

Table 4 Summary of Data From Galkeno 900 Bioreactor Treatment Site

| | Aluminum, dissolved | Arsenic, dissolved | Antimony, dissolved | Barium, dissolved | Cadmium, dissolved | Calcium, dissolved | Carbon, Total Organic | Cobalt, dissolved | Hardness calculated from dissolved metal scan | Iron, dissolved | Lithium, dissolved | Magnesium, dissolved | Manganese, dissolved | Nickel, dissolved | Phosphorus, dissolved (not colourimetric) | Potassium, dissolved | Silicon, dissolved | Sodium, dissolved | Strontium, dissolved | Sulphur, Dissolved | Sulphate, Dissolved | Uranium, dissolved | Zinc, dissolved | Sulphide |
|---|---------------------|--------------------|---------------------|-------------------|--------------------|--------------------|-----------------------|-------------------|---|-----------------|--------------------|----------------------|----------------------|-------------------|---|----------------------|--------------------|-------------------|----------------------|--------------------|---------------------|--------------------|-----------------|----------|
| | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Galkeno 900 Adit Discharge | | | | | | | | | | | | | | | | | | | | | | | | |
| 13-Nov-2008 | 0.022 | 0.0806 | 0.0034 | 0.007 | 0.00213 | 359 | | 0.02666 | 1040 | 1.82 | 0.053 | 36 | | 0.197 | <0.01 | 0.6 | 3.54 | 1.6 | 0.466 | | | 0.0084 | 6.28 | |
| 19-Dec-2008 | 0.015 | 0.0864 | 0.0032 | 0.009 | 0.00138 | 398 | | 0.0296 | 1120 | 1.93 | 0.069 | 31.9 | 17.5 | 0.191 | | 0.6 | 3.75 | 1.6 | 0.449 | 324 | | 0.0095 | 5.91 | |
| 15-Jan-2009 | 0.01 | 0.0903 | 0.0047 | 0.008 | 0.00139 | 413 | | 0.0276 | 1020 | 2.02 | 0.067 | 33.1 | 18.1 | 0.195 | | 0.7 | 3.9 | 2.8 | 0.467 | 331 | | 0.0099 | 6.68 | |
| 3-Feb-2009 | <0.005 | 0.0705 | 0.0024 | 0.007 | 0.00129 | 369 | | 0.0238 | 1060 | 2.01 | 0.054 | 34.4 | 22.7 | 0.178 | <0.01 | 0.8 | 3.39 | 1.6 | 0.487 | 369 | | 0.0089 | 6.44 | |
| 10-Mar-2009 | <0.005 | 0.0809 | 0.0033 | 0.008 | 0.00126 | 328 | | 0.0281 | 959 | 1.69 | 0.054 | 33.8 | 20.9 | 0.212 | <0.01 | 0.6 | 3.39 | 1.5 | 0.494 | 284 | | 0.009 | 6.82 | |
| 16-Apr-2009 | 0.006 | 0.0748 | 0.0026 | 0.008 | 0.00148 | 437 | | 0.0255 | 1240 | 1.9 | 0.06 | 37.7 | 18.8 | 0.198 | <0.01 | 0.73 | 4.35 | 1.87 | 0.463 | 380 | | 0.0095 | 6.41 | |
| 7-May-2009 | 0.005 | 0.068 | 0.0026 | 0.0084 | 0.0014 | 422 | | 0.025 | 1210 | 1.85 | 0.057 | 39 | 17.9 | 0.188 | | <1 | 4.11 | 2 | 0.453 | 365 | | 0.00937 | 6.07 | |
| 6-Jun-2009 | 0.014 | 0.0687 | 0.0024 | 0.0079 | 0.0016 | 418 | | 0.0273 | 1210 | 1.66 | 0.057 | 39 | 18 | 0.203 | | <1 | 4.28 | 2 | 0.449 | 371 | | 0.00938 | 6.29 | |
| 8-Jul-2009 | <0.01 | 0.0628 | 0.0026 | 0.008 | 0.0015 | 391 | | 0.0254 | 1130 | 1.72 | 0.058 | 38 | 16.5 | 0.183 | | <1 | 3.35 | 2 | 0.481 | 322 | | 0.0105 | 5.93 | |
| 18-Aug-2009 | <0.01 | 0.0641 | 0.0026 | 0.007 | 0.0014 | 417 | | 0.0265 | 1200 | 1.39 | 0.059 | 39 | 17.6 | 0.197 | | <1 | 3.53 | 2 | 0.447 | 354 | 930 | 0.0121 | 6.05 | |
| 11-Sep-2009 | <0.01 | 0.064 | 0.0025 | 0.008 | 0.0014 | 443 | | 0.0252 | 1270 | 1.84 | 0.056 | 41 | 17.9 | 0.194 | | <1 | 4.24 | 2 | 0.454 | 356 | 910 | 0.0102 | 6.05 | |
| 9-Oct-2009 | <0.01 | 0.0679 | 0.0027 | 0.008 | 0.0014 | 407 | | 0.0252 | 1180 | 1.96 | 0.057 | 39 | 17.5 | 0.183 | | <1 | 3.93 | 2 | 0.485 | 353 | 930 | 0.0102 | 4.97 | |
| 12-Nov-2009 | <0.01 | 0.0508 | 0.0022 | 0.007 | 0.0014 | 425 | | 0.0264 | 1220 | 0.624 | 0.06 | 38 | 17.6 | 0.195 | | <1 | 4.08 | 2 | 0.453 | 397 | 960 | 0.0092 | 5.9 | |
| 2-Dec-2009 | 0.016 | 0.0702 | 0.0026 | 0.008 | 0.0016 | 448 | | 0.0285 | 1300 | 2 | 0.058 | 43 | 19 | 0.211 | | <1 | 4.77 | 2 | 0.47 | 393 | 950 | 0.0101 | 6.22 | |
| 12-Jan-2010 | <0.01 | 0.0589 | 0.0025 | 0.008 | 0.0015 | 427 | | 0.0234 | 1220 | 1.57 | 0.055 | 38 | 17.7 | 0.183 | | <1 | 4.18 | 2 | 0.459 | 349 | 940 | 0.0099 | 5.9 | |
| 11-Feb-2010 | 0.031 | 0.0586 | 0.0023 | 0.007 | 0.0013 | 418 | | 0.0246 | 1200 | 1.74 | 0.054 | 38 | 16.5 | 0.188 | | <1 | 4.08 | 2 | 0.417 | 363 | 960 | 0.0097 | 5.77 | |
| 8-Mar-2010 | <0.01 | 0.0549 | 0.0023 | 0.007 | 0.0015 | 421 | <0.5 | 0.0261 | 1210 | 1.36 | 0.055 | 38 | 17.3 | 0.202 | | <1 | 3.93 | 2 | 0.456 | 339 | 1000 | 0.0099 | 6.15 | |
| 23-Mar-2010 | <0.01 | 0.0597 | 0.0022 | 0.008 | 0.0016 | 427 | <0.5 | 0.0231 | 1200 | 1.52 | 0.06 | 34 | 17.2 | 0.17 | | <1 | 3.93 | 1 | 0.453 | 364 | 940 | 0.0098 | 5.56 | |
| Galkeno 900 Bioreactor Standpipe | | | | | | | | | | | | | | | | | | | | | | | | |
| 13-Nov-2008 | 1.55 | 0.0179 | 0.0019 | 0.076 | 0.0044 | 349 | 108 | 0.00599 | 1050 | 0.026 | 0.033 | 44.1 | 6.52 | 0.051 | <0.01 | 1.6 | 3.79 | 2.7 | 0.551 | | 844 | 0.0171 | 1.05 | <0.005 |
| 4-Jan-2009 | 0.01 | 0.0051 | 0.0024 | 0.017 | 0.00232 | 408 | 1.1 | 0.0196 | | 0.02 | 0.061 | 33.1 | 16.6 | 0.167 | | 0.8 | 3.84 | 1.8 | 0.484 | 329 | 1460 | 0.0104 | 5.65 | <0.005 |
| 12-Feb-2009 | <0.005 | 0.0016 | 0.0016 | 0.015 | 0.00206 | 414 | 240 | 0.0017 | 1200 | 0.02 | 0.042 | 41.4 | 6.47 | 0.182 | <0.01 | 0.8 | 3.55 | 1.8 | 0.438 | 319 | 989 | 0.0087 | 2 | <0.005 |
| 1-Mar-2009 | <0.005 | 0.0047 | 0.0016 | 0.014 | 0.00215 | 413 | 35.9 | 0.0129 | 1200 | 0.02 | 0.053 | 41.1 | 16.5 | 0.152 | <0.01 | 0.8 | 3.81 | 1.7 | 0.461 | 308 | 925 | 0.009 | 4.36 | <0.005 |
| 12-Mar-2009 | <0.005 | 0.0034 | 0.0018 | 0.02 | 0.00261 | 346 | 7.8 | 0.0107 | 1020 | 0.03 | 0.048 | 37.8 | 20.2 | 0.165 | <0.01 | 0.8 | 3.56 | 1.6 | 0.519 | 298 | 977 | 0.0119 | 3.96 | <0.005 |
| 10-Apr-2009 | <0.005 | 0.0013 | 0.0014 | 0.017 | 0.00257 | 408 | 2.5 | 0.00214 | 1200 | <0.01 | 0.042 | 45.2 | 11.1 | 0.1 | <0.01 | 1.1 | 4.37 | 2.1 | 0.449 | 323 | 152 | 0.0103 | 2.77 | <0.005 |
| 23-Apr-2009 | 0.005 | 0.0015 | 0.0014 | 0.019 | 0.00234 | 413 | 2.4 | 0.0008 | 1190 | 0.014 | 0.047 | 39.3 | 4.39 | 0.09 | <0.01 | 0.95 | 4.35 | 1.85 | 0.459 | 354 | 840 | 0.0109 | 2.06 | 0.007 |
| 7-May-2009 | <0.004 | 0.0014 | 0.0006 | 0.0183 | 0.001 | 408 | 2 | 0.0001 | 1190 | <0.02 | 0.043 | 40 | 0.358 | 0.0553 | | <1 | 4.19 | 2 | 0.444 | 353 | 940 | 0.011 | 1.01 | 0.005 |
| 21-May-2009 | <0.004 | 0.0016 | <0.0004 | 0.0165 | 0.0005 | 383 | 2.4 | 0.0002 | 1110 | 0.067 | 0.037 | 37 | 0.178 | 0.0333 | | <1 | 4.2 | 2 | 0.425 | 328 | 970 | 0.0114 | 0.597 | <0.005 |
| 4-Jun-2009 | 0.006 | 0.0016 | 0.0005 | 0.0216 | 0.0006 | 402 | 3.1 | 0.0002 | 1180 | <0.02 | 0.042 | 42 | 0.212 | 0.0241 | | 1 | 4.42 | 2 | 0.471 | 348 | 930 | 0.0127 | 0.553 | 0.006 |
| 18-Jun-2009 | <0.01 | 0.0016 | 0.0005 | 0.02 | 0.0005 | 395 | 2.1 | <0.0005 | 1160 | <0.02 | 0.037 | 41 | 0.208 | 0.019 | | 1 | 4.68 | 2 | 0.435 | 341 | 920 | 0.0116 | 0.537 | <0.005 |
| 2-Jul-2009 | <0.01 | 0.0018 | 0.0007 | 0.021 | 0.0007 | 406 | 1.9 | <0.0005 | 1190 | <0.02 | 0.038 | 42 | 0.196 | 0.018 | | 1 | 4.67 | 2 | 0.445 | 359 | 870 | 0.0124 | 0.533 | <0.005 |
| 16-Jul-2009 | <0.01 | 0.0017 | 0.0007 | 0.021 | 0.0006 | 387 | 18.9 | <0.0005 | 1110 | <0.02 | 0.038 | 35 | 0.337 | 0.015 | | 1 | 4.85 | 3 | 0.467 | 309 | 900 | 0.0116 | 0.578 | 0.008 |
| 30-Jul-2009 | <0.01 | 0.0033 | 0.002 | 0.033 | 0.0033 | 399 | 17.5 | 0.0239 | 1160 | 0.028 | 0.039 | 40 | 26.1 | 0.066 | | 1 | 4.33 | 2 | 0.459 | 335 | 850 | 0.0154 | 1.04 | 0.012 |
| 13-Aug-2009 | <0.01 | 0.0301 | 0.0006 | 0.051 | <0.0001 | 401 | 12.3 | 0.0745 | 1180 | 0.042 | 0.03 | 42 | 55.6 | 0.07 | | <1 | 4.87 | 2 | 0.468 | 329 | 870 | 0.0219 | 0.266 | 0.014 |
| 27-Aug-2009 | <0.01 | 0.0655 | <0.0005 | 0.047 | <0.0001 | 404 | 17.3 | 0.0206 | 1180 | 17.9 | 0.031 | 43 | 37.9 | 0.013 | | <1 | 6.7 | 2 | 0.462 | 318 | 850 | 0.0127 | <0.01 | 0.033 |
| 10-Sep-2009 | <0.01 | 0.0944 | <0.0005 | 0.047 | <0.0001 | 403 | 15.8 | 0.0043 | 1180 | 6.97 | 0.027 | 43 | 32.2 | 0.003 | | <1 | 9.26 | 2 | 0.475 | 221 | 580 | 0.0095 | <0.01 | 0.012 |
| 24-Sep-2009 | <0.01 | 0.128 | <0.0005 | 0.045 | <0.0001 | 363 | 10.1 | 0.0018 | 1080 | 1.66 | 0.028 | 42 | 25.9 | 0.002 | | <1 | 9.43 | 2 | 0.491 | 180 | 440 | 0.011 | <0.01 | 0.109 |
| 9-Oct-2009 | <0.01 | 0.0173 | <0.0005 | 0.044 | <0.0001 | 346 | 17.2 | 0.0029 | 1040 | 0.08 | 0.031 | 43 | 22.2 | 0.012 | | <1 | 8.99 | 2 | 0.437 | 167 | 410 | 0.0139 | 0.043 | |
| 20-Oct-2009 | <0.01 | 0.142 | <0.0005 | 0.054 | <0.0001 | 374 | 7 | 0.0071 | 1110 | 17 | 0.028 | 43 | 23.4 | 0.005 | | <1 | 7.37 | 2 | 0.447 | 224 | 560 | 0.012 | <0.01 | 0.086 |
| 5-Nov-2009 | <0.01 | 0.0295 | <0.0005 | 0.044 | <0.0001 | 411 | 9.4 | 0.0139 | 1200 | 13.8 | 0.044 | 42 | 22.6 | 0.02 | | <1 | 5.79 | 2 | 0.445 | 341 | 720 | 0.0106 | 0.022 | 0.078 |
| 16-Nov-2009 | <0.01 | 0.0144 | <0.0005 | 0.035 | <0.0001 | 405 | 1.5 | 0.0139 | 1170 | 9.91 | 0.052 | 39 | 19 | 0.016 | | <1 | 4.73 | 2 | 0.458 | 370 | 820 | 0.0087 | 0.026 | 0.133 |
| 30-Nov-2009 | <0.01 | 0.0009 | <0.0005 | 0.027 | <0.0001 | 423 | 6.5 | 0.013 | 1220 | <0.02 | 0.053 | 40 | 18.8 | 0.025 | | <1 | 4.65 | 2 | 0.452 | 349 | 880 | 0.0053 | <0.01 | 0.16 |
| 14-Dec-2009 | <0.01 | 0.0037 | <0.0005 | 0.028 | <0.0001 | 471 | 5.2 | 0.0087 | 1350 | 6.45 | 0.06 | 43 | 19.5 | 0.018 | | <1 | 4.85 | 2 | 0.5 | 391 | 970 | 0.0083 | 0.026 | 0.3 |
| 28-Dec-2009 | <0.01 | 0.0053 | <0.0005 | 0.019 | <0.0001 | 420 | 3.9 | 0.0135 | 1210 | 4.56 | 0.056 | 38 | 17.1 | 0.067 | | <1 | 4.7 | 2 | 0.45 | 354 | 940 | 0.008 | 0.238 | 0.202 |
| 11-Jan-2010 | <0.01 | 0.0055 | <0.0005 | 0.022 | <0.0001 | 415 | 1.6 | 0.0127 | 1190 | 4.87 | 0.056 | 37 | 17.8 | 0.052 | | <1 | 4.27 | 2 | 0.447 | 335 | 1000 | 0.0094 | 0.036 | 0.138 |
| 25-Jan-2010 | <0.01 | 0.0031 | <0.0005 | 0.019 | <0.0001 | 423 | 3.2 | 0.0146 | 1210 | 2.53 | 0.057 | 37 | 17.6 | 0.087 | | <1 | 4.07 | 2 | 0.451 | | | | | |