<br>mg/L | pH   | SO4-d<br>mg/L | TDS<br>mg/L | TOC<br>mg/L | TSS<br>mg/L | TURB<br>NTU |
|----------|-----------|-------------|---------------------|---------------------|-------------|---------------|---------------|-----------------|------------------|-----------------|----------------|-------------|---------------|-----------------|-------------|--------------|-------------|------------|------|---------------|-------------|-------------|-------------|-------------|
| P09-VC1  | 9/20/2010 | M           | <0.5                | 3.40                | 140.00      | <0.5          |               | 178.00          | <0.5             |                 |                | <0.5        |               | 390.00          |             | 170.00       |             | <0.5       | 8.02 | 62.00         |             |             | 42.00       |             |
| P09-VC1  | 9/20/2010 | SPLIT       | <0.5                | 3.30                | 140.00      | <0.5          |               | 175.00          | <0.5             |                 |                | <0.5        |               | 395.00          |             | 170.00       |             | <0.5       | 7.99 | 55.00         |             |             | 39.00       |             |
| RPD (%)  |           |             | N/A                 | 2.99                | 0.00        | N/A           | N/A           | 1.70            | N/A              | N/A             | N/A            | N/A         | N/A           | 1.27            | N/A         | 0.00         | N/A         | N/A        | 0.03 | 11.97         | N/A         | N/A         | 7.41        | N/A         |
| Comments |           |             |                     |                     |             |               |               |                 |                  |                 |                |             |               |                 |             |              |             |            |      |               |             |             |             |             |
| Action   |           |             |                     |                     |             |               |               |                 |                  |                 |                |             |               |                 |             |              |             |            |      |               |             |             |             |             |
| Result   |           |             |                     |                     |             |               |               |                 |                  |                 |                |             |               |                 |             |              |             |            |      |               |             |             |             |             |
| SRK05-9  | 11/4/2010 | M           | <0.5                | 22.30               | 340.00      | <0.5          |               | 1560.00         | <0.5             |                 |                | <0.5        |               | 2300.00         |             | 420.00       |             | <0.5       | 8.23 | 1200.00       |             |             | 360.00      |             |
| SRK05-9  | 11/4/2010 | SPLIT       | <0.5                | 17.10               | 350.00      | <0.5          |               | 1580.00         | 0.70             |                 |                | <0.5        |               | 2300.00         |             | 430.00       |             | <0.5       | 8.11 | 1200.00       |             |             | 320.00      |             |
| RPD (%)  |           |             | N/A                 | 26.40               | 2.90        | N/A           | N/A           | 1.27            | N/A              | N/A             | N/A            | N/A         | N/A           | 0.00            | N/A         | 2.35         | N/A         | N/A        | 0.12 | 0.00          | N/A         | N/A         | 11.76       | N/A         |
| Comments |           |             |                     |                     |             |               |               |                 |                  |                 |                |             |               |                 |             |              |             |            |      |               |             |             |             |             |
| Action   |           |             |                     |                     |             |               |               |                 |                  |                 |                |             |               |                 |             |              |             |            |      |               |             |             |             |             |
| Result   |           |             |                     |                     |             |               |               |                 |                  |                 |                |             |               |                 |             |              |             |            |      |               |             |             |             |             |

RPD > 50%



Table D-29: Vangorda Creek Drainage Groundwater Quality  
2010 QA/QC Splits -Dissolved Metals

| Station         | Date      | Sample Type | Ag-d   | Al-d  | As-d  | Ba-d  | B-d  | Be-d  | Bi-d   | Ca-d   | Cd-d  | Co-d   | Cr-d | Cu-d  | Fe-d   | Hg-d   | K-d  | Li-d | Mg-d | Mn-d   | Mo-d | Na-d  | Ni-d | Pb-d  | Sb-d  | S-d   | Se-d | Si-d   | Sn-d  | Sr-d    | Ti-d  | Tl-d  | U-d  | V-d    | Zn-d  | Zr-d |       |      |  |  |  |
|-----------------|-----------|-------------|--------|-------|-------|-------|------|-------|--------|--------|-------|--|------|-------|--|--------|------|------|------|--|------|-------|------|-------|-------|-------|------|--------|-------|---------|-------|-------|------|--------|-------|------|-------|------|--|--|--|
|                 |           |             | µg/L   | µg/L  | µg/L  | µg/L  | µg/L | µg/L  | µg/L   | mg/L   | µg/L  | µg/L   | µg/L | µg/L  | µg/L   | µg/L   | mg/L | mg/L | mg/L | µg/L   | µg/L | µg/L  | µg/L | µg/L  | µg/L  | µg/L  | µg/L | µg/L   | µg/L  | µg/L    | µg/L  | µg/L  | µg/L | µg/L   | µg/L  | µg/L |       |      |  |  |  |
| P09-VC1         | 9/20/2010 | M           | <0.005 | 3.70  | 18.30 | 20.00 | <50  | <0.01 | <0.005 | 53.60  | 0.01  | 0.04   | <0.1 | 0.16  |  | 741.00 |      | 1.25 | 0.01 | 10.80  |      | 33.00 | 2.54 | 13.50 | 0.27  | 0.16  | 0.05 | 22.00  | <0.04 | 5750.00 | <0.01 | 714.0 | <0.5 | <0.002 | 5.32  | <0.2 | 9.10  | <0.1 |  |  |  |
| P09-VC1         | 9/20/2010 | SPLIT       | <0.005 | 5.10  | 17.90 | 21.00 | <50  | <0.01 | <0.005 | 53.00  | 0.01  | 0.04   | <0.1 | 0.15  |  | 743.00 |      | 1.23 | 0.01 | 10.40  |      | 32.90 | 2.40 | 12.90 | 0.27  | 0.16  | 0.07 | 22.00  | <0.04 | 5730.00 | <0.01 | 736.0 | <0.5 | <0.002 | 5.47  | <0.2 | 9.40  | <0.1 |  |  |  |
|                 |           | RPD (%)     | N/A    | 31.82 | 2.21  | 4.88  | N/A  | N/A   | N/A    | 1.13   | 0.00  | 4.88   | N/A  | 6.45  | 0.27   | N/A    | 1.61 | 1.65 | 3.77 | 0.30   |      | 5.67  | 4.55 | 0.00  | 0.64  | 33.33 | 0.00 | N/A    | 0.35  | N/A     | 3.03  | N/A   | N/A  | 2.78   | N/A   | 3.24 | N/A   |      |  |  |  |
| <b>Comments</b> |           |             |        |       |       |       |      |       |        |        |       |  |      |       |  |        |      |      |      |  |      |       |      |       |       |       |      |        |       |         |       |       |      |        |       |      |       |      |  |  |  |
| <b>Action</b>   |           |             |        |       |       |       |      |       |        |        |       |  |      |       |  |        |      |      |      |  |      |       |      |       |       |       |      |        |       |         |       |       |      |        |       |      |       |      |  |  |  |
| <b>Result</b>   |           |             |        |       |       |       |      |       |        |        |       |  |      |       |  |        |      |      |      |  |      |       |      |       |       |       |      |        |       |         |       |       |      |        |       |      |       |      |  |  |  |
| SRK05-9         | 11/4/2010 | M           | <0.03  | 4.00  | 0.60  | 38.70 | <300 | <0.05 | <0.03  | 290.00 | 0.28  | 0.17   | <0.5 | 2.10  |  | 26.00  |      | 5.10 | 0.01 | 204.00   |      | 27.60 | 1.10 | 11.70 | 2.40  | 0.66  | <0.1 | 424.00 | 0.60  | 4940.00 | 0.10  | 904.0 | <3   | <0.01  | 31.90 | <1   | 81.20 | <0.5 |  |  |  |
| SRK05-9         | 11/4/2010 | SPLIT       | <0.03  | 4.00  | 0.70  | 38.30 | <300 | <0.05 | <0.03  | 291.00 | 0.25  | 0.10   | <0.5 | 1.80  |  | 12.00  |      | 5.20 | 0.01 | 207.00   |      | 12.80 | 1.00 | 11.80 | 1.50  | 0.53  | <0.1 | 435.00 | 0.60  | 4990.00 | 0.09  | 891.0 | <3   | <0.01  | 31.40 | <1   | 87.90 | <0.5 |  |  |  |
|                 |           | RPD (%)     | N/A    | 0.00  | 15.38 | 1.04  | N/A  | N/A   | N/A    | 0.34   | 11.32 | 51.85  | N/A  | 15.38 | 73.68  | N/A    | 1.94 | 0.00 | 1.46 | 73.27  |      | 9.52  | 0.85 | 46.15 | 21.85 | N/A   | 2.56 | 0.00   | 1.01  | 10.53   | 1.45  | N/A   | N/A  | 1.58   | N/A   | 7.92 | N/A   |      |  |  |  |
| <b>Comments</b> |           |             |        |       |       |       |      |       |        |        |       | Both values correctly entered into emLine; however, split value not > PQL. Therefore, RPD analysis not valid in this case. |      |       | Both values correctly entered into emLine; however, split value not > PQL. Therefore, RPD analysis not valid in this case. |        |      |      |      | Both values > PQL and correctly entered into emLine. |      |       |      |       |       |       |      |        |       |         |       |       |      |        |       |      |       |      |  |  |  |
| <b>Action</b>   |           |             |        |       |       |       |      |       |        |        |       | <b>Let Value Stand</b>   |      |       | <b>Let Value Stand</b>   |        |      |      |      | <b>Let Value Stand</b>                               |      |       |      |       |       |       |      |        |       |         |       |       |      |        |       |      |       |      |  |  |  |
| <b>Result</b>   |           |             |        |       |       |       |      |       |        |        |       | Discrepancy between values remains.  |      |       | Discrepancy between values remains.  |        |      |      |      | Discrepancy between values remains.                  |      |       |      |       |       |       |      |        |       |         |       |       |      |        |       |      |       |      |  |  |  |

RPD > 50%  
RPD > 100%



Table D-30: Vangorda Creek Drainage Groundwater Quality  
2010 QA/QC Lab vs. Field Comparison

| Station   | Date      | COND<br>µmho/cm | CONDF<br>µmho/cm | RPD<br>% | Comments  | Action          | Result  | pH   | pHF  | Difference | Comments  | Action          | Result  |
|-----------|-----------|-----------------|------------------|----------|---|-----------------|---|------|------|------------|---|-----------------|---|
| BH05-9B-R | 6/12/2010 | 628             | 562              | 11.09    |   |                 |   | 8.2  | 7.92 | 0.28       |   |                 |   |
| BH05-9B-R | 9/20/2010 | 624             | 625              | 0.16     |   |                 |   | 8.07 | 7.68 | 0.39       |   |                 |   |
| P09-GS1A  | 9/17/2010 | 1450            | 1430             | 1.39     |   |                 |   | 7.92 | 6.82 | 1.1        | Field and lab values correctly entered into emLine.                   | Let Value Stand | Discrepancy between lab and field values remains. |
| P09-GS1B  | 9/16/2010 | 1260            | 1300             | 3.13     |   |                 |   | 7.74 | 7.14 | 0.6        |   |                 |   |
| P09-LCD1  | 6/12/2010 | 823             | 776              | 5.88     |   |                 |   | 8    | 7.34 | 0.66       |   |                 |   |
| P09-LCD1  | 9/20/2010 | 843             | 910              | 7.64     |   |                 |   | 7.9  | 7.23 | 0.67       |   |                 |   |
| P09-LCD4  | 9/21/2010 |                 |                  | #DIV/0!  | Sample not collected. Samplers noted "Insufficient water to sample."  |                 |   |      |      | 0          | Sample not collected. Samplers noted "Insufficient water to sample."  |                 |   |
| P09-LCD6  | 6/12/2010 | 878             | 832              | 5.38     |   |                 |   | 8    | 7.44 | 0.56       |   |                 |   |
| P09-LCD6  | 9/20/2010 | 876             | 920              | 4.90     |   |                 |   | 7.84 | 7.33 | 0.51       |   |                 |   |
| P09-VC1   | 6/12/2010 | 369             | 360              | 2.47     |   |                 |   | 8.1  | 7.81 | 0.29       |   |                 |   |
| P09-VC1   | 9/20/2010 | 390             | 390              | 0.00     |   |                 |   | 8.02 | 8.08 | 0.06       |   |                 |   |
| P09-VC2   | 9/20/2010 | 404             | 420              | 3.88     |   |                 |   | 7.84 | 7.68 | 0.16       |   |                 |   |
| P2001-2A  | 6/13/2010 | 1630            | 1638             | 0.49     |   |                 |   | 7.5  | 8.47 | 0.97       |   |                 |   |
| P2001-2A  | 9/18/2010 | 1750            | 1684             | 3.84     |   |                 |   | 7.73 | 6.65 | 1.08       | Field and lab values correctly entered into emLine.                   | Let Value Stand | Discrepancy between lab and field values remains. |
| P2001-2B  | 6/13/2010 | 1430            | 1264             | 12.32    |   |                 |   | 7.8  | 7.43 | 0.37       |   |                 |   |
| P2001-2B  | 9/18/2010 | 1660            | 1741             | 4.76     |   |                 |   | 7.81 | 6.72 | 1.09       | Field and lab values correctly entered into emLine.                   | Let Value Stand | Discrepancy between lab and field values remains. |
| P2001-3   | 6/19/2010 | 917             | 989              | 7.56     |   |                 |   | 8.2  | 7.34 | 0.86       |   |                 |   |
| P2001-3   | 9/15/2010 | 976             | 885              | 9.78     |   |                 |   | 8.09 | 7.23 | 0.86       |   |                 |   |
| SRK05-5C  | 6/12/2010 | 790             | 734              | 7.35     |   |                 |   | 8.2  | 7.64 | 0.56       |   |                 |   |
| SRK05-5C  | 9/20/2010 | 787             | 610              | 25.34    | Field and lab values correctly entered into emLine.                   | Let Value Stand | Discrepancy between lab and field values remains. | 7.82 | 7.85 | 0.03       |   |                 |   |
| SRK05-7   | 9/21/2010 |                 |                  | #DIV/0!  | Sample not collected. Samplers noted "Insufficient amount to sample." |                 |   |      |      | 0          | Sample not collected. Samplers noted "Insufficient amount to sample." |                 |   |
| SRK05-8   | 6/12/2010 | 2130            | 1918             | 10.47    |   |                 |   | 7.4  | 6.97 | 0.43       |   |                 |   |
| SRK05-8   | 9/20/2010 | 2290            | 2399             | 4.65     |   |                 |   | 7.69 | 7.23 | 0.46       |   |                 |   |

RPD > 50% or pH difference > 1.5 pH unit

RPD > 20% or pH difference > 1 pH unit

Table D-30: Vangorda Creek Drainage Groundwater Quality  
2010 QA/QC Lab vs. Field Comparison

| Station | Date       | COND<br>µmho/cm | COND<br>µmho/cm | RPD<br>% | Comments | Action | Result | pH   | pHF  | Difference | Comments | Action | Result |
|---------|------------|-----------------|-----------------|----------|----------|--------|--------|------|------|------------|----------|--------|--------|
| SRK05-9 | 1/7/2010   | 2350            | 2210            | 6.14     |          |        |        | 7.7  | 6.96 | 0.74       |          |        |        |
| SRK05-9 | 1/21/2010  | 2280            | 2180            | 4.48     |          |        |        | 7.8  | 7.25 | 0.55       |          |        |        |
| SRK05-9 | 2/4/2010   | 2290            | 2110            | 8.18     |          |        |        | 7.9  | 7.25 | 0.65       |          |        |        |
| SRK05-9 | 2/18/2010  | 2210            | 2020            | 8.98     |          |        |        | 8    | 7.54 | 0.46       |          |        |        |
| SRK05-9 | 3/2/2010   | 2100            | 2020            | 3.88     |          |        |        | 7.9  | 7.47 | 0.43       |          |        |        |
| SRK05-9 | 3/23/2010  | 2080            | 1900            | 9.05     |          |        |        | 8.2  | 7.7  | 0.5        |          |        |        |
| SRK05-9 | 4/7/2010   | 2020            | 2030            | 0.49     |          |        |        | 8.2  | 7.24 | 0.96       |          |        |        |
| SRK05-9 | 4/19/2010  | 2050            | 2130            | 3.83     |          |        |        | 8.1  | 7.6  | 0.5        |          |        |        |
| SRK05-9 | 5/1/2010   | 1980            | 1750            | 12.33    |          |        |        | 8    | 8.18 | 0.18       |          |        |        |
| SRK05-9 | 5/18/2010  | 1880            | 1893            | 0.69     |          |        |        | 8.3  | 7.6  | 0.7        |          |        |        |
| SRK05-9 | 6/2/2010   | 2040            | 2190            | 7.09     |          |        |        | 8.3  | 7.53 | 0.77       |          |        |        |
| SRK05-9 | 6/20/2010  | 2200            | 2230            | 1.35     |          |        |        | 8.1  | 7.48 | 0.62       |          |        |        |
| SRK05-9 | 7/7/2010   | 2280            | 2520            | 10.00    |          |        |        | 7.88 | 7.47 | 0.41       |          |        |        |
| SRK05-9 | 7/22/2010  | 2340            | 2021            | 14.63    |          |        |        | 7.91 | 7.46 | 0.45       |          |        |        |
| SRK05-9 | 8/5/2010   | 2370            | 2410            | 1.67     |          |        |        | 7.78 | 7.44 | 0.34       |          |        |        |
| SRK05-9 | 8/18/2010  | 2380            | 2235            | 6.28     |          |        |        | 8.01 | 7.43 | 0.58       |          |        |        |
| SRK05-9 | 9/7/2010   | 2580            | 2503            | 3.03     |          |        |        | 8.03 | 7.21 | 0.82       |          |        |        |
| SRK05-9 | 9/23/2010  | 2440            | 2129            | 13.61    |          |        |        | 7.9  | 7.11 | 0.79       |          |        |        |
| SRK05-9 | 10/7/2010  | 2360            | 2330            | 1.28     |          |        |        | 7.89 | 7.84 | 0.05       |          |        |        |
| SRK05-9 | 10/21/2010 | 2160            | 2200            | 1.83     |          |        |        | 8.11 | 7.58 | 0.53       |          |        |        |
| SRK05-9 | 11/4/2010  | 2300            | 2218            | 3.63     |          |        |        | 8.23 | 7.47 | 0.76       |          |        |        |
| SRK05-9 | 11/18/2010 | 2310            | 2164            | 6.53     |          |        |        | 7.95 | 7.09 | 0.86       |          |        |        |
| SRK05-9 | 12/2/2010  | 2260            | 2270            | 0.44     |          |        |        | 8.11 | 7.48 | 0.63       |          |        |        |
| SRK05-9 | 12/16/2010 | 2230            | 2230            | 0.00     |          |        |        | 8.11 | 7.89 | 0.22       |          |        |        |
| V34     | 6/12/2010  | 1520            | 1468            | 3.48     |          |        |        | 7.9  | 7.29 | 0.61       |          |        |        |
| V34     | 9/18/2010  | 1670            | 1625            | 2.73     |          |        |        | 7.63 | 6.87 | 0.76       |          |        |        |
| V35     | 6/12/2010  | 3390            | 3002            | 12.14    |          |        |        | 7.5  | 6.99 | 0.51       |          |        |        |
| V35     | 9/18/2010  | 2760            | 2781            | 0.76     |          |        |        | 7.77 | 6.85 | 0.92       |          |        |        |
| V36     | 6/12/2010  | 2500            | 2166            | 14.32    |          |        |        | 7.5  | 7.03 | 0.47       |          |        |        |
| V36     | 9/18/2010  | 2720            | 2700            | 0.74     |          |        |        | 7.58 | 6.64 | 0.94       |          |        |        |
| V37     | 6/13/2010  | 956             | 997             | 4.20     |          |        |        | 8.5  | 9.19 | 0.69       |          |        |        |
| V37     | 9/18/2010  | 1100            | 1085            | 1.37     |          |        |        | 8.04 | 7.27 | 0.77       |          |        |        |

RPD > 50% or pH difference > 1.5 pH unit  
 RPD > 20% or pH difference > 1 pH unit

Table D-31: Vangorda Creek Drainage Water Quality  
2010 QA/QC Duplicates - Pit Lakes - General Parameters

| Station         | Date      | Sample Type | Acid(pH4.5)<br>mg/L | Acid(pH8.3)<br>mg/L | ALK<br>mg/L | ALKPP<br>mg/L | CaCO3<br>mg/L | CaCO3-d<br>mg/L | Cl-d<br>mg/L | CO3<br>mg/L | COND<br>µmho/cm | HCO3<br>mg/L | NH3<br>mg/L | NO2<br>mg/L | NO2/3<br>mg/L | NO3<br>mg/L | OH<br>mg/L | oPO4<br>mg/L | P<br>mg/L | pH   | SO4-d<br>mg/L | TDS<br>mg/L | TSS<br>mg/L |
|-----------------|-----------|-------------|---------------------|---------------------|-------------|---------------|---------------|-----------------|--------------|-------------|-----------------|--------------|-------------|-------------|---------------|-------------|------------|--------------|-----------|------|---------------|-------------|-------------|
| VL-1            | 6/16/2010 | M           | 69.4                | 423                 | <0.5        | <0.5          | 931           | 899             | <0.5         | <0.5        | 2210            | <0.5         | 0.66        | 0.006       | 0.04          | 0.04        | <0.5       | <0.005       | <0.005    | 3.18 | 1300          | 960         | 11          |
| VL-1            | 6/16/2010 | DUP         | 74.7                | 420                 | <0.5        | <0.5          | 927           | 938             | <0.5         | <0.5        | 2190            | <0.5         | 0.69        | <0.005      | 0.04          | 0.04        | <0.5       | <0.005       | <0.005    | 3.19 | 1300          | 1000        | 11          |
| <b>RPD (%)</b>  |           |             | 7.36                | 0.71                | N/A         | N/A           | 0.43          | 4.25            | N/A          | N/A         | 0.91            | N/A          | 4.44        | N/A         | 0.00          | 0.00        | N/A        | N/A          | N/A       | 0.01 | 0.00          | 4.08        | 0.00        |
| <b>Comments</b> |           |             |                     |                     |             |               |               |                 |              |             |                 |              |             |             |               |             |            |              |           |      |               |             |             |
| <b>Action</b>   |           |             |                     |                     |             |               |               |                 |              |             |                 |              |             |             |               |             |            |              |           |      |               |             |             |
| <b>Result</b>   |           |             |                     |                     |             |               |               |                 |              |             |                 |              |             |             |               |             |            |              |           |      |               |             |             |

RPD > 50%





Table D-32: Vangorda Creek Drainage Water Quality  
2010 QA/QC Duplicates - Pit Lakes - Dissolved Metals

| Station  | Date      | Sample Type | Ag-d | Al-d | As-d  | Ba-d | B-d   | Be-d  | Bi-d | Ca-d | Cd-d | Co-d | Cr-d | Cu-d | Fe-d  | K-d  | Li-d  | Mg-d | Mn-d  | Mo-d | Na-d | Ni-d | Pb-d | Sb-d | S-d  | Se-d | Si-d | Sn-d | Sr-d | Ti-d | Tl-d | U-d  | V-d  | Zn-d   | Zr-d |  |  |
|----------|-----------|-------------|------|------|-------|------|-------|-------|------|------|------|------|------|------|-------|------|-------|------|-------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|--------|------|--|--|
|          |           |             | µg/L | µg/L | µg/L  | µg/L | µg/L  | µg/L  | µg/L | mg/L | µg/L | µg/L | µg/L | µg/L | µg/L  | mg/L | mg/L  | mg/L | µg/L  | µg/L | mg/L | µg/L | µg/L | mg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L   |      |  |  |
| VL-1     | 6/16/2010 | M           | <0.1 | 3170 | 1.7   | 23.9 | <1000 | 0.5   | <0.1 | 173  | 142  | 656  | <2   | 1170 | 46300 | 2    | 0.04  | 114  | 47200 | <1   | 4    | 522  | 307  | <0.4 | 411  | <0.8 | 4390 | <0.2 | 875  | <10  | 1.56 | 7.46 | <4   | 177000 | <2   |  |  |
| VL-1     | 6/16/2010 | DUP         | <0.1 | 3250 | 2     | 24.1 | <1000 | 0.7   | <0.1 | 185  | 143  | 658  | <2   | 1190 | 49600 | 2    | 0.041 | 115  | 48200 | <1   | 4    | 515  | 319  | <0.4 | 415  | <0.8 | 4680 | <0.2 | 895  | <10  | 1.46 | 7.41 | <4   | 178000 | <2   |  |  |
| RPD (%)  |           |             | N/A  | 2.49 | 16.22 | 0.83 | N/A   | 33.33 | N/A  | 6.70 | 0.70 | 0.30 | N/A  | 1.69 | 6.88  | 0.00 | 2.47  | 0.87 | 2.10  | N/A  | 0.00 | 1.35 | 3.83 | N/A  | 0.97 | N/A  | 6.39 | N/A  | 2.26 | N/A  | 6.62 | 0.67 | N/A  | 0.56   | N/A  |  |  |
| Comments |           |             |      |      |       |      |       |       |      |      |      |      |      |      |       |      |       |      |       |      |      |      |      |      |      |      |      |      |      |      |      |      |      |        |      |  |  |
| Action   |           |             |      |      |       |      |       |       |      |      |      |      |      |      |       |      |       |      |       |      |      |      |      |      |      |      |      |      |      |      |      |      |      |        |      |  |  |
| Result   |           |             |      |      |       |      |       |       |      |      |      |      |      |      |       |      |       |      |       |      |      |      |      |      |      |      |      |      |      |      |      |      |      |        |      |  |  |

 RPD > 50%  
 RPD > 100%



Table D-33: Vangorda Creek Drainage Water Quality  
2010 QA/QC Duplicates - Pit Lakes - Total Metals

| Station  | Date      | Sample Type | Ag   | Al   | As   | B     | Ba   | Be   | Bi   | Ca   | Cd   | Co       | Cr   | Cu   | Fe    | K    | Li    | Mg   | Mn    | Mo   | Na   | Ni   | Pb   | S    | Sb   | Se   | Si   | Sn   | Sr   | Ti   | Tl   | U    | V    | Zn     | Zr   |  |  |  |
|----------|-----------|-------------|------|------|------|-------|------|------|------|------|------|----------|------|------|-------|------|-------|------|-------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|--------|------|--|--|--|
|          |           |             | µg/L | µg/L | µg/L | µg/L  | µg/L | µg/L | µg/L | mg/L | µg/L | ug/L     | µg/L | µg/L | µg/L  | mg/L | mg/L  | mg/L | µg/L  | µg/L | mg/L | µg/L | µg/L | mg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L   | µg/L |  |  |  |
| VL-1     | 6/16/2010 | M           | 0.2  | 3100 | 2.4  | <1000 | 24.3 | 0.5  | <0.1 | 188  | 145  | 638.0000 | <2   | 1150 | 51800 | 2    | 0.04  | 112  | 46100 | <1   | 4    | 501  | 308  | 429  | <0.4 | <0.8 | 4770 | <0.2 | 884  | <10  | 1.64 | 6.98 | <4   | 172000 | <2   |  |  |  |
| VL-1     | 6/16/2010 | DUP         | <0.1 | 3160 | 2.2  | <1000 | 24   | 0.5  | <0.1 | 181  | 146  | 659.0000 | <2   | 1170 | 49600 | 2    | 0.042 | 115  | 48800 | <1   | 4    | 510  | 314  | 441  | <0.4 | <0.8 | 4480 | <0.2 | 890  | <10  | 1.54 | 6.98 | <4   | 179000 | <2   |  |  |  |
| RPD (%)  |           |             | N/A  | 1.92 | 8.70 | N/A   | 1.24 | 0.00 | N/A  | 3.79 | 0.69 | 3.24     | N/A  | 1.72 | 4.34  | 0.00 | 4.88  | 2.64 | 5.69  | N/A  | 0.00 | 1.78 | 1.93 | 2.76 | N/A  | N/A  | 6.27 | N/A  | 0.68 | N/A  | 6.29 | 0.00 | N/A  | 3.99   | N/A  |  |  |  |
| Comments |           |             |      |      |      |       |      |      |      |      |      |          |      |      |       |      |       |      |       |      |      |      |      |      |      |      |      |      |      |      |      |      |      |        |      |  |  |  |
| Action   |           |             |      |      |      |       |      |      |      |      |      |          |      |      |       |      |       |      |       |      |      |      |      |      |      |      |      |      |      |      |      |      |      |        |      |  |  |  |
| Result   |           |             |      |      |      |       |      |      |      |      |      |          |      |      |       |      |       |      |       |      |      |      |      |      |      |      |      |      |      |      |      |      |      |        |      |  |  |  |

 RPD > 50%  
 RPD > 100%



Table D-34: Vangorda Creek Drainage Water Quality  
2010 QA/QC Splits - Pit Lakes - General Parameters

| Station  | Date      | Sample Type | Acid(pH4.5)<br>mg/L | Acid(pH8.3)<br>mg/L | ALK<br>mg/L | ALKPP<br>mg/L | CaCO3<br>mg/L | CaCO3-d<br>mg/L | Cl-d<br>mg/L | CO3<br>mg/L | COND<br>µmho/cm | HCO3<br>mg/L | NH3<br>mg/L | NO2<br>mg/L | NO2/3<br>mg/L | NO3<br>mg/L | OH<br>mg/L | oPO4<br>mg/L | P<br>mg/L | pH   | SO4-d<br>mg/L | TDS<br>mg/L | TSS<br>mg/L |
|----------|-----------|-------------|---------------------|---------------------|-------------|---------------|---------------|-----------------|--------------|-------------|-----------------|--------------|-------------|-------------|---------------|-------------|------------|--------------|-----------|------|---------------|-------------|-------------|
| VL-1     | 6/16/2010 | M           | 69.4                | 423                 | <0.5        | <0.5          | 931           | 899             | <0.5         | <0.5        | 2210            | <0.5         | 0.66        | 0.006       | 0.04          | 0.04        | <0.5       | <0.005       | <0.005    | 3.18 | 1300          | 960         | 11          |
| VL-1     | 6/16/2010 | SPLIT       | 74.7                | 420                 | <0.5        | <0.5          | 927           | 938             | <0.5         | <0.5        | 2190            | <0.5         | 0.69        | <0.005      | 0.04          | 0.04        | <0.5       | <0.005       | <0.005    | 3.19 | 1300          | 1000        | 11          |
| RPD (%)  |           |             | 7.36                | 0.71                | N/A         | N/A           | 0.43          | 4.25            | N/A          | N/A         | 0.91            | N/A          | 4.44        | N/A         | 0.00          | 0.00        | N/A        | N/A          | N/A       | 0.01 | 0.00          | 4.08        | 0.00        |
| Comments |           |             |                     |                     |             |               |               |                 |              |             |                 |              |             |             |               |             |            |              |           |      |               |             |             |
| Action   |           |             |                     |                     |             |               |               |                 |              |             |                 |              |             |             |               |             |            |              |           |      |               |             |             |
| Result   |           |             |                     |                     |             |               |               |                 |              |             |                 |              |             |             |               |             |            |              |           |      |               |             |             |

RPD > 50%



Table D-35: Vangorda Creek Drainage Water Quality  
2010 QA/QC Splits - Pit Lakes - Dissolved Metals

| Station  | Date      | Sample Type | Ag-d | Al-d | As-d  | Ba-d | B-d   | Be-d  | Bi-d | Ca-d | Cd-d | Co-d | Cr-d | Cu-d | Fe-d  | K-d  | Li-d  | Mg-d | Mn-d  | Mo-d | Na-d | Ni-d | Pb-d | Sb-d | S-d  | Se-d | Si-d | Sn-d | Sr-d | Ti-d | Tl-d | U-d  | V-d  | Zn-d   | Zr-d |  |  |
|----------|-----------|-------------|------|------|-------|------|-------|-------|------|------|------|------|------|------|-------|------|-------|------|-------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|--------|------|--|--|
|          |           |             | µg/L | µg/L | µg/L  | µg/L | µg/L  | µg/L  | µg/L | mg/L | µg/L | µg/L | µg/L | µg/L | µg/L  | mg/L | mg/L  | mg/L | µg/L  | µg/L | mg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L   | µg/L |  |  |
| VL-1     | 6/16/2010 | M           | <0.1 | 3170 | 1.7   | 23.9 | <1000 | 0.5   | <0.1 | 173  | 142  | 656  | <2   | 1170 | 46300 | 2    | 0.04  | 114  | 47200 | <1   | 4    | 522  | 307  | <0.4 | 411  | <0.8 | 4390 | <0.2 | 875  | <10  | 1.56 | 7.46 | <4   | 177000 | <2   |  |  |
| VL-1     | 6/16/2010 | SPLIT       | <0.1 | 3250 | 2     | 24.1 | <1000 | 0.7   | <0.1 | 185  | 143  | 658  | <2   | 1190 | 49600 | 2    | 0.041 | 115  | 48200 | <1   | 4    | 515  | 319  | <0.4 | 415  | <0.8 | 4680 | <0.2 | 895  | <10  | 1.46 | 7.41 | <4   | 178000 | <2   |  |  |
| RPD (%)  |           |             | N/A  | 2.49 | 16.22 | 0.83 | N/A   | 33.33 | N/A  | 6.70 | 0.70 | 0.30 | N/A  | 1.69 | 6.88  | 0.00 | 2.47  | 0.87 | 2.10  | N/A  | 0.00 | 1.35 | 3.83 | N/A  | 0.97 | N/A  | 6.39 | N/A  | 2.26 | N/A  | 6.62 | 0.67 | N/A  | 0.56   | N/A  |  |  |
| Comments |           |             |      |      |       |      |       |       |      |      |      |      |      |      |       |      |       |      |       |      |      |      |      |      |      |      |      |      |      |      |      |      |      |        |      |  |  |
| Action   |           |             |      |      |       |      |       |       |      |      |      |      |      |      |       |      |       |      |       |      |      |      |      |      |      |      |      |      |      |      |      |      |      |        |      |  |  |
| Result   |           |             |      |      |       |      |       |       |      |      |      |      |      |      |       |      |       |      |       |      |      |      |      |      |      |      |      |      |      |      |      |      |      |        |      |  |  |

RPD > 50%  
 RPD > 100%





Table D-36: Vangorda Creek Drainage Water Quality  
 2010 QA/QC Splits - Pit Lakes - Total Metals

| Station  | Date      | Sample Type | Ag   | Al   | As   | B     | Ba   | Be   | Bi   | Ca   | Cd   | Co       | Cr   | Cu   | Fe    | K    | Li    | Mg   | Mn    | Mo   | Na   | Ni   | Pb   | S    | Sb   | Se   | Si   | Sn   | Sr   | Ti   | Tl   | U    | V    | Zn     | Zr   |  |  |  |
|----------|-----------|-------------|------|------|------|-------|------|------|------|------|------|----------|------|------|-------|------|-------|------|-------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|--------|------|--|--|--|
|          |           |             | µg/L | µg/L | µg/L | µg/L  | µg/L | µg/L | µg/L | mg/L | µg/L | ug/L     | µg/L | µg/L | µg/L  | mg/L | mg/L  | mg/L | µg/L  | µg/L | mg/L | µg/L | µg/L | mg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L   | µg/L |  |  |  |
| VL-1     | 6/16/2010 | M           | 0.2  | 3100 | 2.4  | <1000 | 24.3 | 0.5  | <0.1 | 188  | 145  | 638.0000 | <2   | 1150 | 51800 | 2    | 0.04  | 112  | 46100 | <1   | 4    | 501  | 308  | 429  | <0.4 | <0.8 | 4770 | <0.2 | 884  | <10  | 1.64 | 6.98 | <4   | 172000 | <2   |  |  |  |
| VL-1     | 6/16/2010 | SPLIT       | <0.1 | 3160 | 2.2  | <1000 | 24   | 0.5  | <0.1 | 181  | 146  | 659.0000 | <2   | 1170 | 49600 | 2    | 0.042 | 115  | 48800 | <1   | 4    | 510  | 314  | 441  | <0.4 | <0.8 | 4480 | <0.2 | 890  | <10  | 1.54 | 6.98 | <4   | 179000 | <2   |  |  |  |
| RPD (%)  |           |             | N/A  | 1.92 | 8.70 | N/A   | 1.24 | 0.00 | N/A  | 3.79 | 0.69 | 3.24     | N/A  | 1.72 | 4.34  | 0.00 | 4.88  | 2.64 | 5.69  | N/A  | 0.00 | 1.78 | 1.93 | 2.76 | N/A  | N/A  | 6.27 | N/A  | 0.68 | N/A  | 6.29 | 0.00 | N/A  | 3.99   | N/A  |  |  |  |
| Comments |           |             |      |      |      |       |      |      |      |      |      |          |      |      |       |      |       |      |       |      |      |      |      |      |      |      |      |      |      |      |      |      |      |        |      |  |  |  |
| Action   |           |             |      |      |      |       |      |      |      |      |      |          |      |      |       |      |       |      |       |      |      |      |      |      |      |      |      |      |      |      |      |      |      |        |      |  |  |  |
| Result   |           |             |      |      |      |       |      |      |      |      |      |          |      |      |       |      |       |      |       |      |      |      |      |      |      |      |      |      |      |      |      |      |      |        |      |  |  |  |

RPD > 50%  
 RPD > 100%



**Table D-37: Vangorda Creek Drainage Water Quality  
2010 - Ion Charge Balance**

| Station | Date       | Surface |
|---------|------------|---------|
| LCD     | 5/12/2010  |         |
| LCD     | 6/16/2010  | 1.00    |
| LCD     | 7/14/2010  |         |
| LCD     | 8/4/2010   | 0.92    |
| LCD     | 9/7/2010   | 0.90    |
| LCD     | 10/5/2010  |         |
| V1      | 1/7/2010   |         |
| V1      | 2/18/2010  |         |
| V1      | 3/29/2010  |         |
| V1      | 4/20/2010  |         |
| V1      | 5/12/2010  |         |
| V1      | 6/16/2010  | 1.00    |
| V1      | 7/14/2010  |         |
| V1      | 8/4/2010   | 1.00    |
| V1      | 9/7/2010   | 1.00    |
| V1      | 10/5/2010  |         |
| V1      | 11/1/2010  |         |
| V1      | 12/1/2010  | 1.00    |
| V17A    | 6/16/2010  | 1.00    |
| V2      | 1/7/2010   |         |
| V2      | 2/3/2010   |         |
| V2      | 3/2/2010   |         |
| V2      | 4/7/2010   |         |
| V2      | 5/1/2010   |         |
| V2      | 5/18/2010  |         |
| V2      | 6/2/2010   |         |
| V2      | 6/20/2010  | 1.00    |
| V2      | 7/7/2010   | 1.00    |
| V2      | 7/22/2010  | 1.00    |
| V2      | 8/5/2010   | 1.00    |
| V2      | 8/18/2010  | 0.96    |
| V2      | 9/7/2010   | 0.84    |
| V2      | 9/23/2010  | 0.92    |
| V2      | 10/7/2010  | 1.00    |
| V2      | 10/21/2010 | 0.89    |
| V2      | 11/4/2010  | 1.00    |
| V2      | 12/2/2010  | 0.98    |
| V20     | 6/1/2010   |         |
| V22     | 3/4/2010   |         |
| V22     | 6/16/2010  | 0.85    |
| V22     | 9/7/2010   | 0.92    |
| V22     | 12/16/2010 | 1.00    |
| V23     | 3/4/2010   |         |
| V23     | 6/16/2010  | 1.00    |
| V23     | 9/7/2010   | 0.93    |
| V23     | 12/16/2010 | 0.97    |
| V24     | 6/22/2010  | 0.72    |
| V24     | 6/29/2010  | 0.85    |
| V24     | 7/6/2010   | 0.76    |
| V24     | 7/13/2010  | 1.00    |
| V25     | 6/22/2010  | 0.84    |
| V25     | 6/29/2010  | 1.10    |
| V25     | 7/6/2010   | 1.00    |
| V25     | 7/13/2010  | 1.10    |
| V25     | 8/12/2010  |         |
| V25BSP  | 4/27/2010  |         |
| V25BSP  | 5/11/2010  |         |
| V25BSP  | 6/15/2010  | 0.99    |
| V25BSP  | 6/22/2010  | 0.82    |
| V25BSP  | 6/29/2010  | 1.10    |
| V25BSP  | 7/6/2010   | 1.10    |
| V25BSP  | 7/13/2010  | 1.10    |
| V25BSP  | 8/5/2010   | 1.10    |
| V25BSP  | 8/12/2010  |         |
| V25BSP  | 9/7/2010   | 0.88    |
| V25BSP  | 10/5/2010  |         |
| V25BSP  | 11/1/2010  |         |
| V25BSP  | 12/2/2010  | 0.88    |
| V27     | 1/18/2010  |         |
| V27     | 2/24/2010  |         |
| V27     | 3/29/2010  |         |
| V27     | 4/20/2010  |         |
| V27     | 5/12/2010  |         |
| V27     | 6/16/2010  | 1.00    |
| V27     | 7/14/2010  |         |
| V27     | 8/4/2010   | 0.94    |
| V27     | 9/7/2010   | 1.00    |
| V27     | 10/5/2010  |         |
| V27     | 11/1/2010  |         |
| V27     | 12/1/2010  | 0.99    |

| Station | Date       | Surface |
|---------|------------|---------|
| V2A     | 2/3/2010   |         |
| V2A     | 3/2/2010   |         |
| V2A     | 4/7/2010   |         |
| V2A     | 5/1/2010   |         |
| V2A     | 5/18/2010  |         |
| V2A     | 6/2/2010   |         |
| V2A     | 6/15/2010  | 1.10    |
| V2A     | 7/7/2010   | 0.97    |
| V2A     | 7/22/2010  | 1.10    |
| V2A     | 8/5/2010   | 1.00    |
| V2A     | 8/18/2010  | 0.96    |
| V2A     | 9/7/2010   | 0.85    |
| V2A     | 9/23/2010  | 0.90    |
| V2A     | 10/7/2010  | 1.00    |
| V2A     | 10/21/2010 | 0.97    |
| V2A     | 11/4/2010  | 1.00    |
| V4      | 1/18/2010  |         |
| V4      | 2/24/2010  |         |
| V4      | 3/29/2010  |         |
| V4      | 4/20/2010  |         |
| V4      | 5/12/2010  |         |
| V4      | 6/16/2010  | 0.95    |
| V4      | 7/14/2010  |         |
| V4      | 8/4/2010   | 1.00    |
| V4      | 9/7/2010   | 0.90    |
| V4      | 10/5/2010  |         |
| V4      | 11/1/2010  |         |
| V4      | 12/1/2010  | 1.00    |
| V5      | 1/6/2010   |         |
| V5      | 2/18/2010  |         |
| V5      | 3/30/2010  |         |
| V5      | 4/20/2010  |         |
| V5      | 5/12/2010  |         |
| V5      | 6/17/2010  | 0.91    |
| V5      | 7/14/2010  |         |
| V5      | 8/4/2010   | 1.00    |
| V5      | 9/7/2010   | 0.90    |
| V5      | 10/5/2010  |         |
| V5      | 11/2/2010  |         |
| V5      | 12/1/2010  | 1.00    |
| V8      | 1/6/2010   |         |
| V8      | 2/18/2010  |         |
| V8      | 3/30/2010  |         |
| V8      | 4/20/2010  |         |
| V8      | 5/12/2010  |         |
| V8      | 6/17/2010  | 0.93    |
| V8      | 7/14/2010  |         |
| V8      | 8/4/2010   | 1.00    |
| V8      | 9/7/2010   | 0.92    |
| V8      | 10/5/2010  |         |
| V8      | 11/2/2010  |         |
| V8      | 12/1/2010  | 1.00    |

| Station    | Date       | Seepage |
|------------|------------|---------|
| MOOSE SEEP | 1/7/2010   |         |
| MOOSE SEEP | 2/3/2010   |         |
| MOOSE SEEP | 3/2/2010   |         |
| MOOSE SEEP | 4/7/2010   |         |
| MOOSE SEEP | 5/1/2010   |         |
| MOOSE SEEP | 5/18/2010  |         |
| MOOSE SEEP | 6/2/2010   |         |
| MOOSE SEEP | 6/20/2010  | 0.99    |
| MOOSE SEEP | 7/7/2010   | 1       |
| MOOSE SEEP | 7/22/2010  | 1       |
| MOOSE SEEP | 8/5/2010   | 0.95    |
| MOOSE SEEP | 8/18/2010  | 0.95    |
| MOOSE SEEP | 9/7/2010   | 0.85    |
| MOOSE SEEP | 9/23/2010  | 0.92    |
| MOOSE SEEP | 10/7/2010  | 1       |
| MOOSE SEEP | 10/21/2010 | 1       |
| MOOSE SEEP | 11/4/2010  | 1       |
| MOOSE SEEP | 12/2/2010  | 0.96    |
| V14        | 6/1/2010   |         |

Table D-37: Vangorda Creek Drainage Water Quality  
 2010 - Ion Charge Balance

| Station   | Date       | Groundwater |
|-----------|------------|-------------|
| BH05-9B-R | 6/12/2010  | 0.87        |
| BH05-9B-R | 9/20/2010  | 0.94        |
| P09-GS1A  | 9/17/2010  | 0.92        |
| P09-GS1B  | 6/11/2010  |             |
| P09-GS1B  | 9/16/2010  | 1           |
| P09-LCD1  | 6/12/2010  | 0.99        |
| P09-LCD1  | 9/20/2010  | 1.1         |
| P09-LCD6  | 6/12/2010  | 0.97        |
| P09-LCD6  | 9/20/2010  | 1.1         |
| P09-VC1   | 6/12/2010  | 1           |
| P09-VC1   | 9/20/2010  | 1           |
| P09-VC2   | 9/20/2010  | 1           |
| P2001-2A  | 6/13/2010  | 0.98        |
| P2001-2A  | 9/18/2010  | 0.97        |
| P2001-2B  | 6/13/2010  | 0.94        |
| P2001-2B  | 9/18/2010  | 1           |
| P2001-3   | 6/19/2010  | 0.98        |
| P2001-3   | 9/15/2010  | 1.1         |
| P96-6     | 6/15/2010  | 1.1         |
| P96-6     | 9/21/2010  | 1.1         |
| SRK05-5C  | 6/12/2010  | 1           |
| SRK05-5C  | 9/20/2010  | 0.88        |
| SRK05-8   | 6/12/2010  | 0.96        |
| SRK05-8   | 9/20/2010  | 1.1         |
| SRK05-9   | 1/7/2010   |             |
| SRK05-9   | 1/21/2010  |             |
| SRK05-9   | 2/4/2010   |             |
| SRK05-9   | 2/18/2010  |             |
| SRK05-9   | 3/2/2010   |             |
| SRK05-9   | 3/23/2010  |             |
| SRK05-9   | 4/7/2010   |             |
| SRK05-9   | 4/19/2010  |             |
| SRK05-9   | 5/1/2010   |             |
| SRK05-9   | 5/18/2010  |             |
| SRK05-9   | 6/2/2010   |             |
| SRK05-9   | 6/20/2010  | 1           |
| SRK05-9   | 7/7/2010   | 1           |
| SRK05-9   | 7/22/2010  | 1.1         |
| SRK05-9   | 8/5/2010   | 0.98        |
| SRK05-9   | 8/18/2010  | 0.98        |
| SRK05-9   | 9/7/2010   | 0.92        |
| SRK05-9   | 9/23/2010  | 0.96        |
| SRK05-9   | 10/7/2010  | 1           |
| SRK05-9   | 10/21/2010 | 0.96        |
| SRK05-9   | 11/4/2010  |             |
| SRK05-9   | 11/18/2010 | 1           |
| SRK05-9   | 12/2/2010  | 0.95        |
| SRK05-9   | 12/16/2010 | 1           |
| SRK08-P14 | 9/16/2010  | 0.99        |
| SRK08-P15 | 9/16/2010  | 1           |
| SRK08-P16 | 9/20/2010  |             |
| V34       | 6/12/2010  | 1.1         |
| V34       | 9/18/2010  | 1.1         |
| V35       | 6/12/2010  | 1.1         |
| V35       | 9/18/2010  | 1           |
| V36       | 6/12/2010  | 0.93        |
| V36       | 9/18/2010  | 0.97        |
| V37       | 6/13/2010  | 0.93        |
| V37       | 9/18/2010  | 0.96        |

| Station | Date      | Pit Lakes |
|---------|-----------|-----------|
| GL-1    | 4/29/2010 |           |
|         | 6/15/2010 |           |
|         | 7/13/2010 | 1.10      |
|         | 8/10/2010 |           |
|         | 9/7/2010  | 0.98      |
| GL-15   | 4/29/2010 |           |
|         | 6/15/2010 |           |
|         | 7/13/2010 | 1.00      |
|         | 8/10/2010 |           |
|         | 9/7/2010  | 1.00      |
| GL-3    | 4/29/2010 |           |
|         | 6/15/2010 |           |
|         | 7/13/2010 | 1.10      |
|         | 8/10/2010 |           |
|         | 9/7/2010  | 1.00      |
| GL-30   | 4/29/2010 |           |
|         | 6/15/2010 |           |
|         | 7/13/2010 | 1.00      |
|         | 8/10/2010 |           |
|         | 9/7/2010  | 0.89      |
| GL-40   | 4/29/2010 |           |
| GL-5    | 4/29/2010 |           |
|         | 6/15/2010 |           |
|         | 7/13/2010 | 1.10      |
|         | 8/10/2010 |           |
|         | 9/7/2010  | 0.99      |
| VL-1    | 4/29/2010 |           |
|         | 6/16/2010 |           |
|         | 7/14/2010 | 0.81      |
|         | 8/11/2010 |           |
|         | 9/7/2010  | 1.00      |
| VL-15   | 4/29/2010 |           |
|         | 6/16/2010 |           |
|         | 7/14/2010 | 0.83      |
|         | 8/11/2010 |           |
|         | 9/7/2010  | 0.99      |
| VL-3    | 4/29/2010 |           |
|         | 6/16/2010 |           |
|         | 7/14/2010 | 0.81      |
|         | 8/11/2010 |           |
|         | 9/7/2010  | 0.97      |
| VL-5    | 4/29/2010 |           |
|         | 6/16/2010 |           |
|         | 7/14/2010 | 0.79      |
|         | 8/11/2010 |           |
|         | 9/7/2010  | 1.00      |

Figure D-1: Sulphate in Vangorda Creek Drainage - Upstream Sites

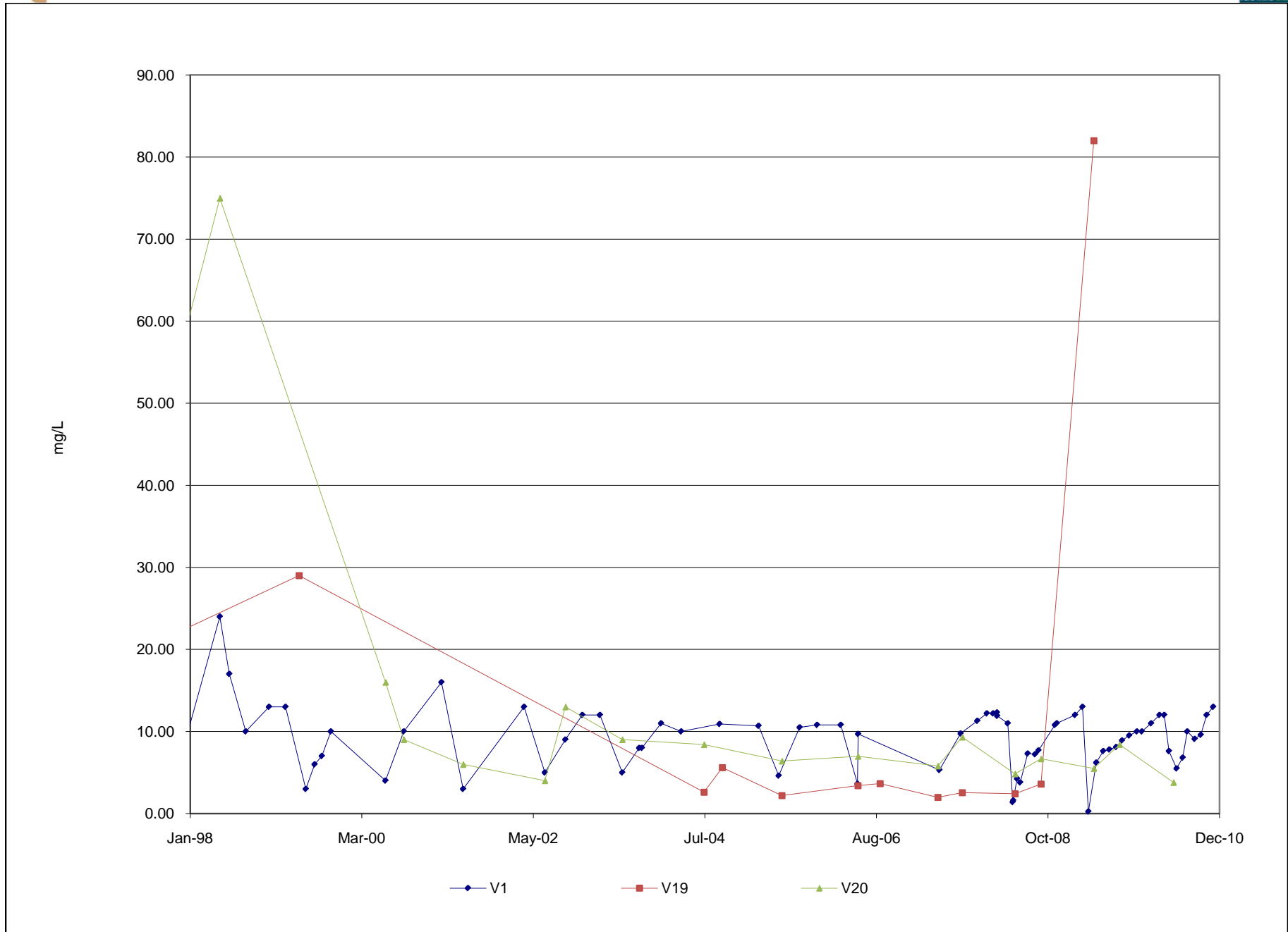


Figure D-2: Zinc (Total) in Vangorda Creek Drainage - Upstream Sites

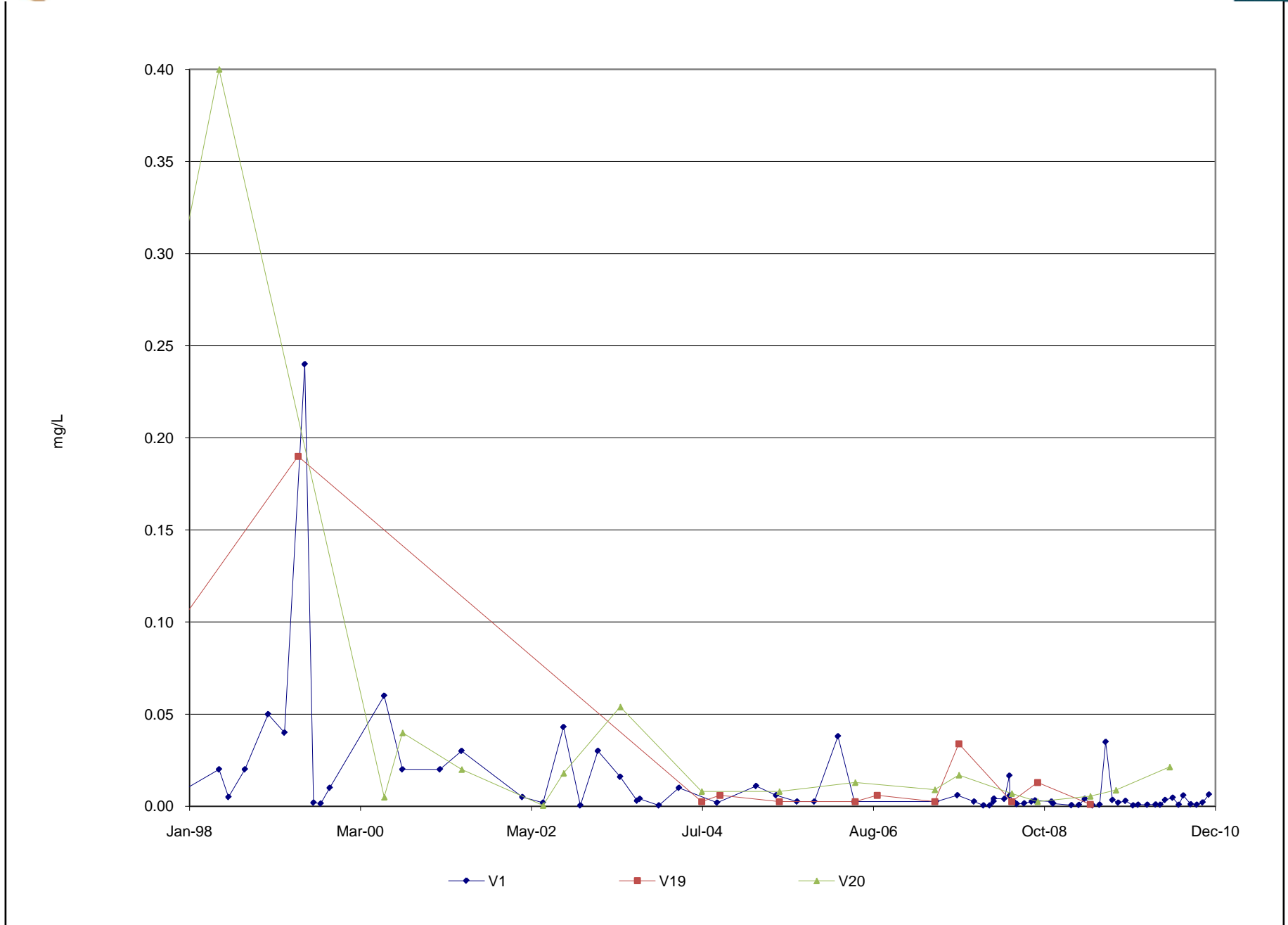


Figure D-3: Cadmium (Total) in Vangorda Creek Drainage - Upstream Sites

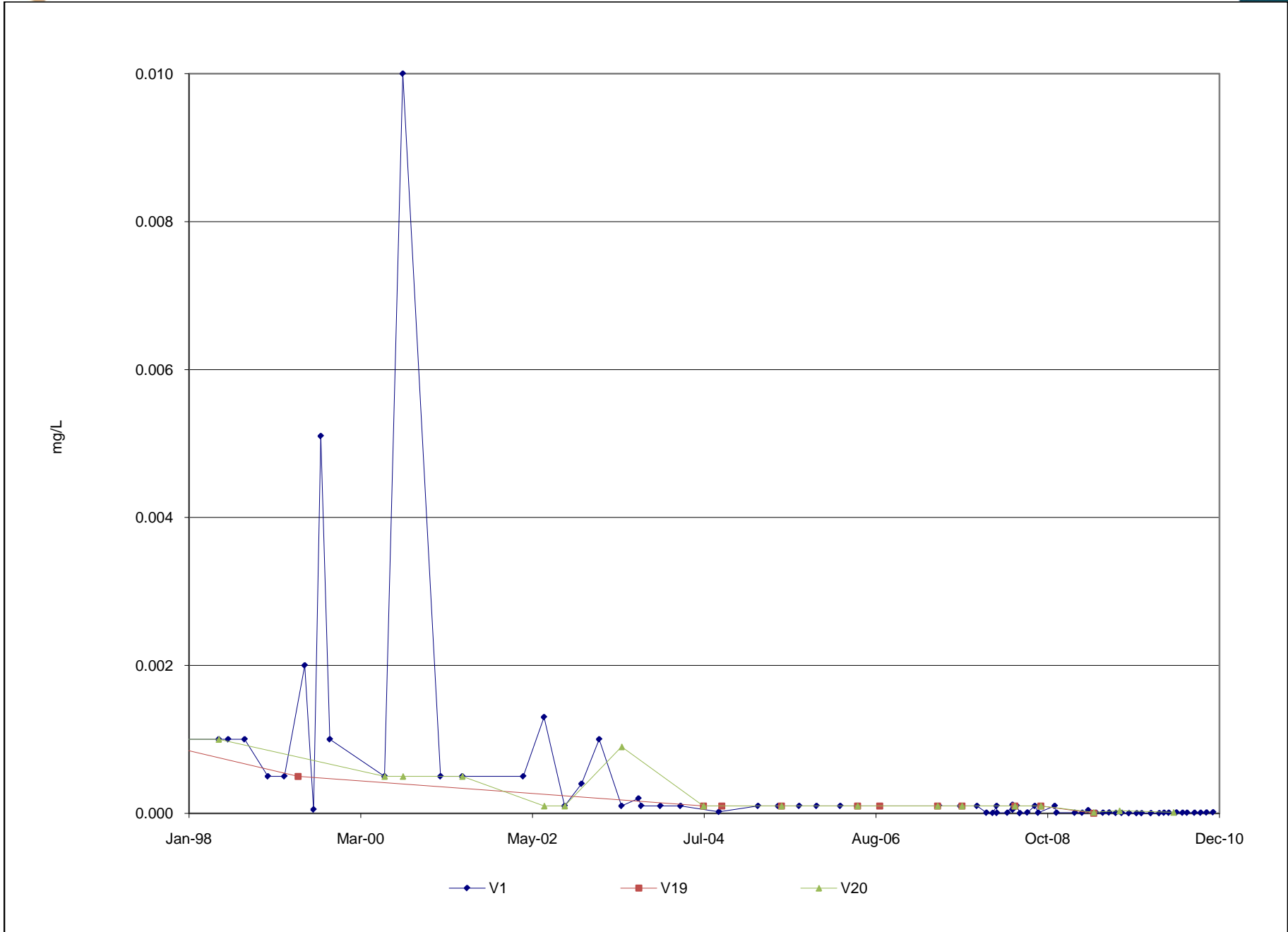




Figure D-4: Zinc at the Surface of the Grum Pit

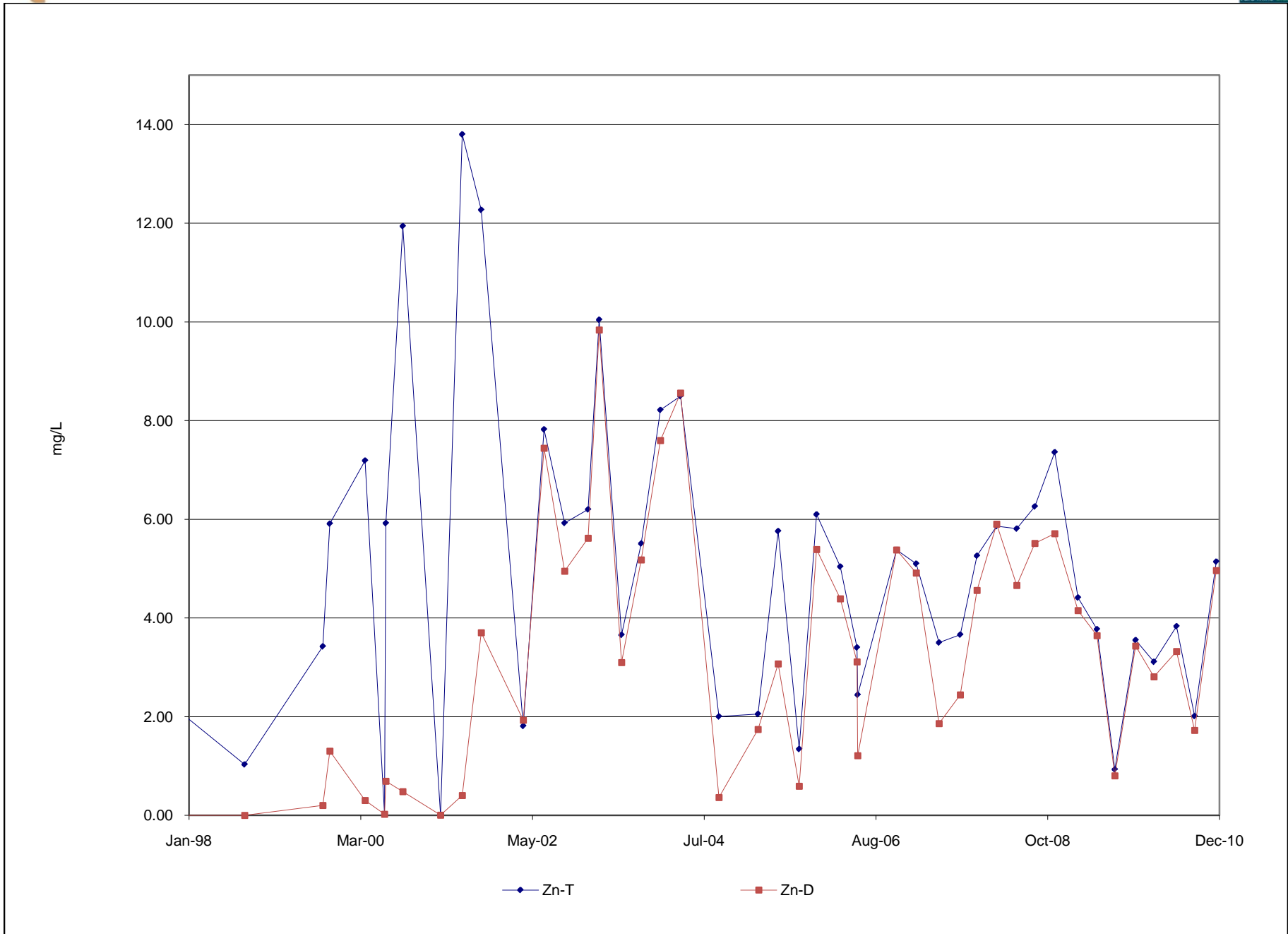


Figure D-5: Sulphate at the Surface of the Vangorda Pit

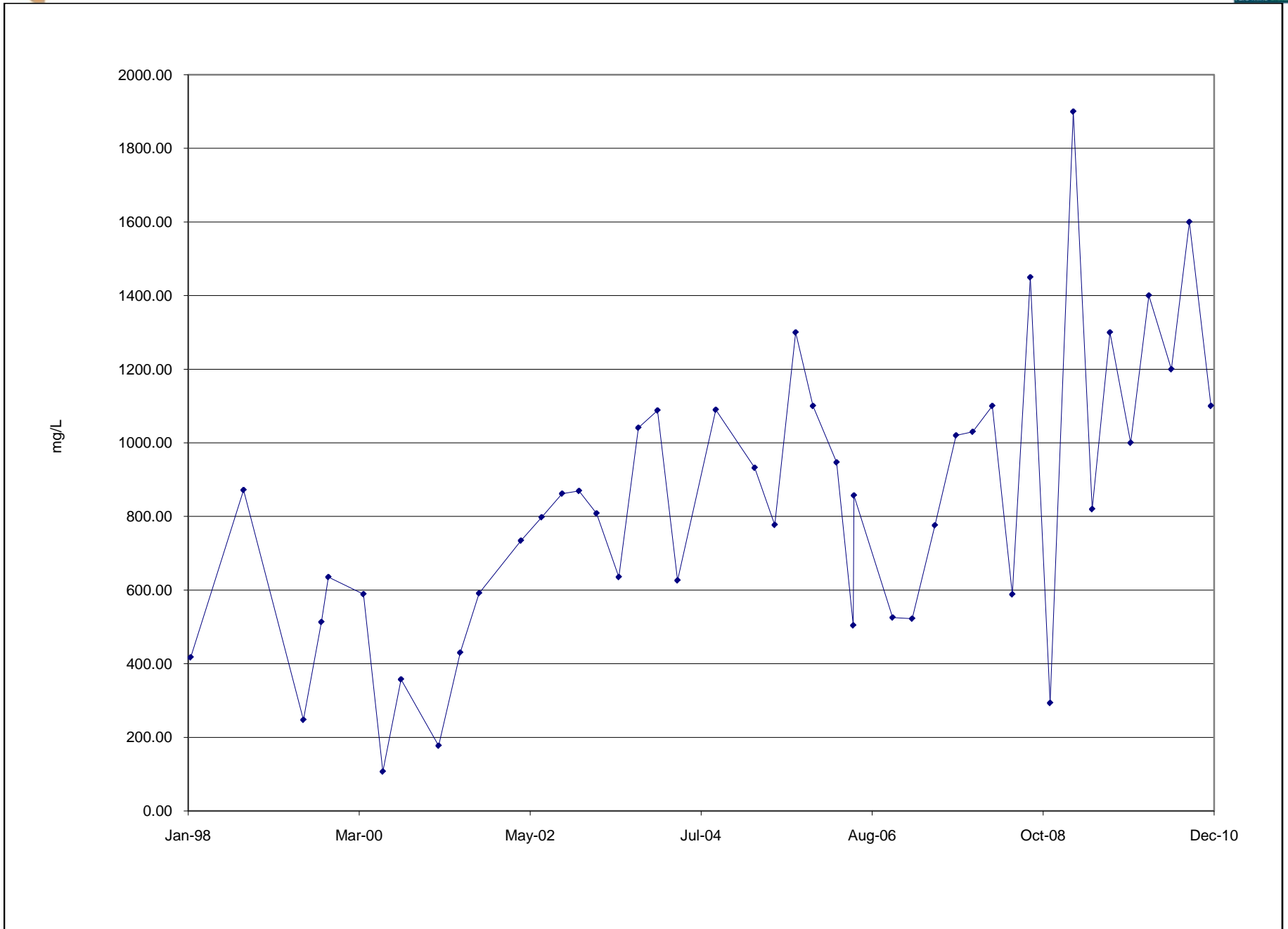


Figure D-6: Zinc (Total and Dissolved) at the Surface of the Vangorda Pit

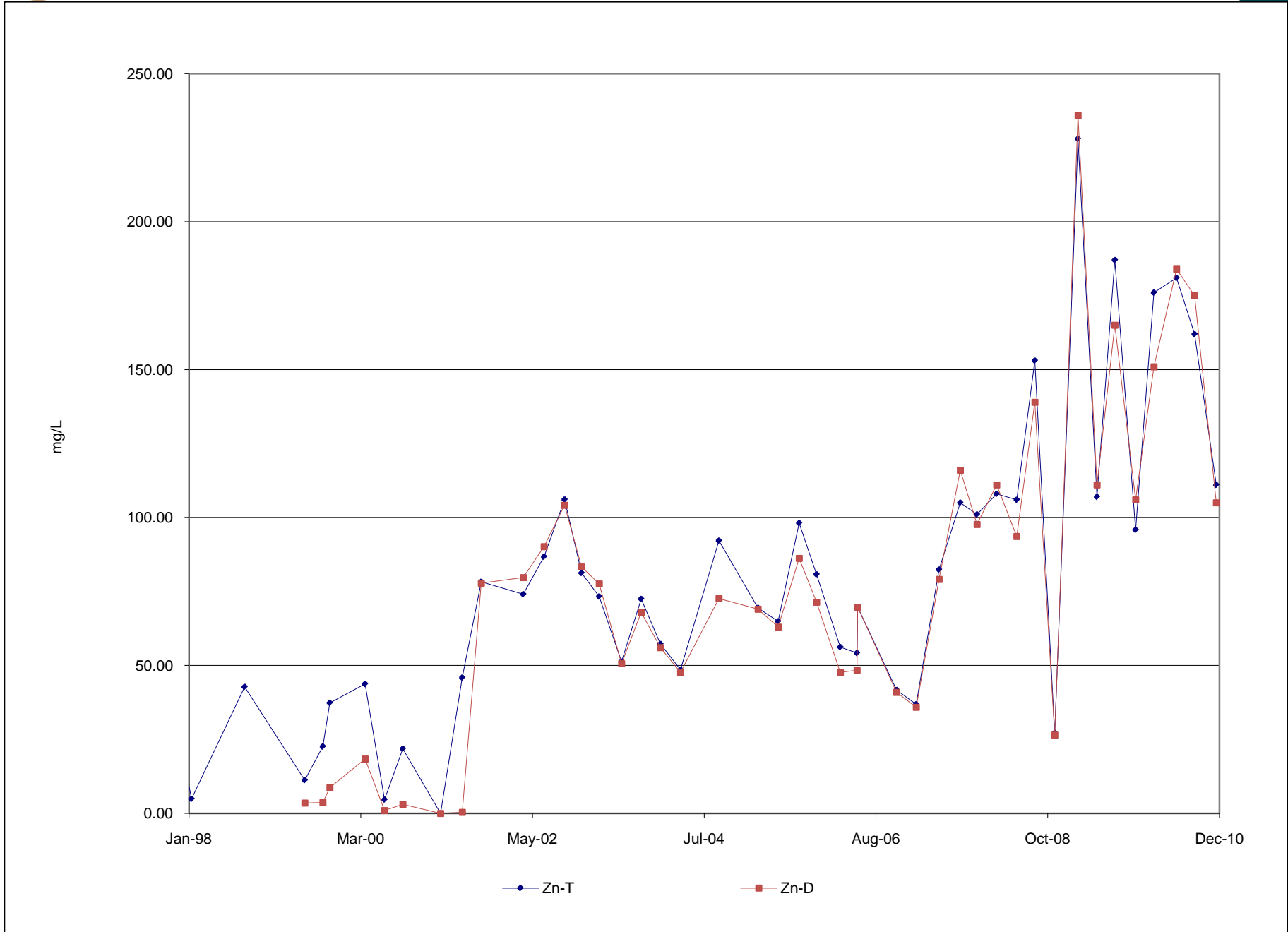


Figure D-7: pH at the Surface of the Vangorda Pit

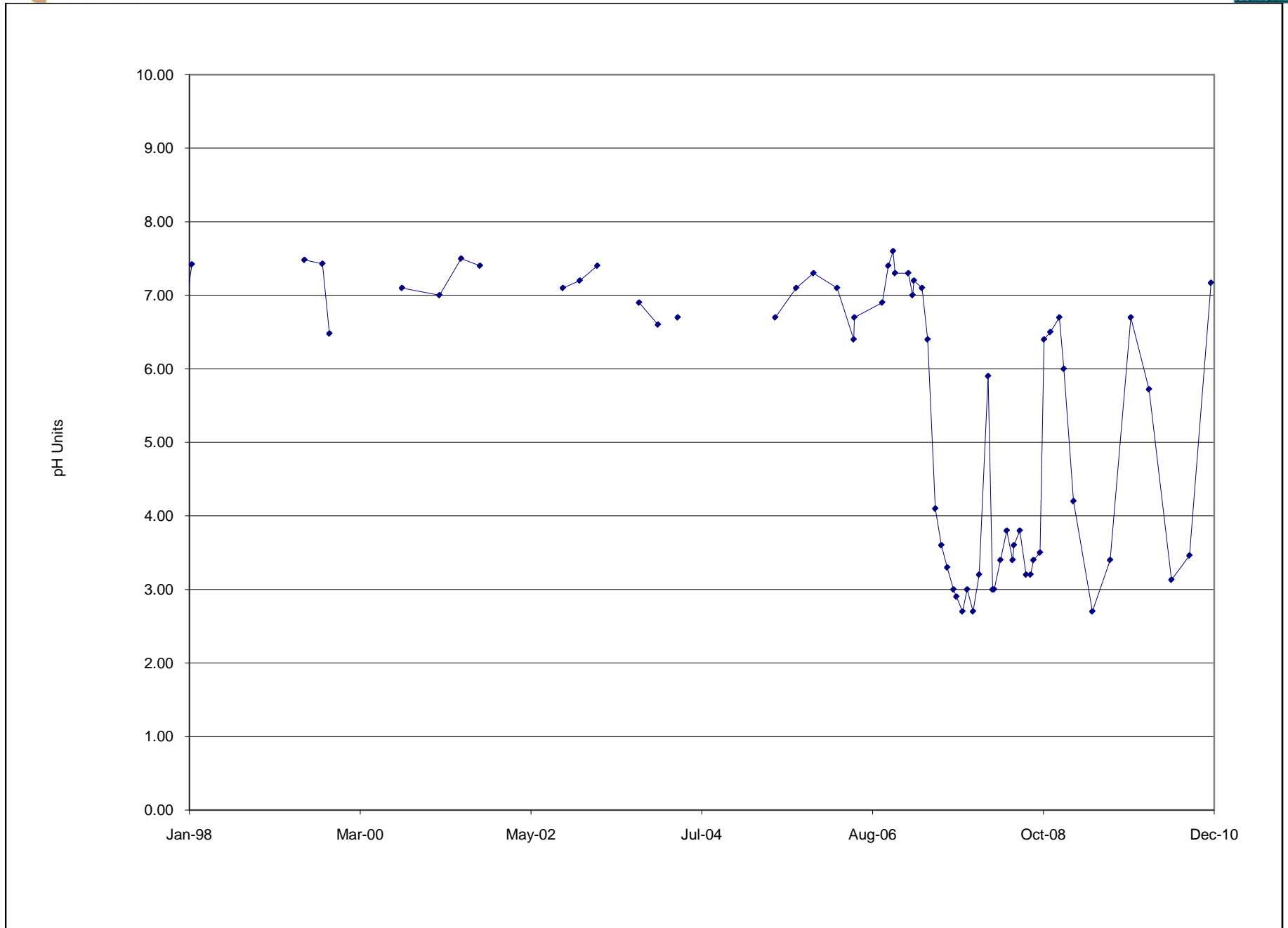
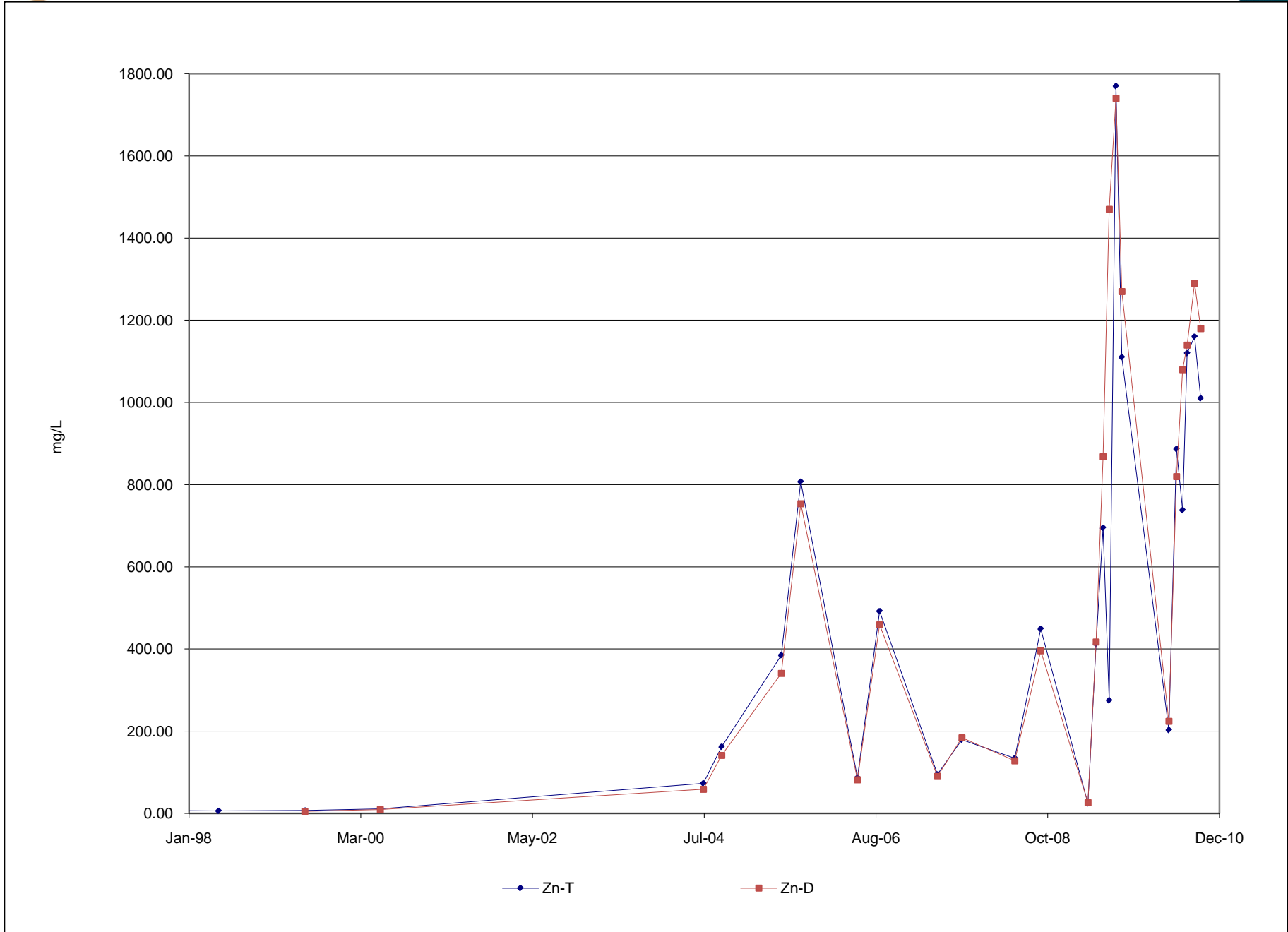


Figure D-8: Zinc (Total and Dissolved ) at the Little Creek Dam Pond (LCD)



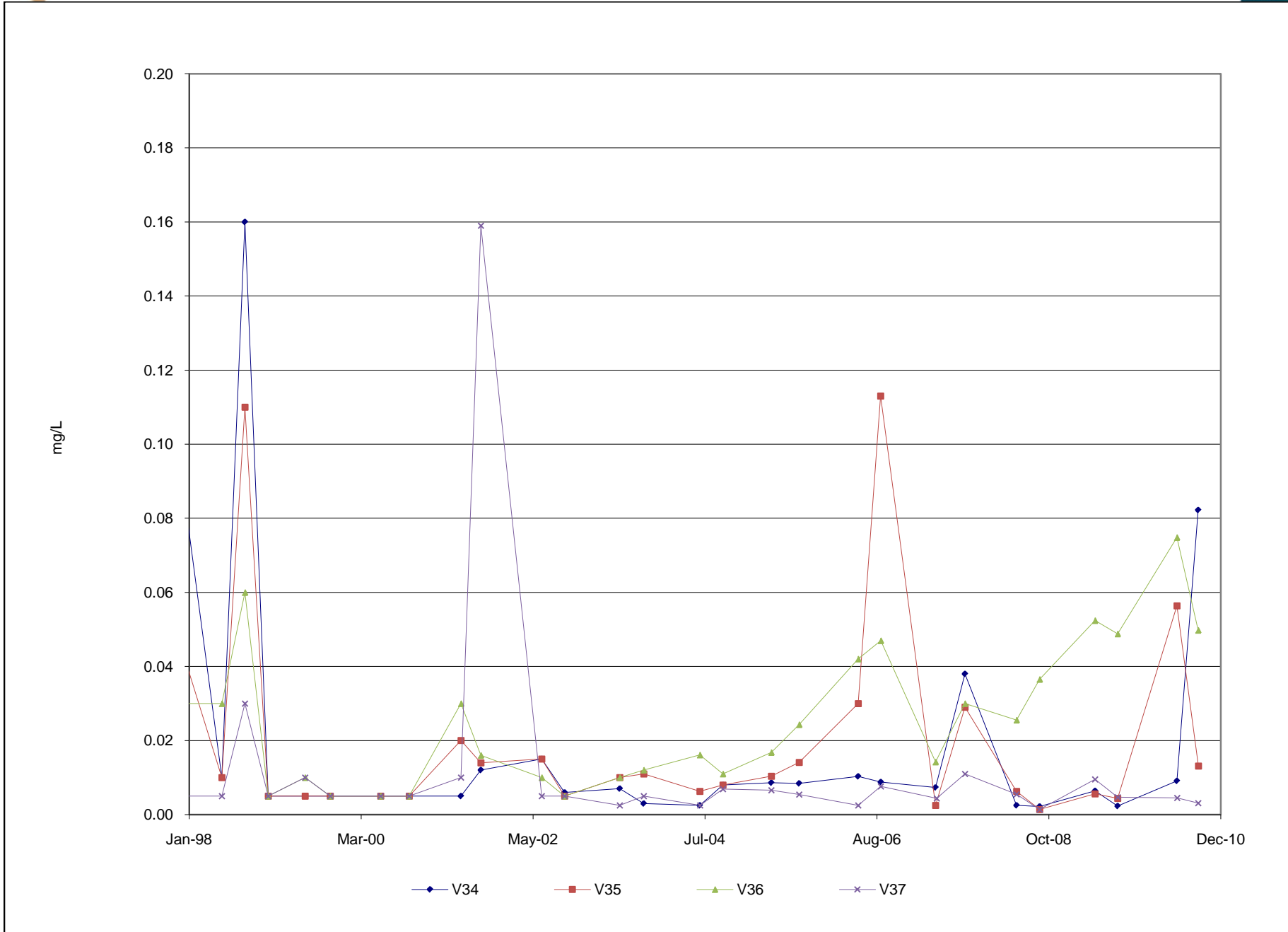


Figure D-10: Sulphate in Groundwater Downgradient of Vangorda Dump

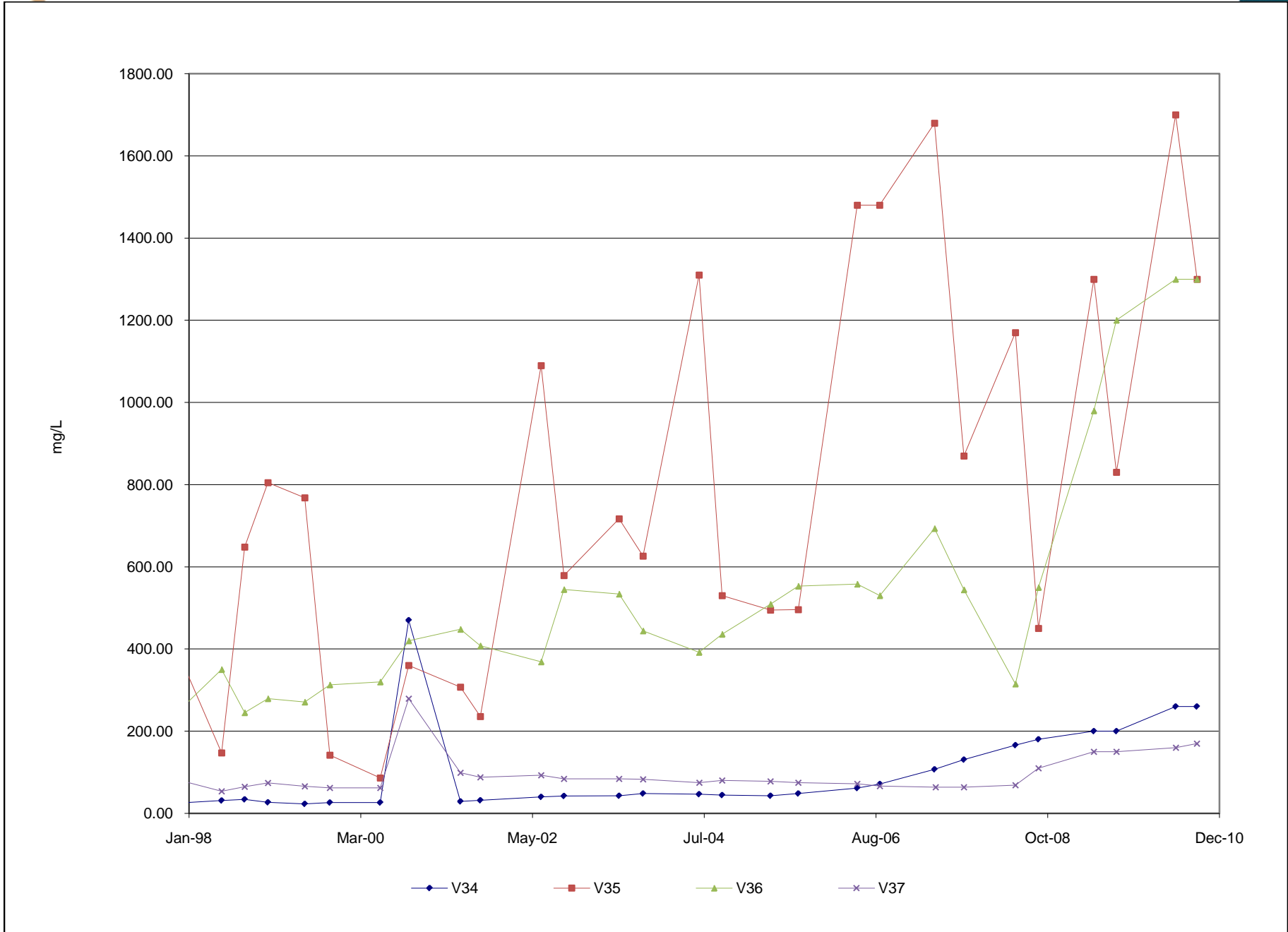


Figure D-11: Sulphate Downstream of Sheep Pad Pond (V25 BSP)

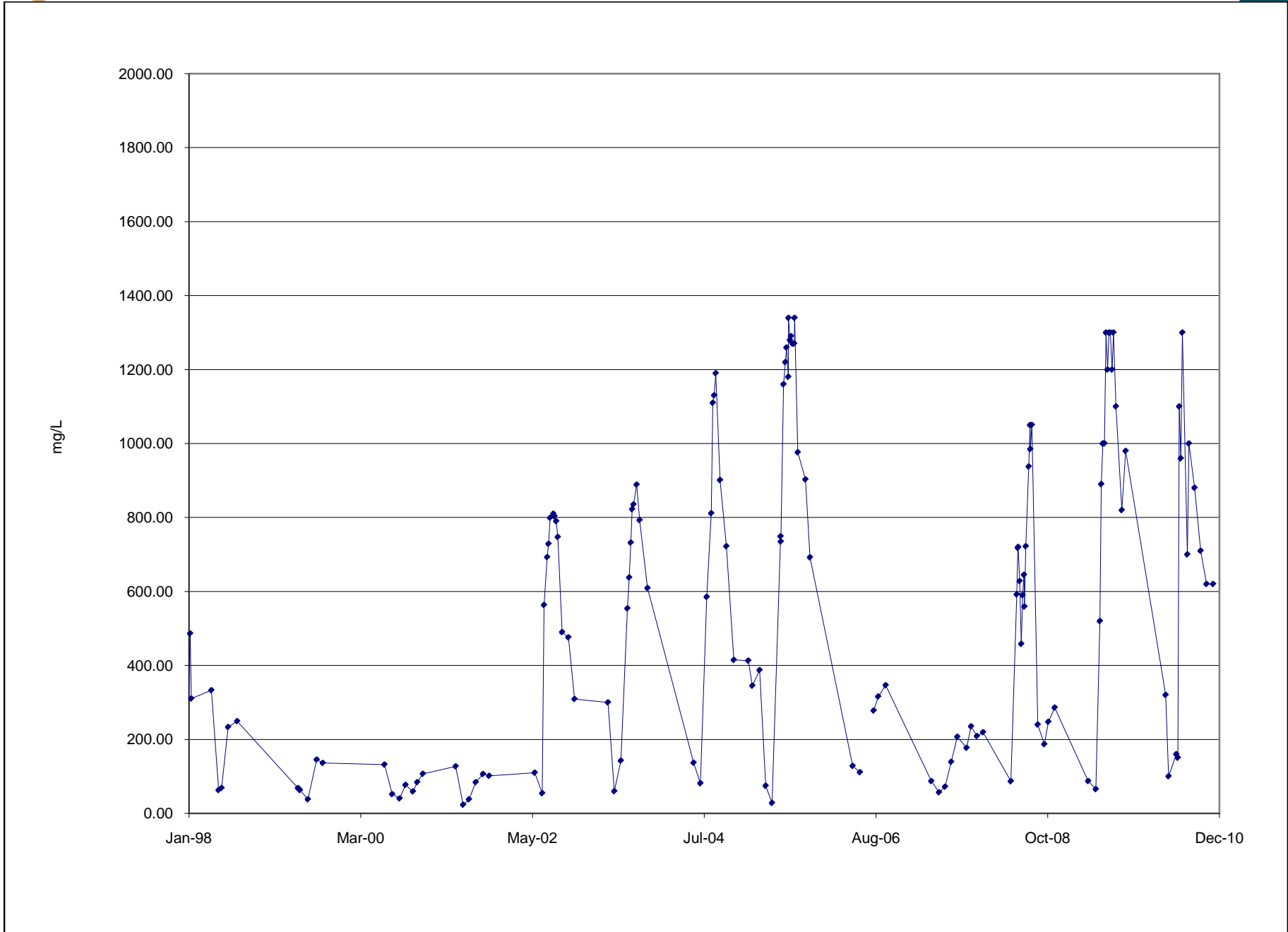




Figure D-12: Zinc (Total and Dissolved)  
Downstream of Sheep Pad Pond (V25 BSP)

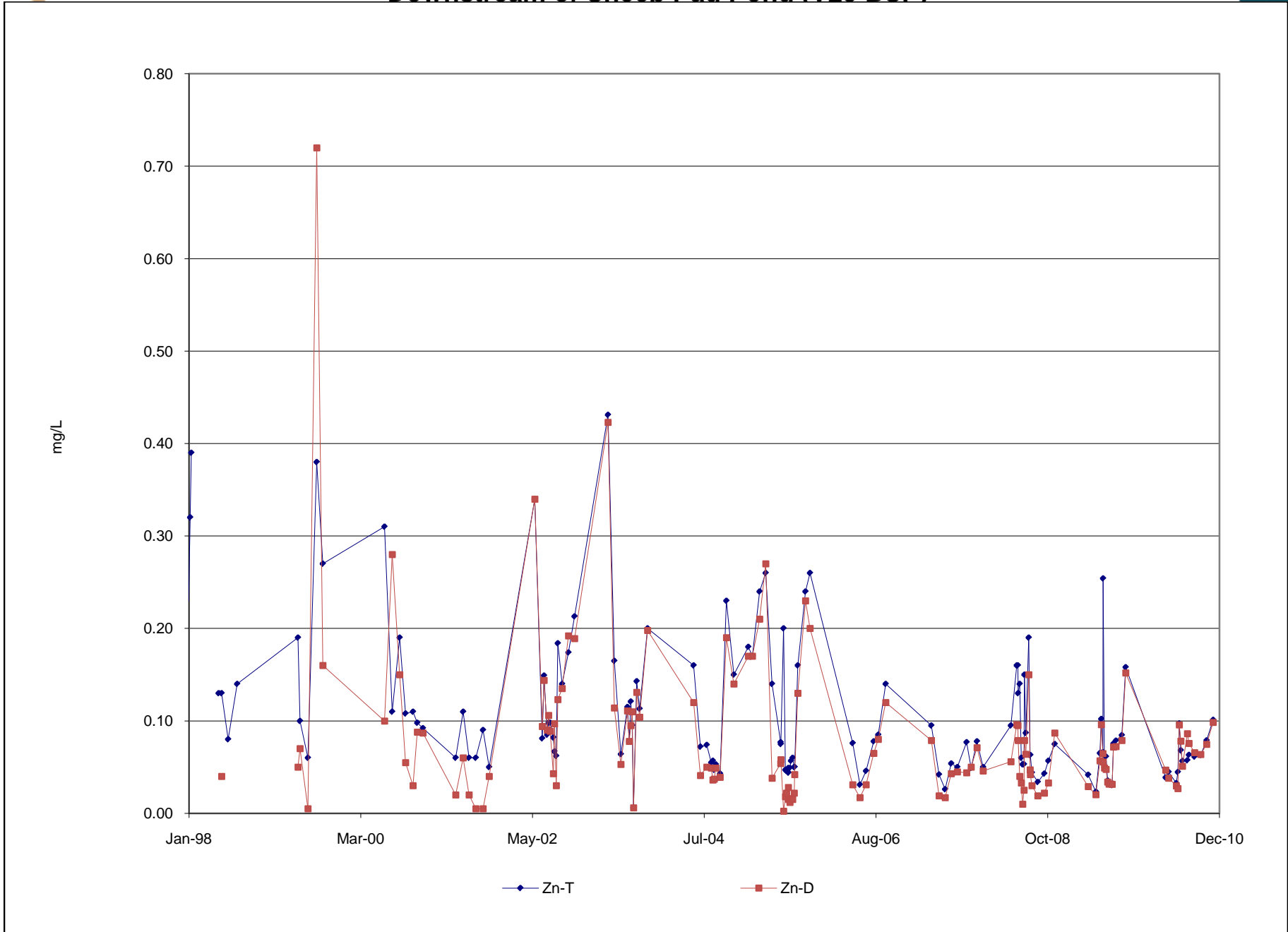


Figure D-13: Sulphate in Shrimp Creek (V4) and Upstream Inflow (V20)

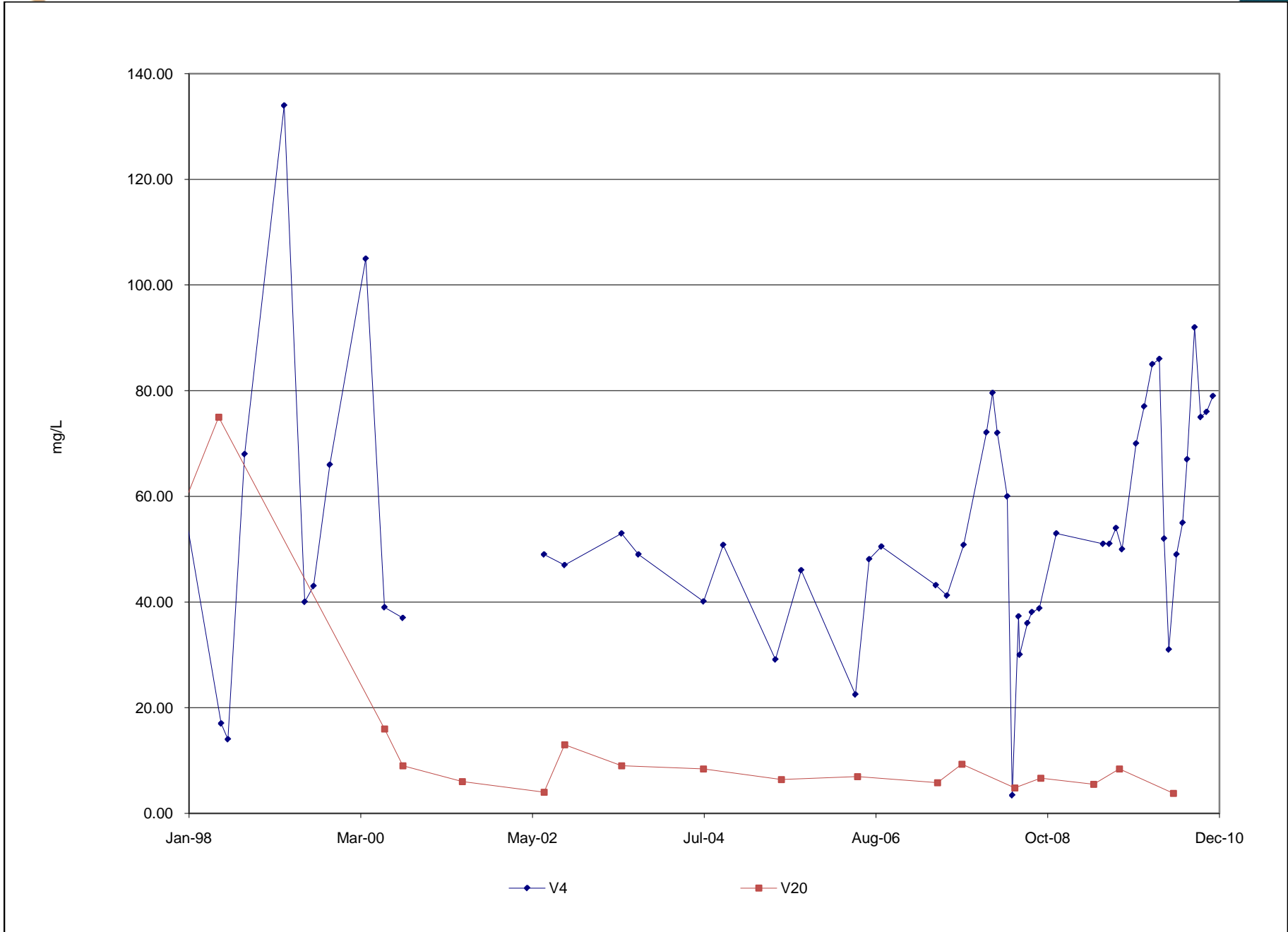


Figure D-14: Zinc (Total) in Shrimp Creek (V4) and Upstream Inflow (V20)

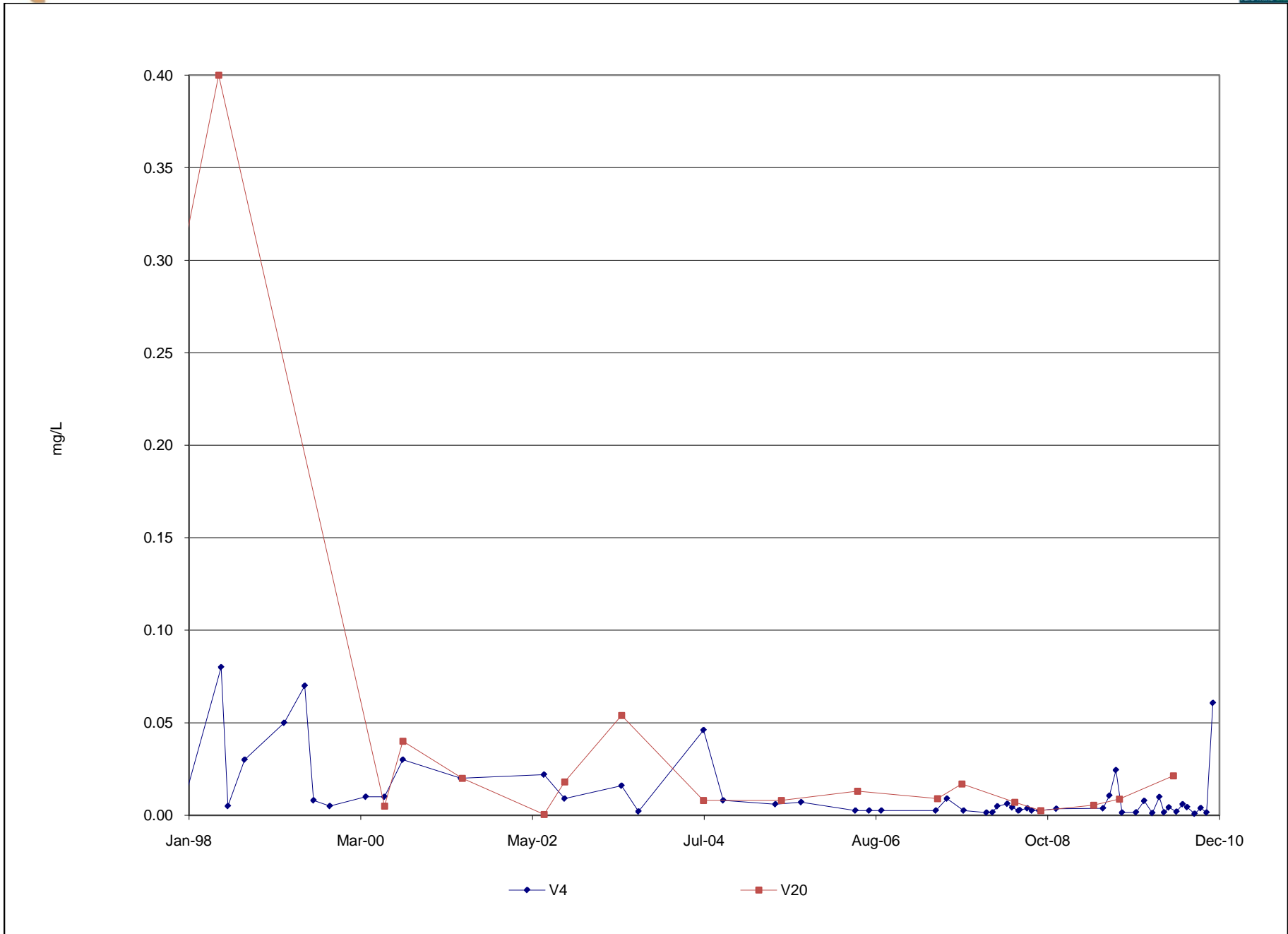
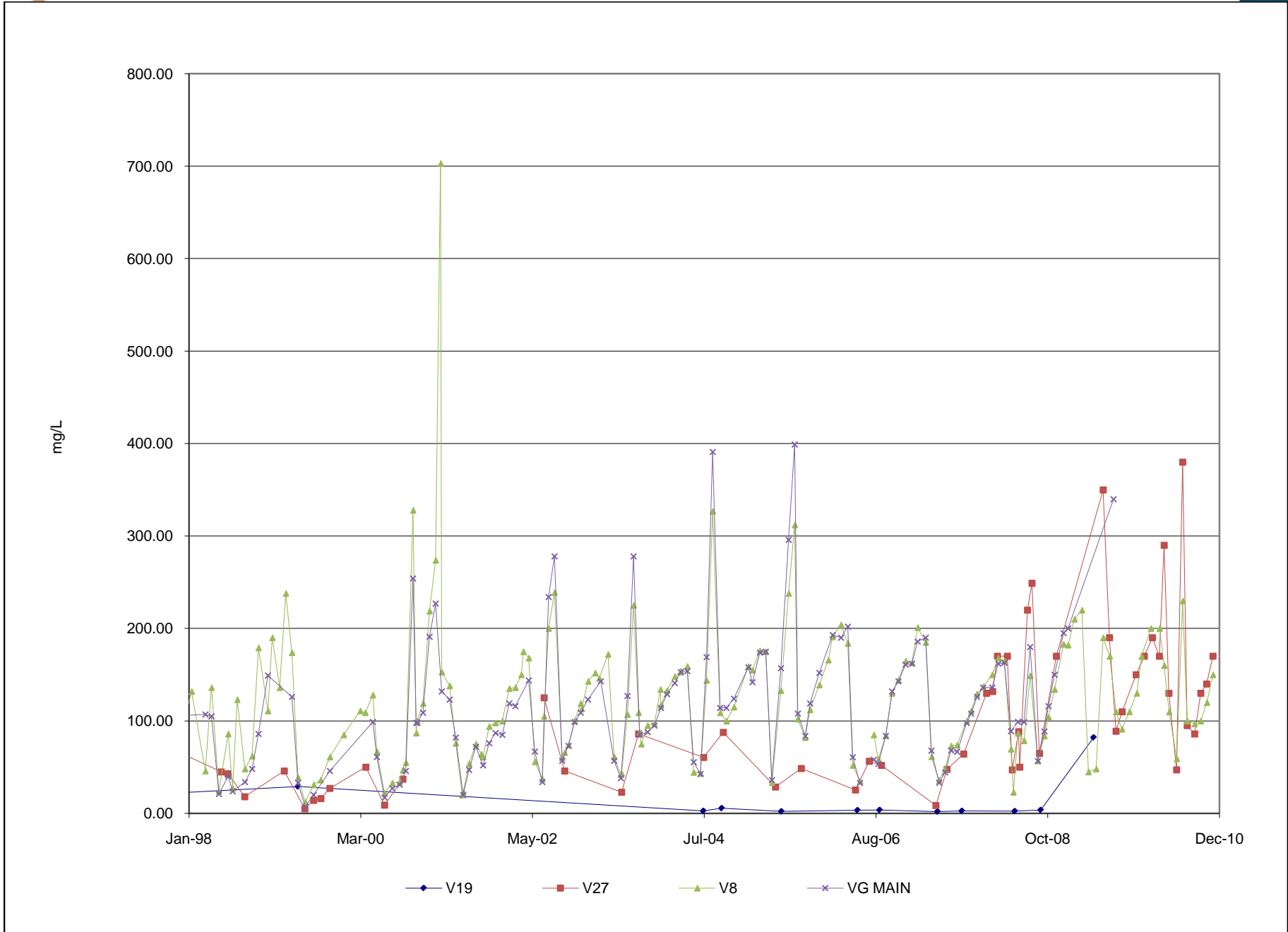


Figure D-15: Sulphate in Vangorda Creek



### Figure D-16: Zinc (Total) in Vangorda Creek

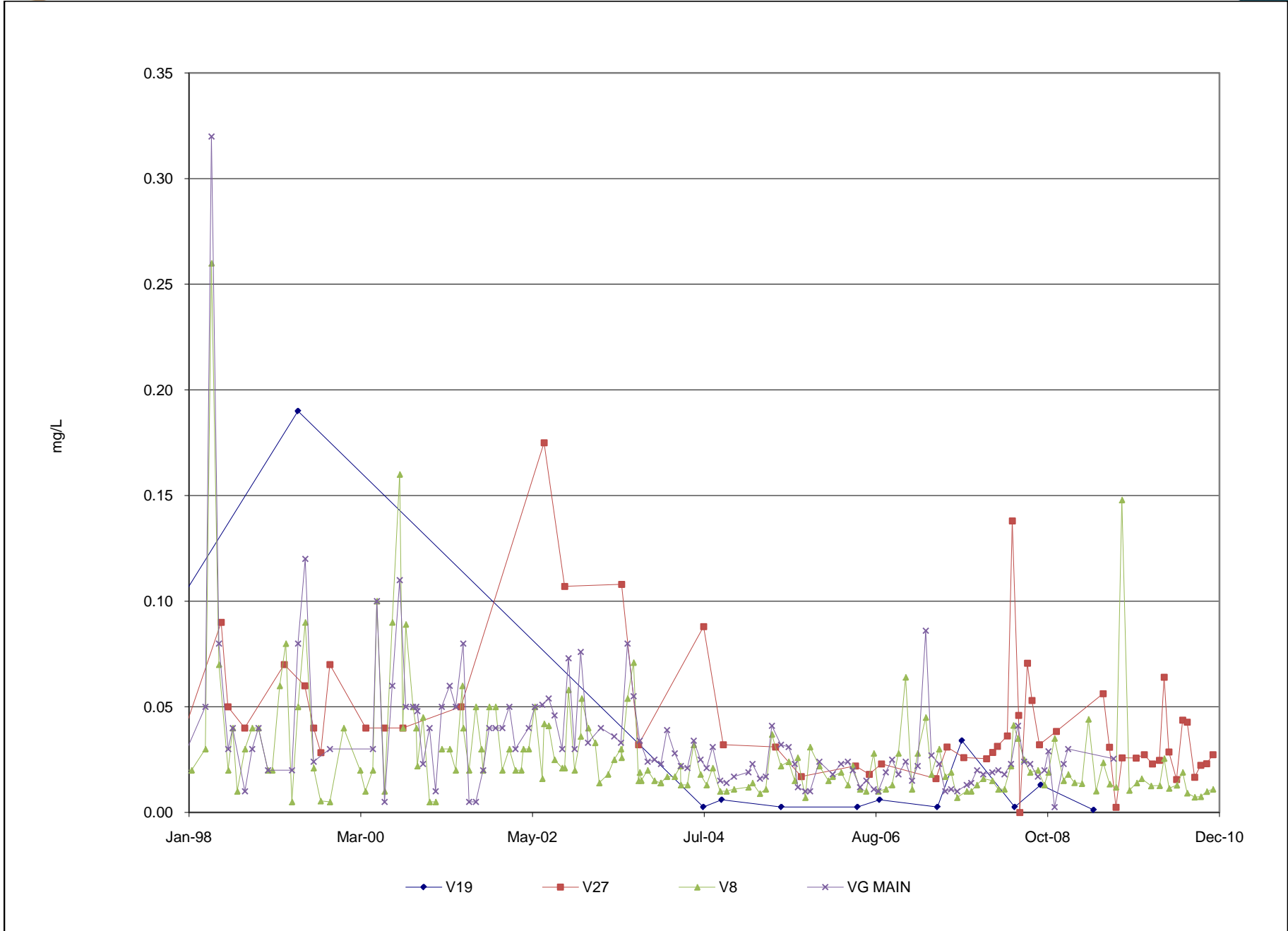


Figure D-17: Sulphate at V17A and V5

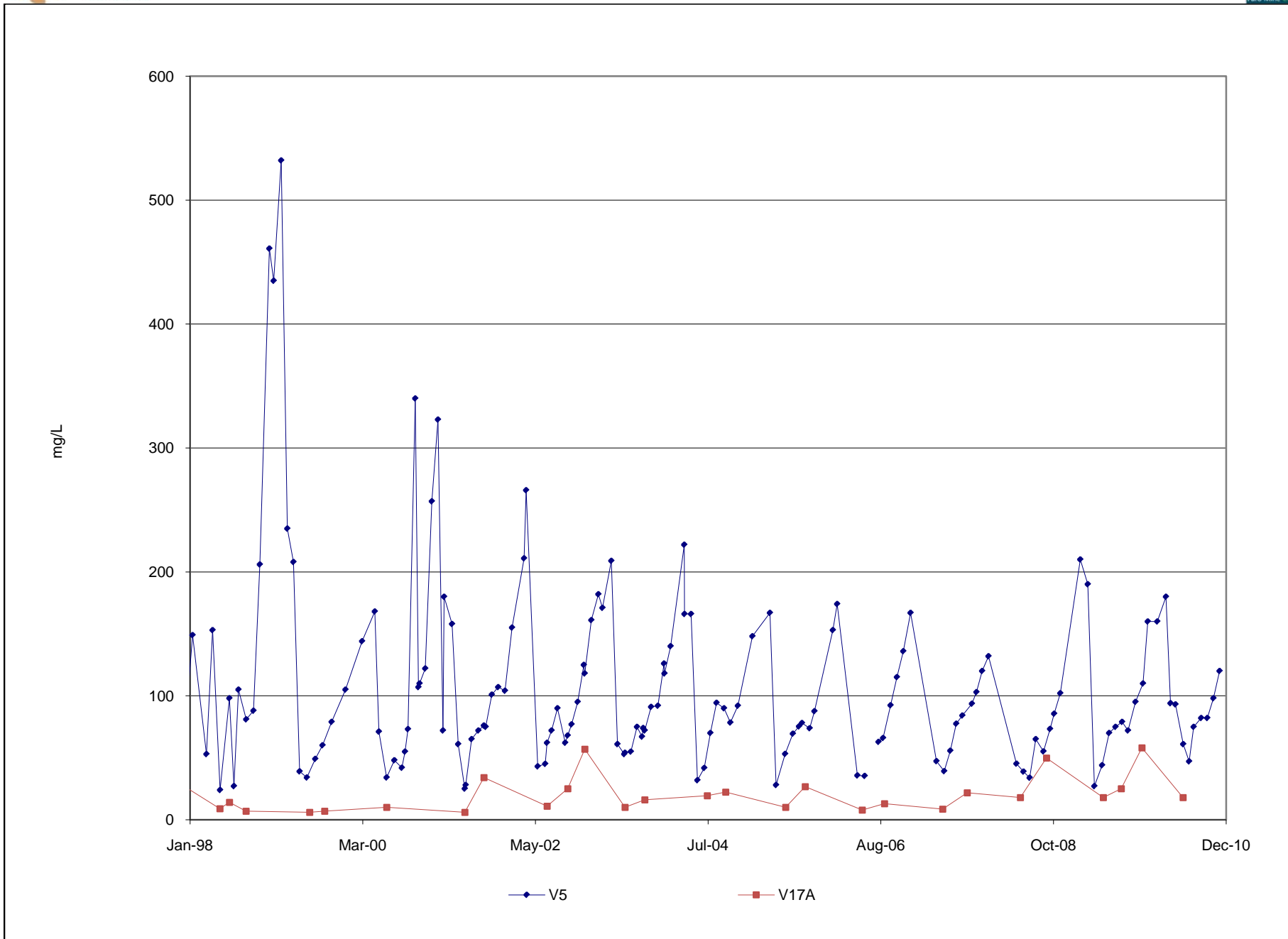


Figure D-18: Zinc (Total) at V17A and V5

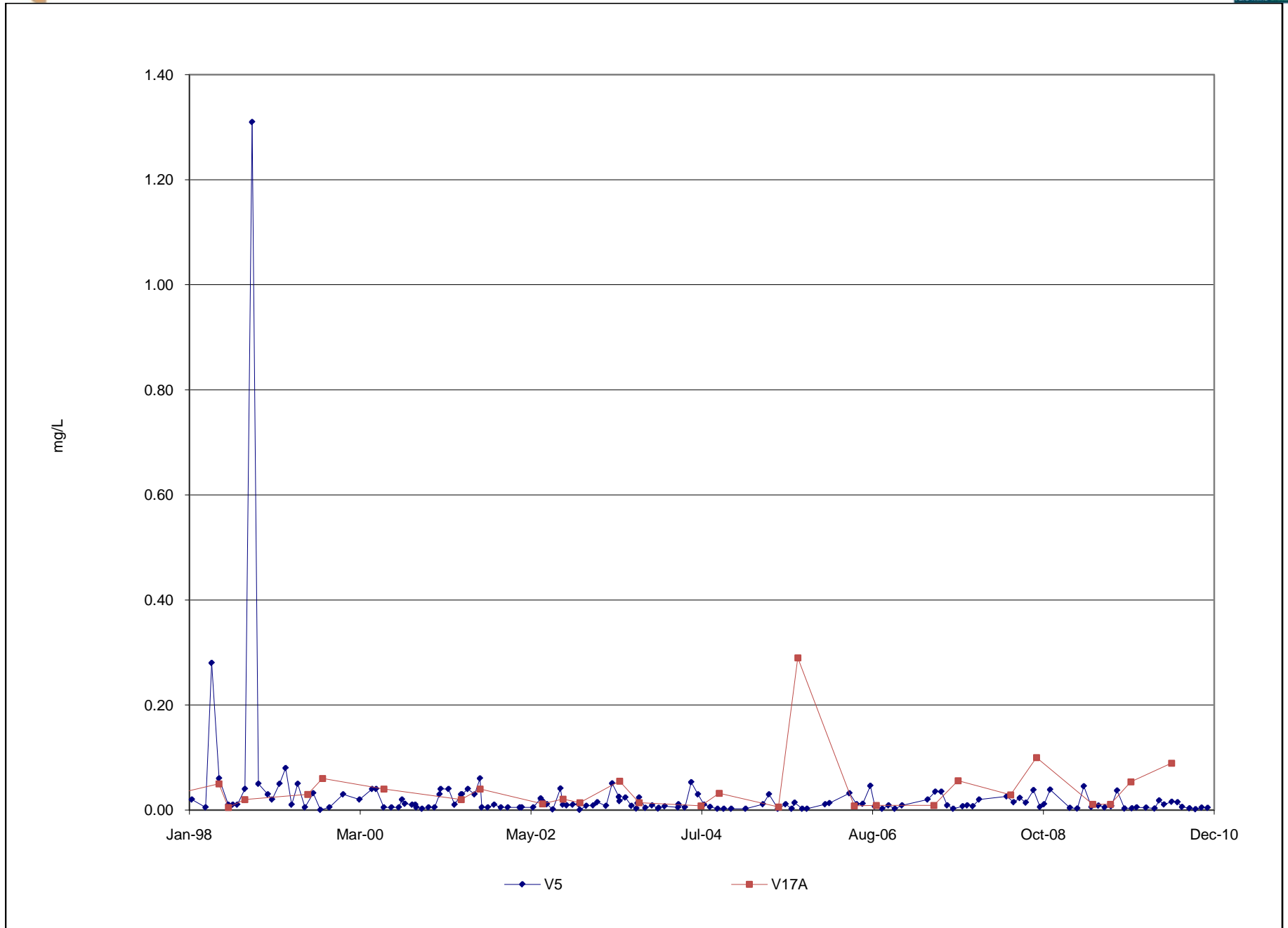


Figure D-19: 2010 FMC Lab Analysis - Zinc  
(Total and Dissolved) at V25

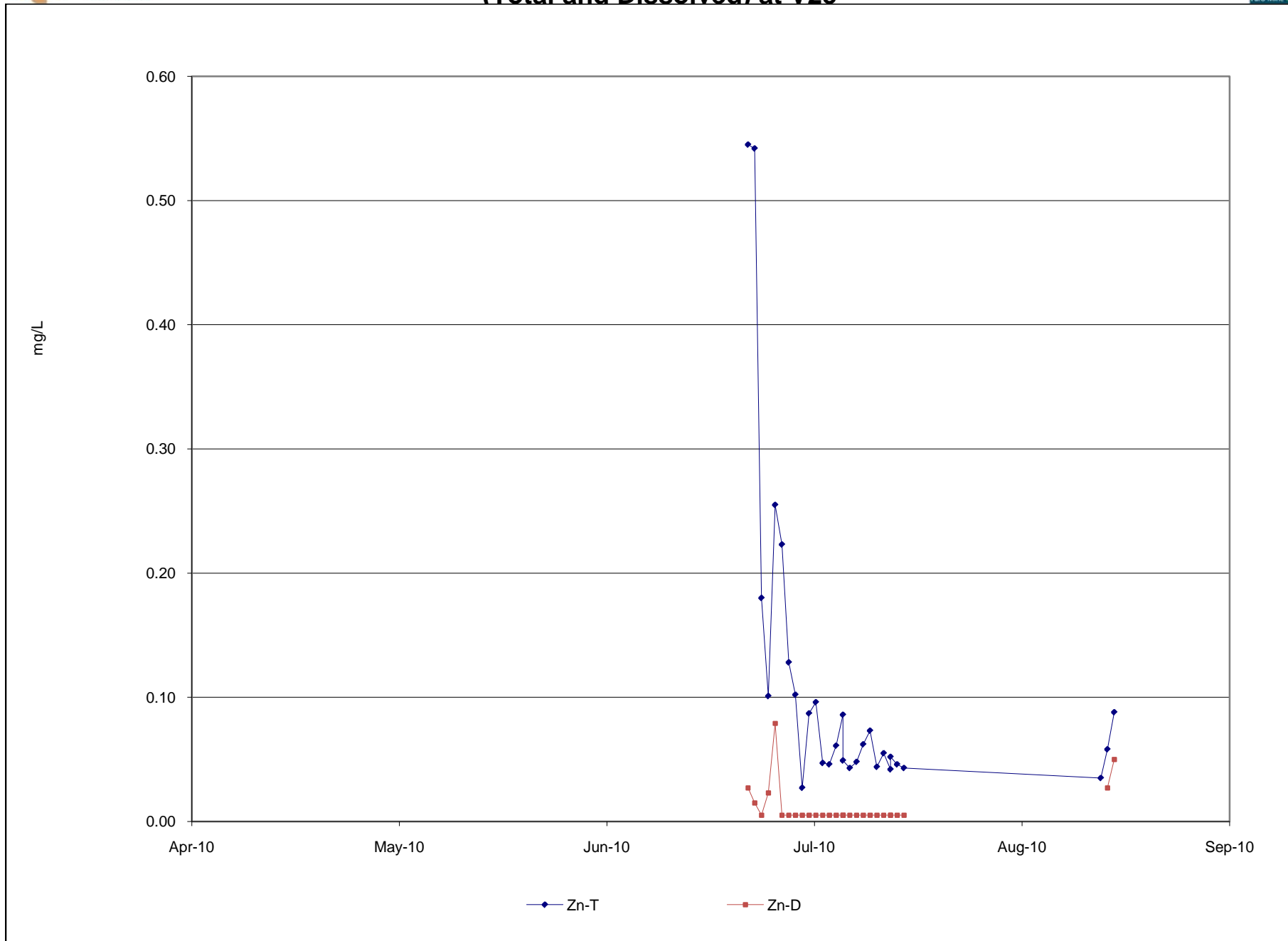




Figure D-20: 2010 FMC Lab Analysis - Zinc  
(Total and Dissolved) at V25 BSP

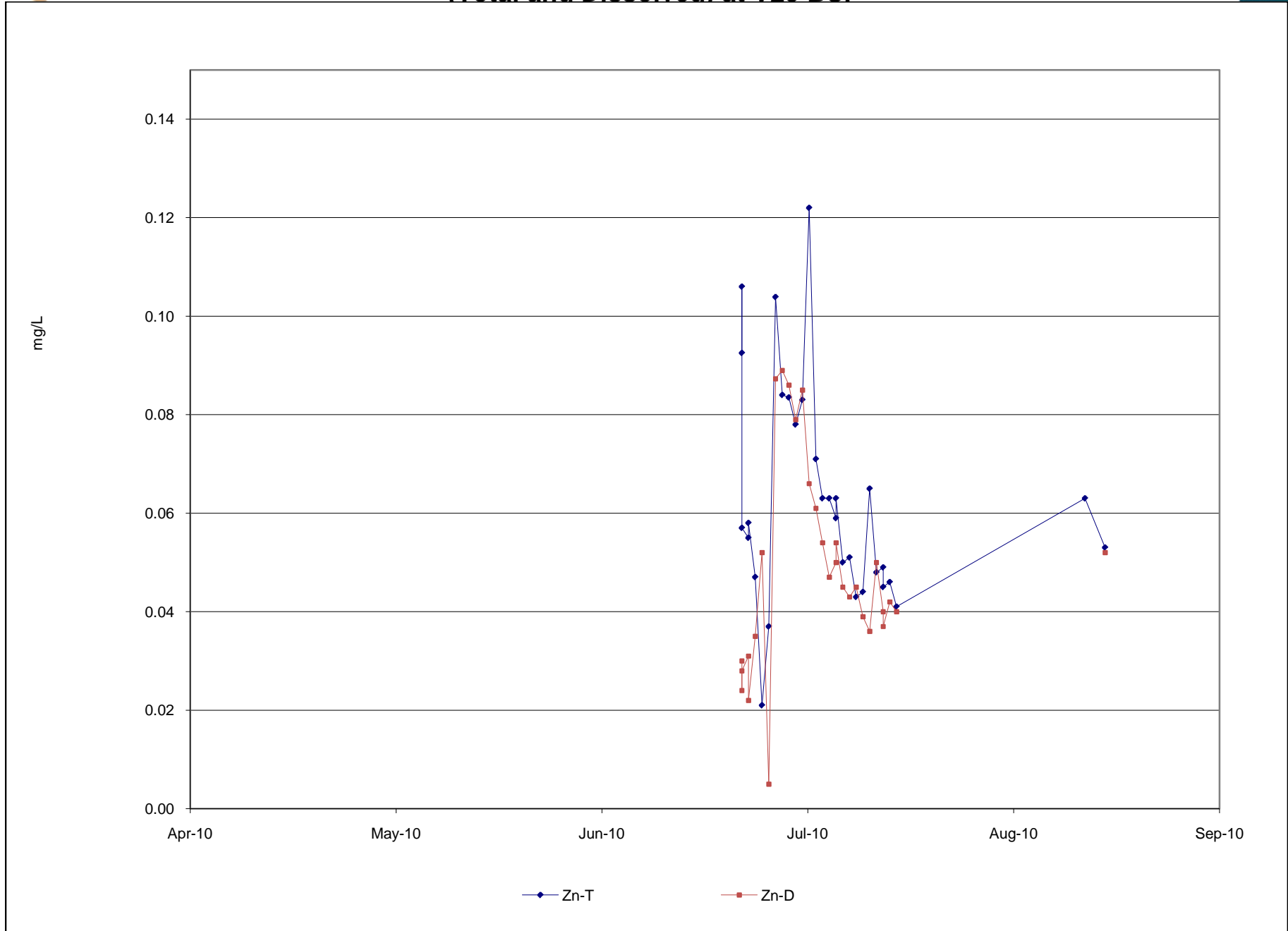


Figure D-21: Sulphate in Vangorda Waste Rock Dump Toe Drains

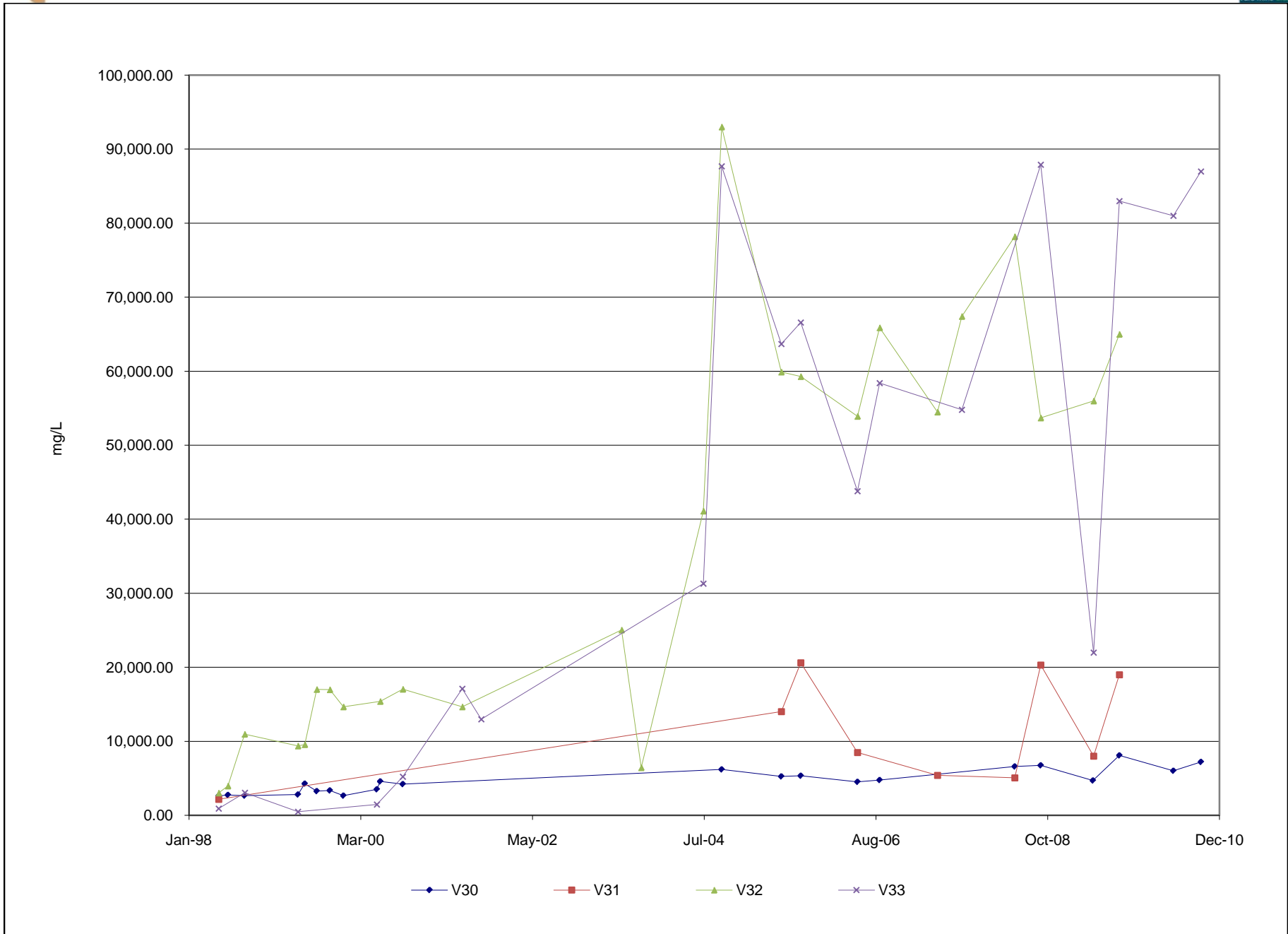


Figure D-22: Zinc (Dissolved) in Vangorda Waste Rock Dumps Toe Drains

