

**RIX'S CREEK MINE
SURFACE WATER MONITORING
2022 / 2023 RESULTS**

License Number: 3391
Licensee: RIX'S CREEK PTY. LIMITED
PO BOX 4
EAST MAITLAND NSW 2323

Premises: RIX'S CREEK COLLIERY
RIX'S CREEK LANE
SINGLETON NSW 2330

Monitoring Frequency: Monthly
Sampling method: Grab sample
Limits: Nil



| Sampling Point | Monitoring Location | Pollutant | Unit | Published: Sampled: Obtained: | 3 February 2022 17 January 2022 24 January 2022 | 1 March 2022 9 February 2022 15 February 2022 | 12 April 2022 29 March 2022 6 April 2022 | 3 May 2022 26 April 2022 2 May 2022 | 10 June 2022 24 May 2022 9 June 2022 | 1 July 2022 21 June 2022 27 June 2022 |
|----------------|---------------------|------------------------|-------|-------------------------------------|---|---|--|---|--|---|
| | | | | JANUARY Measurement | FEBRUARY Measurement | MARCH Measurement | APRIL Measurement | MAY Measurement | JUNE Measurement | |
| 1 | Railway Underpass | Conductivity | uS/cm | | 518 | 634 | 294 | 467 | 627 | 678 |
| | | pH | pH | | 7.6 | 7.7 | 7.1 | 7.3 | 7.7 | 8.0 |
| | | Total dissolved solids | mg/l | | 330 | 365 | 247 | 354 | 352 | 394 |
| | | Total suspended solids | mg/l | | 4 | 4 | 21 | 8 | 4 | 4 |
| 2 | NEH Bridge | Conductivity | uS/cm | | 951 | 1230 | 438 | 5500 | 4170 | 4430 |
| | | pH | pH | | 7.4 | 7.6 | 7.3 | 8.1 | 7.9 | 8.2 |
| | | Total dissolved solids | mg/l | | 583 | 670 | 396 | 3830 | 2240 | 2450 |
| | | Total suspended solids | mg/l | | 26 | 8 | 315 | 7 | 8 | 5 |
| 10 | Below Operation | Conductivity | uS/cm | | 1060 | 783 | 510 | 3910 | 1030 | 1470 |
| | | pH | pH | | 8.7 | 8.0 | 7.6 | 8.0 | 8.1 | 8.2 |
| | | Total dissolved solids | mg/l | | 624 | 456 | 445 | 2470 | 549 | 811 |
| | | Total suspended solids | mg/l | | 12 | 4 | 18 | 4 | 20 | 4 |
| 3 | Maison Dieu Bridge | Conductivity | uS/cm | | 1050 | 1320 | 656 | 3740 | 678 | 3730 |
| | | pH | pH | | 7.2 | 7.3 | 7.1 | 7.2 | 7.3 | 7.2 |
| | | Total dissolved solids | mg/l | | 592 | 698 | 455 | 2290 | 474 | 2180 |
| | | Total suspended solids | mg/l | | 14 | 12 | 39 | 22 | 46 | 6 |
| 4 | CWD1 | Conductivity | uS/cm | | 198 | 202 | 131 | 190 | 223 | 276 |
| | | pH | pH | | 7.8 | 8.7 | 6.9 | 8.7 | 7.1 | 8.2 |
| | | Total dissolved solids | mg/l | | 184 | 135 | 206 | 237 | 157 | 179 |
| | | Total suspended solids | mg/l | | 47 | 6 | 24 | 47 | 15 | 12 |
| 5 | CWD2 | Conductivity | uS/cm | | 179 | 188 | 164 | 148 | 160 | 167 |
| | | pH | pH | | 7.5 | 7.1 | 7.0 | 6.9 | 7.0 | 7.3 |
| | | Total dissolved solids | mg/l | | 188 | 175 | 204 | 199 | 186 | 197 |
| | | Total suspended solids | mg/l | | 15 | 10 | 16 | 14 | 8 | 8 |
| 7 | CWD6 | Conductivity | uS/cm | | 249 | 248 | 180 | 239 | 249 | 250 |
| | | pH | pH | | 7.9 | 7.7 | 7.3 | 7.2 | 7.3 | 7.6 |
| | | Total dissolved solids | mg/l | | 206 | 180 | 185 | 230 | 214 | 211 |
| | | Total suspended solids | mg/l | | 13 | 6 | 19 | 6 | 24 | 7 |
| 8 | DWD1 | Conductivity | uS/cm | | 4260 | 5090 | 2440 | 2940 | 4320 | 5090 |
| | | pH | pH | | 8.8 | 8.5 | 8.3 | 8.5 | 8.5 | 8.6 |
| | | Total dissolved solids | mg/l | | 2540 | 3140 | 1390 | 1720 | 2480 | 2970 |
| | | Total suspended solids | mg/l | | 12 | 7 | 14 | 10 | 10 | 4 |
| 9 | DWD2 | Conductivity | uS/cm | | 4660 | 5170 | 338 | 3630 | 5620 | 5700 |
| | | pH | pH | | 8.6 | 8.8 | 8.6 | 8.6 | 6.9 | 7.7 |
| | | Total dissolved solids | mg/l | | 2790 | 3200 | 251 | 2340 | 3700 | 3370 |
| | | Total suspended solids | mg/l | | 44 | 32 | 2730 | 51 | 8 | 4 |
| 6 | DWD4 | Conductivity | uS/cm | | 4250 | 5050 | 2910 | 3990 | 5180 | 5560 |
| | | pH | pH | | 9.2 | 8.9 | 8.1 | 8.6 | 8.5 | 8.5 |
| | | Total dissolved solids | mg/l | | 2660 | 2680 | 1710 | 2390 | 3040 | 3530 |
| | | Total suspended solids | mg/l | | 57 | 7 | 39 | 6 | 16 | 6 |

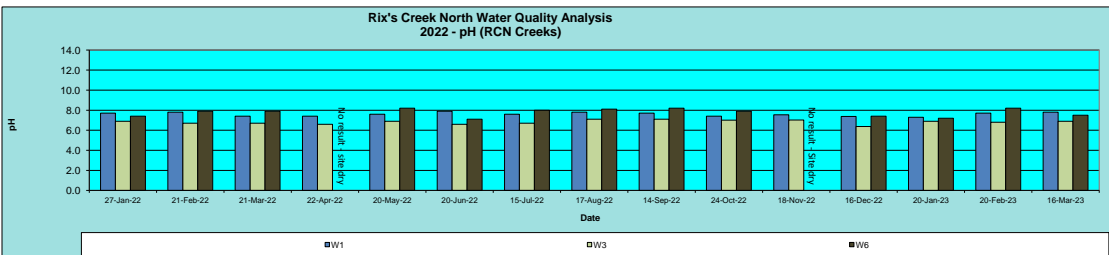
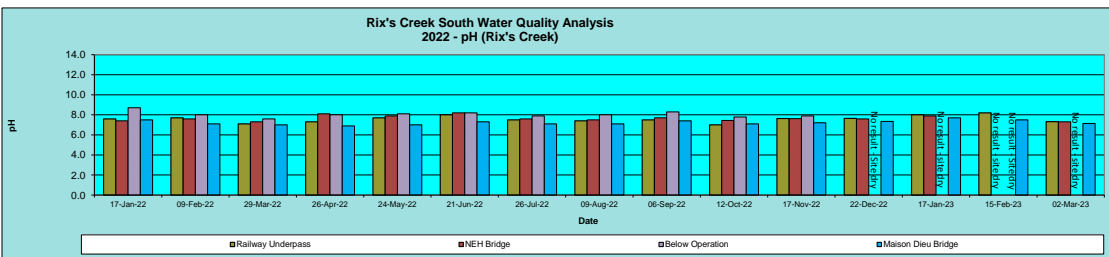
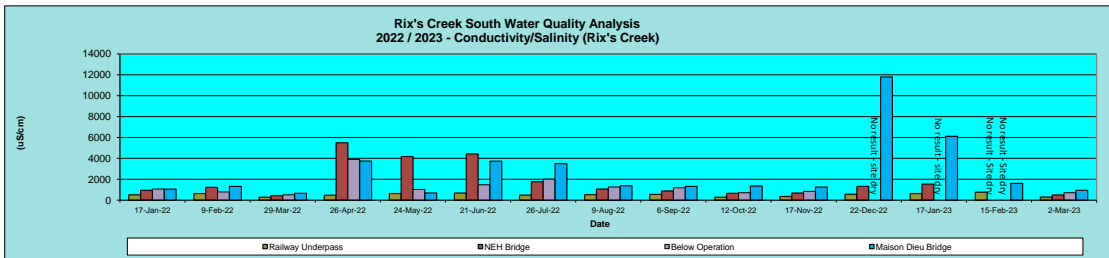
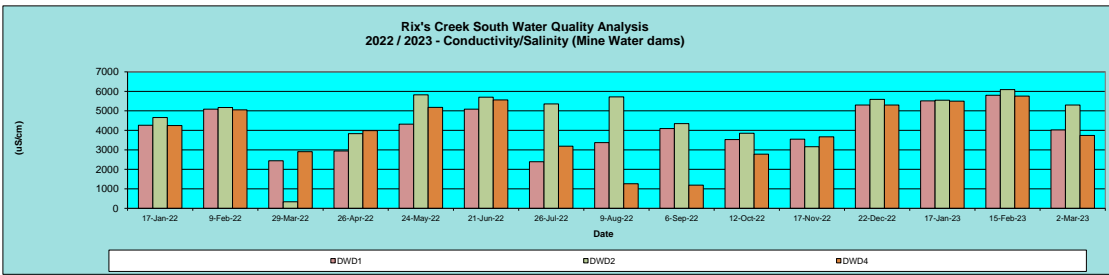
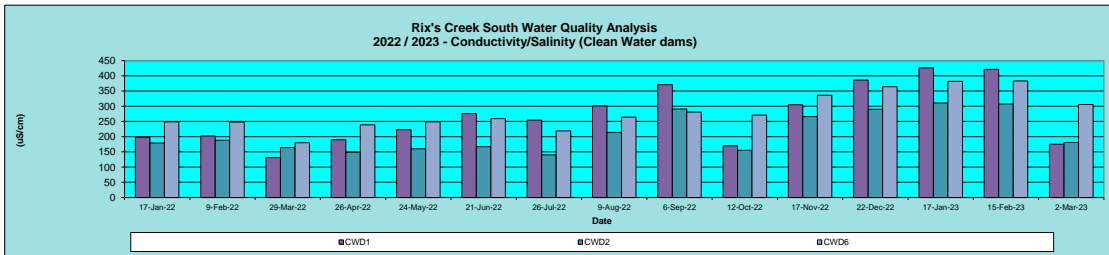
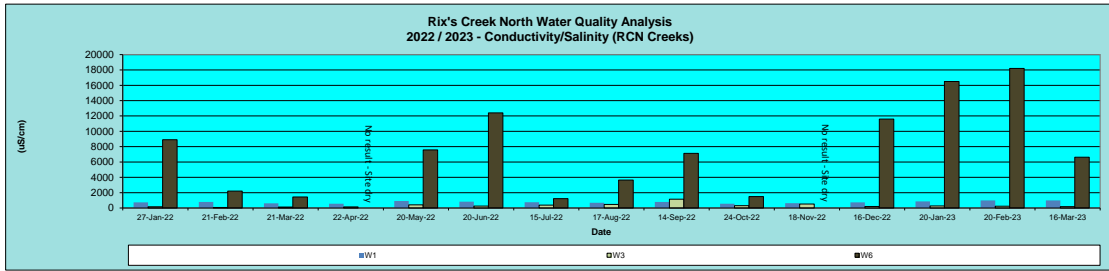
| Sampling Point | Monitoring Location | Pollutant | Unit | Published: Sampled: Obtained: | 3 February 2022 27 January 2022 3 February 2022 | 1 March 2022 21 February 2022 25 February 2022 | 11 April 2022 21 March 2022 28 March 2022 | 3 May 2022 22 April 2022 2 May 2022 | 10 June 2022 20 May 2022 30 May 2022 | 1 July 2022 20 June 2022 24 June 2022 |
|----------------|---------------------|------------------------|-------|-------------------------------------|---|--|---|---|--|---|
| | | | | JANUARY Measurement | FEBRUARY Measurement | MARCH Measurement | APRIL Measurement | MAY Measurement | JUNE Measurement | |
| 11 | W1 | Conductivity | uS/cm | | 732 | 781 | 618 | 564 | 910 | 832 |
| | | pH | pH | | 7.7 | 7.8 | 7.4 | 7.4 | 7.6 | 7.9 |
| | | Total dissolved solids | mg/l | | 345 | 415 | 370 | 379 | 516 | 473 |
| | | Total suspended solids | mg/l | | 16 | 12 | 17 | 12 | 8 | 14 |
| 12 | W3 | Conductivity | uS/cm | | 157 | 74 | 132 | 135 | 415 | 243 |
| | | pH | pH | | 6.9 | 6.7 | 6.7 | 6.6 | 6.9 | 6.6 |
| | | Total dissolved solids | mg/l | | 292 | 170 | 226 | 307 | 319 | 392 |
| | | Total suspended solids | mg/l | | 54 | 33 | 35 | 148 | 14 | 32 |
| 13 | W6 | Conductivity | uS/cm | | 8900 | 2200 | 1430 | | 7580 | 12400 |
| | | pH | pH | | 7.4 | 7.9 | 7.9 | No Result - Site Dry | 8.2 | 7.1 |
| | | Total dissolved solids | mg/l | | 5260 | 1310 | 839 | | 4520 | 8130 |
| | | Total suspended solids | mg/l | | 29 | 24 | 12 | | 6 | 18 |

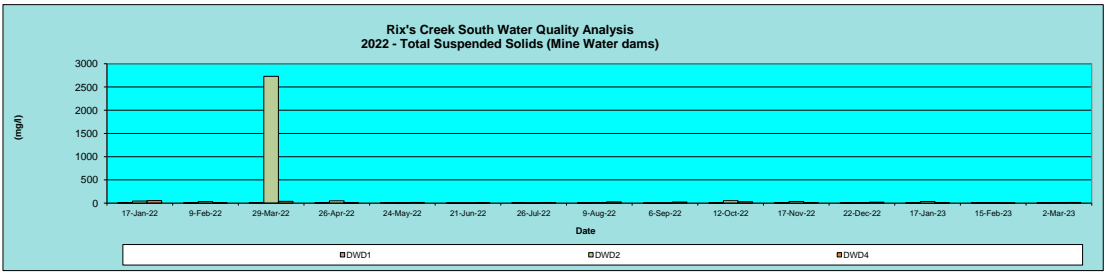
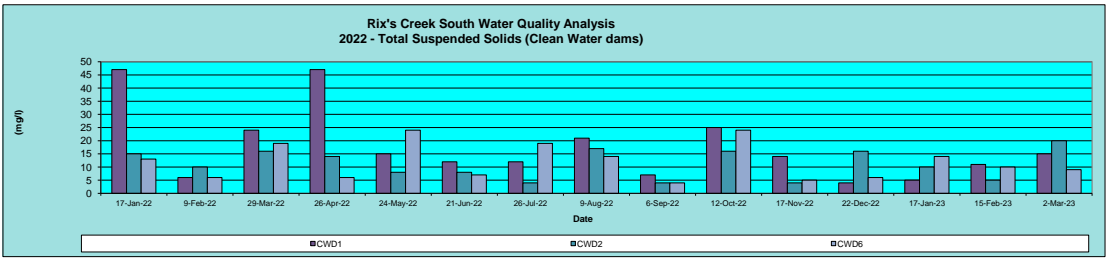
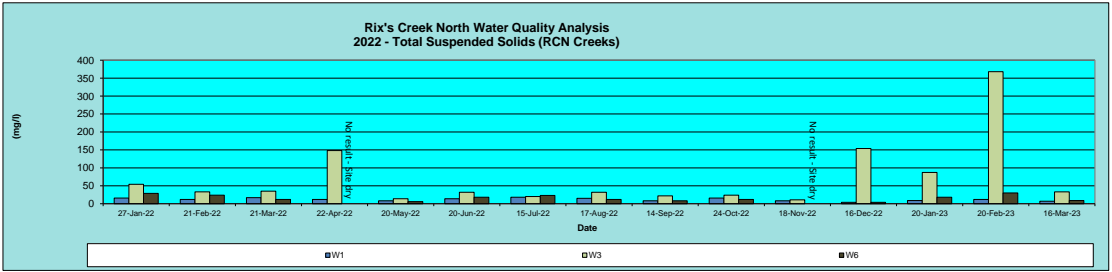
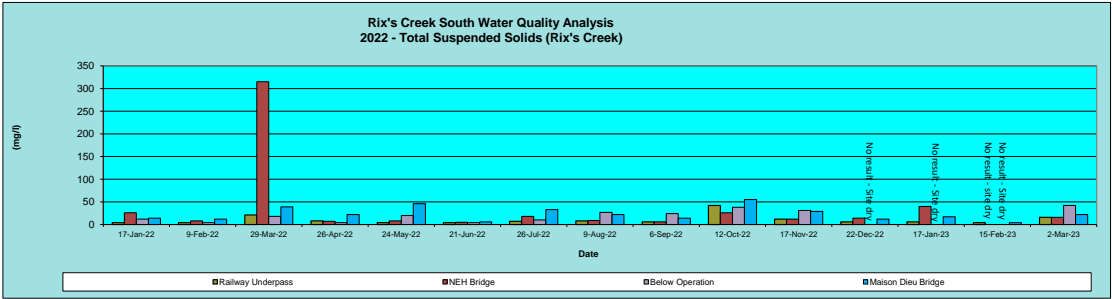
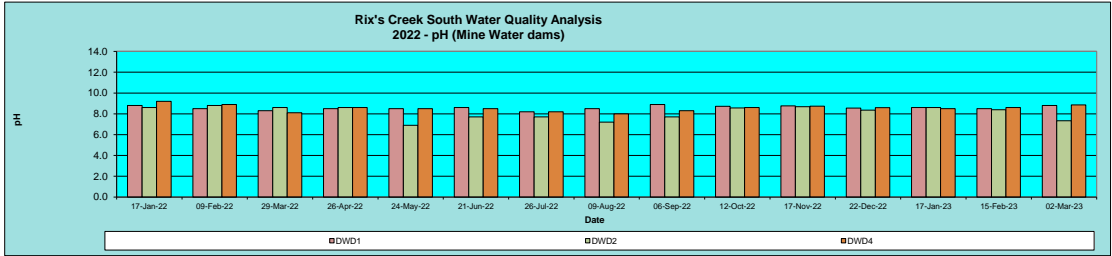
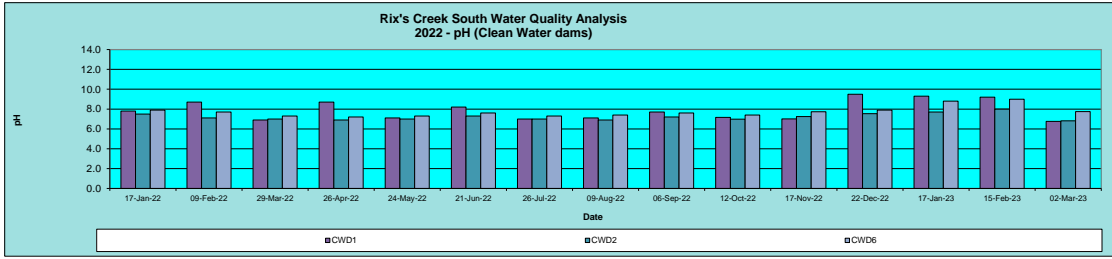
| Published: Sampled: Obtained: | | | | 3 August 2022 26 July 2022 3 August 2022 | 1 September 2022 9 August 2022 16 August 2022 | 3 October 2022 6 September 2022 13 September 2022 | 2 November 2022 12 October 2022 20 October 2022 | 13 November 2022 17 November 2022 28 November 2022 | 9 January 2023 22 December 2022 3 January 2023 |
|-------------------------------------|---------------------|------------------------|-------|--|---|---|---|--|--|
| Sampling Point | Monitoring Location | Pollutant | Unit | JULY Measurement | AUGUST Measurement | SEPTEMBER Measurement | OCTOBER Measurement | NOVEMBER Measurement | DECEMBER Measurement |
| 1 | Railway Underpass | Conductivity | uS/cm | 481 | 525 | 547 | 289 | 349 | 563 |
| | | pH | pH | 7.5 | 7.4 | 7.5 | 7.0 | 7.6 | 7.7 |
| | | Total dissolved solids | mg/l | 326 | 320 | 296 | 245 | 256 | 327 |
| | | Total suspended solids | mg/l | 7 | 8 | 6 | 42 | 12 | 6 |
| 2 | NEH Bridge | Conductivity | uS/cm | 1760 | 1070 | 885 | 662 | 683 | 1320 |
| | | pH | pH | 7.6 | 7.5 | 7.7 | 7.5 | 7.6 | 7.6 |
| | | Total dissolved solids | mg/l | 1000 | 615 | 514 | 428 | 396 | 717 |
| | | Total suspended solids | mg/l | 18 | 9 | 6 | 26 | 12 | 14 |
| 10 | Below Operation | Conductivity | uS/cm | 2020 | 1260 | 1190 | 712 | 841 | No Result - Site Dry |
| | | pH | pH | 7.9 | 8.0 | 8.3 | 7.8 | 7.9 | |
| | | Total dissolved solids | mg/l | 1190 | 690 | 762 | 481 | 502 | |
| | | Total suspended solids | mg/l | 10 | 27 | 24 | 38 | 31 | |
| 3 | Maison Dieu Bridge | Conductivity | uS/cm | 3500 | 1380 | 1310 | 1350 | 1250 | 11800 |
| | | pH | pH | 7.1 | 7.1 | 7.4 | 7.1 | 7.2 | 7.4 |
| | | Total dissolved solids | mg/l | 2130 | 751 | 751 | 865 | 720 | 6720 |
| | | Total suspended solids | mg/l | 33 | 22 | 14 | 55 | 29 | 12 |
| 4 | CWD1 | Conductivity | uS/cm | 254 | 301 | 371 | 170 | 305 | 386 |
| | | pH | pH | 7.0 | 7.1 | 7.7 | 7.2 | 7.0 | 9.5 |
| | | Total dissolved solids | mg/l | 303 | 238 | 258 | 206 | 232 | 243 |
| | | Total suspended solids | mg/l | 12 | 21 | 7 | 25 | 14 | 4 |
| 5 | CWD2 | Conductivity | uS/cm | 140 | 214 | 291 | 155 | 266 | 290 |
| | | pH | pH | 7.0 | 6.9 | 7.2 | 7.0 | 7.3 | 7.5 |
| | | Total dissolved solids | mg/l | 198 | 202 | 242 | 210 | 226 | 219 |
| | | Total suspended solids | mg/l | 4 | 17 | 4 | 16 | 4 | 16 |
| 7 | CWD6 | Conductivity | uS/cm | 219 | 264 | 281 | 271 | 336 | 364 |
| | | pH | pH | 7.3 | 7.4 | 7.6 | 7.4 | 7.7 | 7.9 |
| | | Total dissolved solids | mg/l | 232 | 224 | 231 | 248 | 233 | 260 |
| | | Total suspended solids | mg/l | 19 | 14 | 4 | 24 | 5 | 6 |
| 8 | DWD1 | Conductivity | uS/cm | 2390 | 3370 | 4090 | 3530 | 3550 | 5300 |
| | | pH | pH | 8.2 | 8.5 | 8.9 | 8.7 | 8.8 | 8.6 |
| | | Total dissolved solids | mg/l | 1370 | 1860 | 2430 | 2070 | 2250 | 3000 |
| | | Total suspended solids | mg/l | 10 | 8 | 4 | 8 | 11 | 6 |
| 9 | DWD2 | Conductivity | uS/cm | 5360 | 5720 | 4350 | 3850 | 3160 | 5590 |
| | | pH | pH | 7.7 | 7.2 | 7.7 | 8.6 | 8.7 | 8.4 |
| | | Total dissolved solids | mg/l | 3410 | 3390 | 2730 | 2330 | 2020 | 3240 |
| | | Total suspended solids | mg/l | 4 | 14 | 4 | 55 | 35 | 11 |
| 6 | DWD4 | Conductivity | uS/cm | 3190 | 1260 | 1190 | 2780 | 3670 | 5300 |
| | | pH | pH | 8.2 | 8.0 | 8.3 | 8.6 | 8.7 | 8.6 |
| | | Total dissolved solids | mg/l | 2010 | 690 | 762 | 1700 | 2320 | 3060 |
| | | Total suspended solids | mg/l | 13 | 27 | 24 | 30 | 13 | 22 |

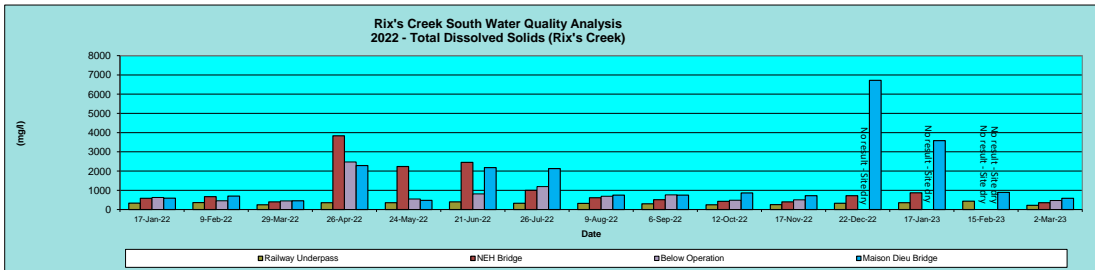
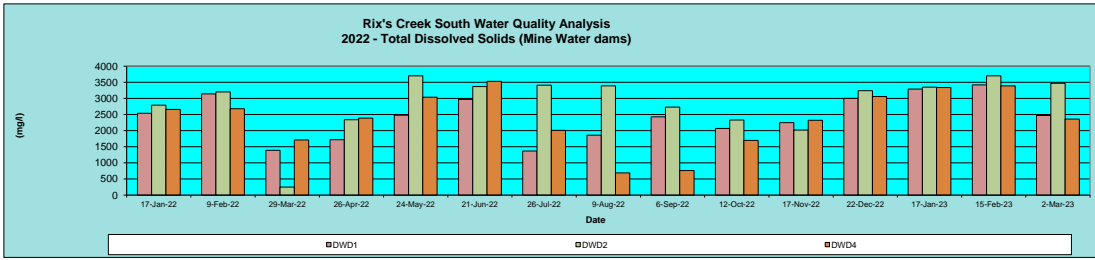
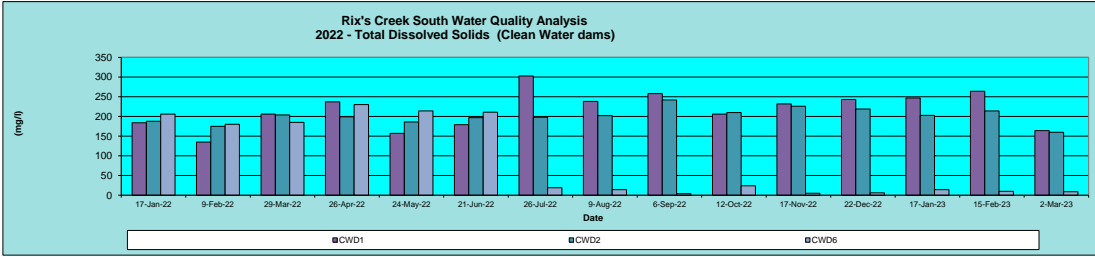
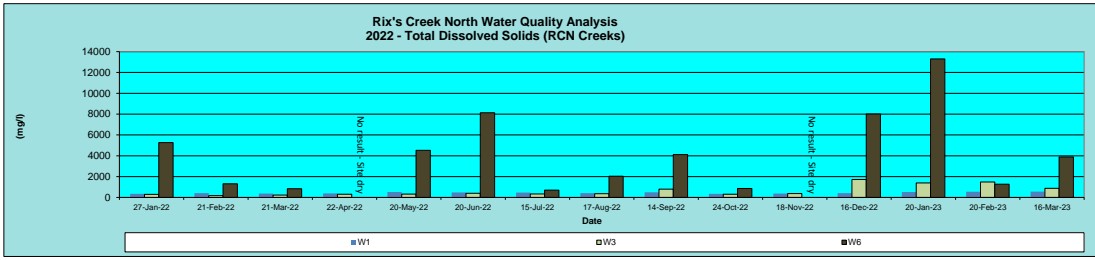
| Published: Sampled: Obtained: | | | | 1 August 2022 15 July 2022 25 July 2022 | 1 September 2022 17 August 2022 24 August 2022 | 3 October 2022 14 September 2022 19 September 2022 | 2 November 2022 24 October 2022 1 November 2022 | 13 December 2022 18 November 2022 28 November 2022 | 9 January 2023 16 December 2022 4 January 2023 |
|-------------------------------------|---------------------|------------------------|-------|---|--|--|---|--|--|
| Sampling Point | Monitoring Location | Pollutant | Unit | JULY Measurement | AUGUST Measurement | SEPTEMBER Measurement | OCTOBER Measurement | NOVEMBER Measurement | DECEMBER Measurement |
| 11 | W1 | Conductivity | uS/cm | 752 | 681 | 784 | 552 | 622 | 737 |
| | | pH | pH | 7.6 | 7.8 | 7.7 | 7.4 | 7.5 | 7.4 |
| | | Total dissolved solids | mg/l | 463 | 414 | 491 | 352 | 378 | 406 |
| | | Total suspended solids | mg/l | 18 | 15 | 8 | 16 | 8 | 4 |
| 12 | W3 | Conductivity | uS/cm | 372 | 457 | 1150 | 310 | 516 | 188 |
| | | pH | pH | 6.7 | 7.1 | 7.1 | 7.0 | 7.0 | 6.4 |
| | | Total dissolved solids | mg/l | 329 | 358 | 790 | 309 | 370 | 1720 |
| | | Total suspended solids | mg/l | 20 | 32 | 22 | 24 | 11 | 154 |
| 13 | W6 | Conductivity | uS/cm | 1220 | 3650 | 7130 | 1490 | No Result - Site Dry | 11600 |
| | | pH | pH | 8.0 | 8.1 | 8.2 | 7.9 | | 7.4 |
| | | Total dissolved solids | mg/l | 706 | 2040 | 4110 | 866 | | 8010 |
| | | Total suspended solids | mg/l | 23 | 12 | 8 | 12 | | 4 |

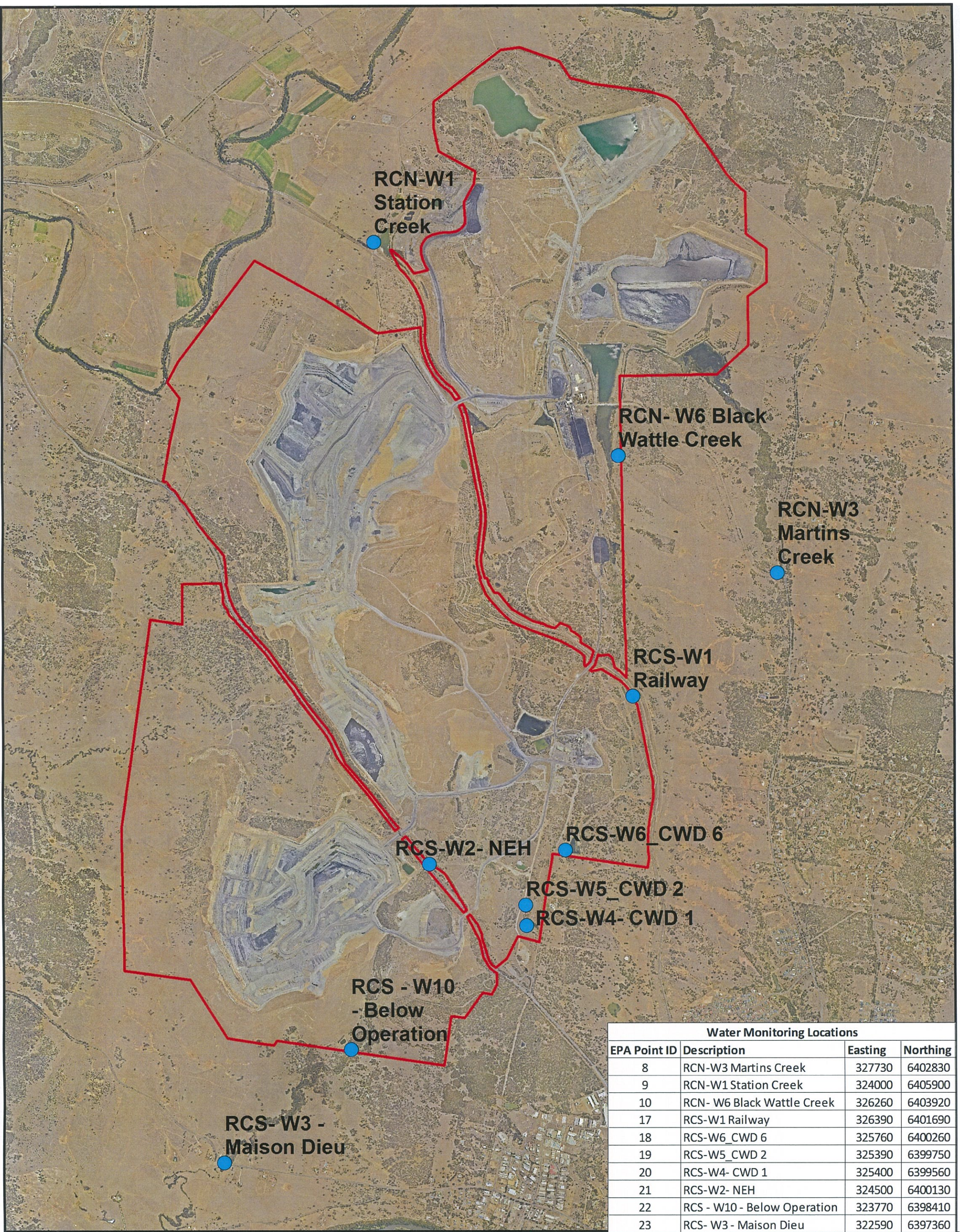
| Sampling Point | Monitoring Location | Pollutant | Unit | Published: | 1 February 2023 | 1 March 2023 | 3 April 2023 |
|----------------|---------------------|------------------------|-------|------------|----------------------|----------------------|-------------------|
| | | | | Sampled: | 17 January 2023 | 15 February 2023 | 2 March 2023 |
| | | | | Obtained: | 23 January 2023 | 20 February 2023 | 10 March 2023 |
| | | | | | JANUARY Measurement | FEBRUARY Measurement | MARCH Measurement |
| 1 | Railway Underpass | Conductivity | uS/cm | | 636 | 769 | 297 |
| | | pH | pH | | 8.0 | 8.2 | 7.3 |
| | | Total dissolved solids | mg/l | | 355 | 436 | 216 |
| | | Total suspended solids | mg/l | | 6 | 4 | 16 |
| 2 | NEH Bridge | Conductivity | uS/cm | | 1540 | | 497 |
| | | pH | pH | | 7.9 | No Result - Site Dry | 7.3 |
| | | Total dissolved solids | mg/l | | 870 | | 352 |
| | | Total suspended solids | mg/l | | 40 | | 16 |
| 10 | Below Operation | Conductivity | uS/cm | | | | 713 |
| | | pH | pH | | No Result - Site Dry | No Result - Site Dry | 7.75 |
| | | Total dissolved solids | mg/l | | | | 472 |
| | | Total suspended solids | mg/l | | | | 42 |
| 3 | Maison Dieu Bridge | Conductivity | uS/cm | | 6110 | 1600 | 942 |
| | | pH | pH | | 7.7 | 7.5 | 7.1 |
| | | Total dissolved solids | mg/l | | 3580 | 890 | 581 |
| | | Total suspended solids | mg/l | | 17 | 4 | 22 |
| 4 | CWD1 | Conductivity | uS/cm | | 426 | 421 | 175 |
| | | pH | pH | | 9.3 | 9.2 | 6.8 |
| | | Total dissolved solids | mg/l | | 247 | 264 | 164 |
| | | Total suspended solids | mg/l | | 5 | 11 | 15 |
| 5 | CWD2 | Conductivity | uS/cm | | 311 | 307 | 181 |
| | | pH | pH | | 7.7 | 8.0 | 6.8 |
| | | Total dissolved solids | mg/l | | 203 | 214 | 160 |
| | | Total suspended solids | mg/l | | 10 | 5 | 20 |
| 7 | CWD6 | Conductivity | uS/cm | | 382 | 383 | 306 |
| | | pH | pH | | 8.8 | 9.0 | 7.7 |
| | | Total dissolved solids | mg/l | | 266 | 258 | 217 |
| | | Total suspended solids | mg/l | | 14 | 10 | 9 |
| 8 | DWD1 | Conductivity | uS/cm | | 5510 | 5800 | 4020 |
| | | pH | pH | | 8.6 | 8.5 | 8.8 |
| | | Total dissolved solids | mg/l | | 3290 | 3420 | 2470 |
| | | Total suspended solids | mg/l | | 9 | 10 | 10 |
| 9 | DWD2 | Conductivity | uS/cm | | 5550 | 6090 | 5300 |
| | | pH | pH | | 8.6 | 8.4 | 7.9 |
| | | Total dissolved solids | mg/l | | 3350 | 3700 | 3470 |
| | | Total suspended solids | mg/l | | 36 | 10 | 12 |
| 6 | DWD4 | Conductivity | uS/cm | | 5500 | 5760 | 3740 |
| | | pH | pH | | 8.5 | 8.6 | 8.9 |
| | | Total dissolved solids | mg/l | | 3340 | 3390 | 2360 |
| | | Total suspended solids | mg/l | | 8 | 4 | 16 |

| Sampling Point | Monitoring Location | Pollutant | Unit | Published: | 1 February 2023 | 1 March 2023 | 3 April 2023 |
|----------------|---------------------|------------------------|-------|------------|---------------------|----------------------|-------------------|
| | | | | Sampled: | 20 January 2023 | 20 February 2023 | 16 March 2023 |
| | | | | Obtained: | 31 January 2023 | 28 February 2023 | 24 March 2023 |
| | | | | | JANUARY Measurement | FEBRUARY Measurement | MARCH Measurement |
| 11 | W1 | Conductivity | uS/cm | | 858 | 989 | 994 |
| | | pH | pH | | 7.3 | 7.7 | 7.8 |
| | | Total dissolved solids | mg/l | | 516 | 546 | 555 |
| | | Total suspended solids | mg/l | | 9 | 12 | 7 |
| 12 | W3 | Conductivity | uS/cm | | 264 | 229 | 184 |
| | | pH | pH | | 6.9 | 6.8 | 6.9 |
| | | Total dissolved solids | mg/l | | 1390 | 1480 | 874 |
| | | Total suspended solids | mg/l | | 87 | 368 | 33 |
| 13 | W6 | Conductivity | uS/cm | | 16500 | 18200 | 6620 |
| | | pH | pH | | 7.2 | 8.2 | 7.5 |
| | | Total dissolved solids | mg/l | | 13300 | 1270 | 3890 |
| | | Total suspended solids | mg/l | | 18 | 30 | 9 |









| Water Monitoring Locations | | | |
|----------------------------|-----------------------------|---------|----------|
| EPA Point ID | Description | Easting | Northing |
| 8 | RCN-W3 Martins Creek | 327730 | 6402830 |
| 9 | RCN-W1 Station Creek | 324000 | 6405900 |
| 10 | RCN- W6 Black Wattle Creek | 326260 | 6403920 |
| 17 | RCS-W1 Railway | 326390 | 6401690 |
| 18 | RCS-W6_CWD 6 | 325760 | 6400260 |
| 19 | RCS-W5_CWD 2 | 325390 | 6399750 |
| 20 | RCS-W4- CWD 1 | 325400 | 6399560 |
| 21 | RCS-W2- NEH | 324500 | 6400130 |
| 22 | RCS - W10 - Below Operation | 323770 | 6398410 |
| 23 | RCS- W3 - Maison Dieu | 322590 | 6397360 |

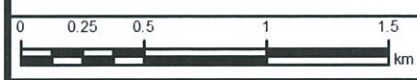


Legend

- EPL_Water_pointsb.csv Events
- EPL PREMISES BOUNDARY

T. R. Gentle 13/8/2020
 Timothy R Gentle
 Surveyor Registered under the
 Surveying and Spatial Information Act, 2002

**EPL 3391
 Surface Water
 Monitoring Sites**



WE CARE. WE DELIVER.
 Author: TRG
 Scale: 1:30,000
 Date: 13/08/2020
 File: EPL Water monit 2008