

ENVIRONMENT PROTECTION LICENCE 20350 MONITORING DATA

Licence Holder: Santos NSW (Eastern) Pty Ltd
Premises: Narrabri Gas Field
X-Line Road, Narrabri NSW 2390

Licence No: 20350

EPL LINK: <http://www.epa.nsw.gov.au/prpoeoapp/ViewPOEOLicence.aspx?DOCID=33816&SYSUID=1&LICID=20350>

EPL Period: May 1st 2021 to April 30th 2022

Reporting Period: Quarter 4 - Februar 2022 - April 2022

Published Date: May-22

Monitoring Location: Refer to Table 1

Scheduled Activity: Coal seam gas exploration, assessment and production

General Notes: Monitoring points removed in accordance with Environmental Protection Licence (EPL) 23050 ammended 11th April 2021 (16, 17, 22, 23, 24, 25, 29, 30, 31, 32, 33, 34, 35, 36, 50, 51, 52, 53, 55, 58, 67 and 68)
Monitoring Point 80, 81 & 82 - no sample required in accordance with EPL20350 Condition M2.7
Monitoring Point 77 - no sample required in accordance with EPL20350 Condition M2.7
Monitoring Point 69, 70, 75 & 76 - no sample required in accordance with EPL20350 Condition M2.6
Monitoring Point 83, 84, 85 & 86 - no sample required in accordance with EPL20350 Condition M2.7
Monitoring point 18 - The bore is sealed shut and unable to open. Historically dry.

| EPA Identification No. | Location | Monitoring Type | LATITUDE | LONGITUDE |
|------------------------|---------------|----------------------|--------------|-------------|
| EPA ID 10 | BWD26PRLPS02 | MONITORING BORE | -30.62235754 | 149.6014509 |
| EPA ID 11 | DWH14PRUPS01 | MONITORING WELL | -30.54892377 | 149.7593231 |
| EPA ID 12 | DWH14PRLPS02 | MONITORING WELL | -30.54916522 | 149.7591818 |
| EPA ID 13 | DWH14PRPUR03 | MONITORING BORE | -30.5490445 | 149.7592524 |
| EPA ID 14 | DWH3PRUPS01 | MONITORING BORE | -30.65363088 | 149.7365671 |
| EPA ID 15 | DWH3PRLPS02 | MONITORING BORE | -30.65353767 | 149.7367105 |
| EPA ID 18 | BWD27PRORA01 | MONITORING BORE | -30.66338611 | 149.6658255 |
| EPA ID 20 | BHN14PRORA01 | MONITORING WELL | -30.47186 | 149.574455 |
| EPA ID 21 | BHN14PRUPS02 | VIBRATING WIRE PIEZO | -30.471734 | 149.574398 |
| EPA ID 26 | BWDMW12S | MONITORING WELL | -30.631887 | 149.64828 |
| EPA ID 27 | BWDMW12D | MONITORING WELL | -30.631878 | 149.648293 |
| EPA ID 28 | BWDMW12I | MONITORING WELL | -30.631891 | 149.648302 |
| EPA ID 37 | LWDMW1D | MONITORING BORE | -30.491237 | 149.619021 |
| EPA ID 38 | LWDMW1S | MONITORING BORE | -30.491241 | 149.619031 |
| EPA ID 39 | LWDMW1I | MONITORING BORE | -30.491247 | 149.619049 |
| EPA ID 40 | LWDMW2S | MONITORING BORE | -30.505449 | 149.616432 |
| EPA ID 41 | LWDMW2D | MONITORING BORE | -30.505448 | 149.616422 |
| EPA ID 42 | LWDMW3D | MONITORING BORE | -30.506452 | 149.624514 |
| EPA ID 43 | LWDMW3S | MONITORING BORE | -30.506442 | 149.624517 |
| EPA ID 44 | DWH8AQGDGY01 | MONITORING BORE | -30.550156 | 149.768324 |
| EPA ID 45 | DWH8AQGARK02 | MONITORING BORE | -30.550156 | 149.768324 |
| EPA ID 46 | DWH8AQGPOR03 | MONITORING BORE | -30.550156 | 149.768324 |
| EPA ID 47 | BWD28QGUPS01 | MONITORING BORE | -30.6680169 | 149.6400693 |
| EPA ID 48 | BWD28QGLPS01 | MONITORING BORE | -30.6680169 | 149.6400693 |
| EPA ID 49 | BWD28QGUPUR01 | MONITORING BORE | -30.6680169 | 149.6400693 |
| EPA ID 56 | WPKMW9D | MONITORING BORE | -30.363006 | 149.66006 |
| EPA ID 57 | WPKMW9S | MONITORING BORE | -30.362985 | 149.660074 |
| EPA ID 59 | WPKMW13I | MONITORING BORE | -30.361215 | 149.658864 |
| EPA ID 60 | WPKMW13S | MONITORING BORE | -30.361219 | 149.658887 |
| EPA ID 61 | WPKMW14D | MONITORING BORE | -30.362521 | 149.656942 |
| EPA ID 62 | WPKMW14S | MONITORING BORE | -30.362528 | 149.656945 |
| EPA ID 63 | WPKMW15D | MONITORING BORE | -30.36086 | 149.656908 |
| EPA ID 64 | WPKMW15S | MONITORING BORE | -30.360883 | 149.656908 |
| EPA ID 65 | WPKMW16D | MONITORING BORE | -30.363133 | 149.653698 |
| EPA ID 66 | WPKMW16S | MONITORING BORE | -30.36315 | 149.653694 |
| EPA ID 69 | BWDPD2 | POND | -30.6337 | 149.6493 |
| EPA ID 7 | BWD27PRUPS02 | MONITORING BORE | -30.66325391 | 149.6658598 |
| EPA ID 70 | BWDPD3 | POND | -30.6324 | 149.6489 |
| EPA ID 71 | LWDPD1CELL4 | POND | -30.494372 | 149.619995 |
| EPA ID 72 | LWDPD1CELL3 | POND | -30.496082 | 149.619909 |
| EPA ID 73 | LWDPD1CELL2 | POND | -30.497881 | 149.619617 |
| EPA ID 74 | LWDPD1CELL1 | POND | -30.499596 | 149.619269 |
| EPA ID 75 | TFDPD1 | POND | -30.3618 | 149.6595 |
| EPA ID 75 | TFDPD1(1) | DAM | -30.36196525 | 149.6595504 |
| EPA ID 75 | TFDPD1(2) | DAM | -30.36245825 | 149.6595151 |
| EPA ID 76 | TFDPD2 | POND | -30.3613 | 149.6583 |
| EPA ID 77 | LWWTPDM1 | PERMEATE DAM | -30.503394 | 149.622056 |
| EPA ID 78 | WPKMW18S | MONITORING BORE | -30.36193 | 149.662952 |
| EPA ID 79 | WPKMW18I | MONITORING BORE | -30.361893 | 149.662963 |
| EPA ID 8 | BWD27PRLPS03 | MONITORING BORE | -30.66312744 | 149.6658851 |
| EPA ID 80 | LWDMW4 | MONITORING BORE | -30.49852 | 149.62643 |
| EPA ID 81 | LWDMW5 | MONITORING BORE | -30.49607 | 149.63064 |
| EPA ID 82 | LWDMW6 | MONITORING BORE | -30.49726 | 149.63251 |
| EPA ID 83 | LWDSMP1 | SOIL | -30.49943 | 149.625015 |
| EPA ID 84 | LWDSMP2 | SOIL | -30.497557 | 149.627274 |
| EPA ID 85 | LWDSMP3 | SOIL | -30.497629 | 149.631531 |
| EPA ID 86 | LWDSMP4 | SOIL | -30.500917 | 149.630417 |
| EPA ID 9 | BWD26PRUPS01 | MONITORING BORE | -30.62224078 | 149.6015298 |

TABLE 2: GROUNDWATER QUALITY MONITORING

| | | EPA Identification No | 7 | 8 | 9 | 10 | 11 | 12 |
|-------------------------|---------|-----------------------|--------------|--------------|--------------|--------------|--------------|--------------|
| | | Location | BWD27PRUPS02 | BWD27PRLPS03 | BWD26PRUPS01 | BWD26PRLPS02 | DWH14PRUPS01 | DWH14PRLPS02 |
| | | Date | 23/03/2022 | 23/03/2022 | 23/03/2022 | 23/03/2022 | 23/03/2022 | 23/03/2022 |
| | | Sample Method | In situ | In situ | In situ | In situ | In situ | In situ |
| Parameter | Units | LOR | RESULT | RESULT | RESULT | RESULT | RESULT | RESULT |
| Dissolved Oxygen | mg/L | - | 2.9 | 2.2 | 3.8 | 2.1 | 3.2 | 3.28 |
| Electrical Conductivity | µS/cm | - | 137 | 217 | 77 | 133 | 240 | 181 |
| pH | pH Unit | - | 5.71 | 5.6 | 5.9 | 6.25 | 5.84 | 5.88 |
| Redox Potential | mV | - | 68 | -34 | -15 | 47 | 41 | 61 |
| Standing Water Level | mTOC | - | 38.9 | 38.6 | 29.9 | 29.1 | 53.39 | 54.18 |

| | | EPA Identification No | 13 | 14 | 15 | 18 | 20 | 21 |
|-------------------------|---------|-----------------------|--------------|-------------|-------------|-----------------|--------------|---------------------|
| | | Location | DWH14PRPUR03 | DWH3PRUPS01 | DWH3PRLPS02 | BWD27PRORA01 | BHN14PRORA01 | BHN14PRUPS02 |
| | | Date | 21/03/2022 | 21/03/2022 | 21/03/2022 | 23/03/2022 | 22/03/2022 | 22/03/2022 |
| | | Sample Method | In situ | In situ | In situ | No sample - dry | In situ | No sample available |
| Parameter | Units | LOR | RESULT | RESULT | RESULT | RESULT | RESULT | RESULT |
| Dissolved Oxygen | mg/L | - | 2.91 | 4.6 | 1.48 | - | 1.48 | 4.7 |
| Electrical Conductivity | µS/cm | - | 738 | 122 | 136 | - | 136 | 464 |
| pH | pH Unit | - | 7.25 | 5.03 | 5.2 | - | 5.2 | 7.31 |
| Redox Potential | mV | - | -190 | 98 | 71 | - | 71 | -30 |
| Standing Water Level | mTOC | - | 53.53 | 66.48 | 67.78 | - | 67.78 | 15.18 |

| | | EPA Identification No | 26 | 27 | 28 | 37 | 38 | 39 | 40 | 41 |
|---------------------------------|---------|-----------------------|-----------------|-----------------|-----------------|------------|-----------------|-----------------|-----------------|------------|
| | | Location | BWDMW12S | BWDMW12D | BWDMW12I | LWDMW1D | LWDMW1S | LWDMW1I | LWDMW2S | LWDMW2D |
| | | Date | 16/03/2022 | 16/03/2022 | 16/03/2022 | 16/03/2022 | 14/03/2022 | 14/03/2022 | 14/03/2022 | 16/03/2022 |
| | | Sample Method | No sample - dry | No sample - dry | No sample - dry | Insitu | No sample - dry | No sample - dry | No sample - dry | Insitu |
| Parameter | Units | LOR | RESULT | RESULT | RESULT | RESULT | RESULT | RESULT | RESULT | RESULT |
| Aluminium | mg/L | 0.01 | - | - | - | - | - | - | - | - |
| Ammonia as N | mg/L | 0.01 | - | - | - | - | - | - | - | - |
| Arsenic | mg/L | 0.001 | - | - | - | - | - | - | - | - |
| Barium | mg/L | 0.001 | - | - | - | - | - | - | - | - |
| Beryllium | mg/L | 0.001 | - | - | - | - | - | - | - | - |
| Bicarbonate Alkalinity as CaCO3 | mg/L | 1 | - | - | - | - | - | - | - | - |
| Boron | mg/L | 0.05 | - | - | - | - | - | - | - | - |
| Bromide | mg/L | 0.01 | - | - | - | - | - | - | - | - |
| Cadmium | mg/L | 0.0001 | - | - | - | - | - | - | - | - |
| Calcium | mg/L | 1 | - | - | - | - | - | - | - | - |
| Carbonate Alkalinity as CaCO3 | mg/L | 1 | - | - | - | - | - | - | - | - |
| Chloride | mg/L | 1 | - | - | - | - | - | - | - | - |
| Chromium | mg/L | 0.001 | - | - | - | - | - | - | - | - |
| Cobalt | mg/L | 0.001 | - | - | - | - | - | - | - | - |
| Copper | mg/L | 0.001 | - | - | - | - | - | - | - | - |
| Dissolved Oxygen | mg/L | - | - | - | - | 2.97 | - | - | - | 2.01 |
| Electrical Conductivity | µS/cm | - | - | - | - | 2291 | - | - | - | 2057 |
| Fluoride | mg/L | 0.1 | - | - | - | - | - | - | - | - |
| Iron | mg/L | 0.05 | - | - | - | - | - | - | - | - |
| Lead | mg/L | 0.001 | - | - | - | - | - | - | - | - |
| Magnesium | mg/L | 1 | - | - | - | - | - | - | - | - |
| Manganese | mg/L | 0.001 | - | - | - | - | - | - | - | - |
| Mercury | mg/L | 0.0001 | - | - | - | - | - | - | - | - |
| Methane | mg/L | 0.01 | - | - | - | - | - | - | - | - |
| Molybdenum | mg/L | 0.001 | - | - | - | - | - | - | - | - |
| Nickel | mg/L | 0.001 | - | - | - | - | - | - | - | - |
| Nitrate as N | mg/L | 0.01 | - | - | - | - | - | - | - | - |
| Nitrite as N | mg/L | 0.01 | - | - | - | - | - | - | - | - |
| pH | pH Unit | - | - | - | - | 6.19 | - | - | - | 6.64 |
| Potassium | mg/L | 1 | - | - | - | - | - | - | - | - |
| Reactive Phosphorus | mg/L | 0.01 | - | - | - | - | - | - | - | - |
| Redox Potential | mV | - | - | - | - | 187 | - | - | - | -28 |
| Selenium | mg/L | 0.01 | - | - | - | - | - | - | - | - |
| Sodium | mg/L | 1 | - | - | - | - | - | - | - | - |
| Standing Water Level | mbTOC | - | - | - | - | 29.97 | - | - | - | 25.94 |
| Strontium | mg/L | 0.001 | - | - | - | - | - | - | - | - |
| Sulfate as SO4 2- | mg/L | 1 | - | - | - | - | - | - | - | - |
| Total Dissolved Solids @180°C | mg/L | 10 | - | - | - | - | - | - | - | - |
| Uranium | mg/L | 0.001 | - | - | - | - | - | - | - | - |
| Vanadium | mg/L | 0.01 | - | - | - | - | - | - | - | - |
| Zinc | mg/L | 0.005 | - | - | - | - | - | - | - | - |

| | | EPA Identification No | 42 | 43 | 56 | 57 | 59 | 60 | 61 | 62 |
|---------------------------------|---------|-----------------------|------------|-----------------|------------|------------|------------|------------|------------|-----------------|
| | | Location | LWDMW3D | LWDMW3S | WPKMW9D | WPKMW9S | WPKMW13I | WPKMW13S | WPKMW14D | WPKMW14S |
| | | Date | 14/03/2022 | 14/03/2022 | 14/03/2022 | 14/03/2022 | 23/03/2022 | 23/03/2022 | 23/03/2022 | 23/03/2022 |
| | | Sample Method | Insitu | No sample - dry | Insitu | Insitu | Insitu | Insitu | Insitu | No sample - dry |
| Parameter | Units | LOR | RESULT | RESULT | RESULT | RESULT | RESULT | RESULT | RESULT | RESULT |
| Aluminium | mg/L | 0.01 | - | - | - | - | - | - | - | - |
| Ammonia as N | mg/L | 0.01 | - | - | - | - | - | - | - | - |
| Arsenic | mg/L | 0.001 | - | - | - | - | - | - | - | - |
| Barium | mg/L | 0.001 | - | - | - | - | - | - | - | - |
| Beryllium | mg/L | 0.001 | - | - | - | - | - | - | - | - |
| Bicarbonate Alkalinity as CaCO3 | mg/L | 1 | - | - | - | - | - | - | - | - |
| Boron | mg/L | 0.05 | - | - | - | - | - | - | - | - |
| Bromide | mg/L | 0.01 | - | - | - | - | - | - | - | - |
| Cadmium | mg/L | 0.0001 | - | - | - | - | - | - | - | - |
| Calcium | mg/L | 1 | - | - | - | - | - | - | - | - |
| Carbonate Alkalinity as CaCO3 | mg/L | 1 | - | - | - | - | - | - | - | - |
| Chloride | mg/L | 1 | - | - | - | - | - | - | - | - |
| Chromium | mg/L | 0.001 | - | - | - | - | - | - | - | - |
| Cobalt | mg/L | 0.001 | - | - | - | - | - | - | - | - |
| Copper | mg/L | 0.001 | - | - | - | - | - | - | - | - |
| Dissolved Oxygen | mg/L | - | 1.98 | - | 1.17 | 2.75 | 1.82 | 1.17 | 2.75 | - |
| Electrical Conductivity | µS/cm | - | 1011 | - | 1261 | 3908 | 975 | 1261 | 3908 | - |
| Fluoride | mg/L | 0.1 | - | - | - | - | - | - | - | - |
| Iron | mg/L | 0.05 | - | - | - | - | - | - | - | - |
| Lead | mg/L | 0.001 | - | - | - | - | - | - | - | - |
| Magnesium | mg/L | 1 | - | - | - | - | - | - | - | - |
| Manganese | mg/L | 0.001 | - | - | - | - | - | - | - | - |
| Mercury | mg/L | 0.0001 | - | - | - | - | - | - | - | - |
| Methane | mg/L | 0.01 | - | - | - | - | - | - | - | - |
| Molybdenum | mg/L | 0.001 | - | - | - | - | - | - | - | - |
| Nickel | mg/L | 0.001 | - | - | - | - | - | - | - | - |
| Nitrate as N | mg/L | 0.01 | - | - | - | - | - | - | - | - |
| Nitrite as N | mg/L | 0.01 | - | - | - | - | - | - | - | - |
| pH | pH Unit | - | 6.38 | - | 8.17 | 7.63 | 6.64 | 6.13 | 8.17 | - |
| Potassium | mg/L | 1 | - | - | - | - | - | - | - | - |
| Reactive Phosphorus | mg/L | 0.01 | - | - | - | - | - | - | - | - |
| Redox Potential | mV | - | -253 | - | 46 | 68 | 46 | 68 | 72 | - |
| Selenium | mg/L | 0.01 | - | - | - | - | - | - | - | - |
| Sodium | mg/L | 1 | - | - | - | - | - | - | - | - |
| Standing Water Level | mbTOC | - | 21.04 | - | 15.37 | 15.7 | 25.94 | 21.04 | 15.37 | - |
| Strontium | mg/L | 0.001 | - | - | - | - | - | - | - | - |
| Sulfate as SO4 2- | mg/L | 1 | - | - | - | - | - | - | - | - |
| Total Dissolved Solids @180°C | mg/L | 10 | - | - | - | - | - | - | - | - |
| Uranium | mg/L | 0.001 | - | - | - | - | - | - | - | - |
| Vanadium | mg/L | 0.01 | - | - | - | - | - | - | - | - |
| Zinc | mg/L | 0.005 | - | - | - | - | - | - | - | - |

| | | EPA Identification No | 63 | 64 | 65 | 66 | 78 | 79 | 80 | 81 | 82 | |
|---------------------------------|---------|-----------------------|------------|------------|------------|-----------------|-----------------|-------------|---------------------------|---------------------------|---------------------------|------------|
| | | Location | WPKMW15D | WPKMW15S | WPKMW16D | WPKMW16S | WPKMW18S | WPKMW18I | LWDMW4 | LWDMW5 | LWDMW6 | |
| | | Date | 23/03/2022 | 23/03/2022 | 23/03/2022 | 23/03/2022 | 23/03/2022 | 23/03/2022 | 23/03/2022 | 14/03/2022 | 14/03/2022 | 14/03/2022 |
| | | Sample Method | Insitu | Insitu | Insitu | No sample - dry | No sample - dry | Grab Sample | No sample - no irrigation | No sample - no irrigation | No sample - no irrigation | |
| Parameter | Units | LOR | RESULT | RESULT | RESULT | RESULT | RESULT | RESULT | RESULT | RESULT | RESULT | |
| Aluminium | mg/L | 0.01 | - | - | - | - | - | - | - | - | - | |
| Ammonia as N | mg/L | 0.01 | - | - | - | - | - | - | - | - | - | |
| Arsenic | mg/L | 0.001 | - | - | - | - | - | - | - | - | - | |
| Barium | mg/L | 0.001 | - | - | - | - | - | - | - | - | - | |
| Beryllium | mg/L | 0.001 | - | - | - | - | - | - | - | - | - | |
| Bicarbonate Alkalinity as CaCO3 | mg/L | 1 | - | - | - | - | - | - | - | - | - | |
| Boron | mg/L | 0.05 | - | - | - | - | - | - | - | - | - | |
| Bromide | mg/L | 0.01 | - | - | - | - | - | - | - | - | - | |
| Cadmium | mg/L | 0.0001 | - | - | - | - | - | - | - | - | - | |
| Calcium | mg/L | 1 | - | - | - | - | - | - | - | - | - | |
| Carbonate Alkalinity as CaCO3 | mg/L | 1 | - | - | - | - | - | - | - | - | - | |
| Chloride | mg/L | 1 | - | - | - | - | - | - | - | - | - | |
| Chromium | mg/L | 0.001 | - | - | - | - | - | - | - | - | - | |
| Cobalt | mg/L | 0.001 | - | - | - | - | - | - | - | - | - | |
| Copper | mg/L | 0.001 | - | - | - | - | - | - | - | - | - | |
| Dissolved Oxygen | mg/L | - | 1.24 | 2.00 | 2.57 | - | - | - | - | - | - | |
| Electrical Conductivity | µS/cm | - | 1315.00 | 3305.00 | 1217.00 | - | - | - | - | - | - | |
| Fluoride | mg/L | 0.1 | - | - | - | - | - | - | - | - | - | |
| Iron | mg/L | 0.05 | - | - | - | - | - | - | - | - | - | |
| Lead | mg/L | 0.001 | - | - | - | - | - | - | - | - | - | |
| Magnesium | mg/L | 1 | - | - | - | - | - | - | - | - | - | |
| Manganese | mg/L | 0.001 | - | - | - | - | - | - | - | - | - | |
| Mercury | mg/L | 0.0001 | - | - | - | - | - | - | - | - | - | |
| Methane | mg/L | 0.01 | - | - | - | - | - | - | - | - | - | |
| Molybdenum | mg/L | 0.001 | - | - | - | - | - | - | - | - | - | |
| Nickel | mg/L | 0.001 | - | - | - | - | - | - | - | - | - | |
| Nitrate as N | mg/L | 0.01 | - | - | - | - | - | - | - | - | - | |
| Nitrite as N | mg/L | 0.01 | - | - | - | - | - | - | - | - | - | |
| pH | pH Unit | - | 7.63 | 7.91 | 7.32 | - | - | - | - | - | - | |
| Potassium | mg/L | 1 | - | - | - | - | - | - | - | - | - | |
| Reactive Phosphorus | mg/L | 0.01 | - | - | - | - | - | - | - | - | - | |
| Redox Potential | mV | - | 80.10 | 88.00 | 85.00 | - | - | - | - | - | - | |
| Selenium | mg/L | 0.01 | - | - | - | - | - | - | - | - | - | |
| Sodium | mg/L | 1 | - | - | - | - | - | - | - | - | - | |
| Standing Water Level | mbTOC | - | 15.70 | 16.48 | 16.89 | - | - | - | - | - | - | |
| Strontium | mg/L | 0.001 | - | - | - | - | - | - | - | - | - | |
| Sulfate as SO4 2- | mg/L | 1 | - | - | - | - | - | - | - | - | - | |
| Total Dissolved Solids @180°C | mg/L | 10 | - | - | - | - | - | - | - | - | - | |
| Uranium | mg/L | 0.001 | - | - | - | - | - | - | - | - | - | |
| Vanadium | mg/L | 0.01 | - | - | - | - | - | - | - | - | - | |
| Zinc | mg/L | 0.005 | - | - | - | - | - | - | - | - | - | |

TABLE 3: TREATED WATER QUALITY MONITORING

| | | EPA Identification No | 77 | 77 | 77 |
|---------------------------------|---------|-----------------------|---------------------------------|---------------------------------|---------------------------------|
| | | Location | LWWTPDM1 | LWWTPDM1 | LWWTPDM1 |
| | | Date | Jan-22 | Feb-22 | Mar-22 |
| | | Sample Method | No sample - plant not operating | No sample - plant not operating | No sample - plant not operating |
| Parameter | Units | LOR | RESULT | RESULT | RESULT |
| Ammonia as N | mg/L | 0.01 | - | - | - |
| Bicarbonate Alkalinity as CaCO3 | mg/L | 1 | - | - | - |
| Boron | mg/L | 0.05 | - | - | - |
| Calcium | mg/L | 1 | - | - | - |
| Carbonate Alkalinity as CaCO3 | mg/L | 1 | - | - | - |
| Chloride | mg/L | 1 | - | - | - |
| Electrical Conductivity | µS/cm | - | - | - | - |
| Fluoride | mg/L | 0.1 | - | - | - |
| Magnesium | mg/L | 1 | - | - | - |
| Nitrate as N | mg/L | 0.01 | - | - | - |
| Nitrite as N | mg/L | 0.01 | - | - | - |
| pH | pH Unit | - | - | - | - |
| Potassium | mg/L | 1 | - | - | - |
| Reactive Silica | mg/L | 1 | - | - | - |
| Sodium Adsorption Ratio | - | 0.01 | - | - | - |
| Sodium | mg/L | 1 | - | - | - |
| Sulfate as SO4 2- | mg/L | 1 | - | - | - |
| Total Alkalinity (as CaCO3) | mg/L | 1 | - | - | - |
| Total Dissolved Solids @180°C | mg/L | 10 | - | - | - |
| Total Hardness (as CaCO3) | mg/L | 1 | - | - | - |
| Total Nitrogen (as N) | mg/L | 0.5 | - | - | - |
| Total Phosphorus (as P) | mg/L | 0.01 | - | - | - |
| Total Residual Chlorine | mg/L | | - | - | - |
| Turbidity | NTU | 0.1 | - | - | - |

TABLE 4: PRODUCED WATER STORAGE QUALITY MONITORING

| | | EPA Identification No | 69 | 70 | 71 | 72 | 73 | 74 | 75 |
|---------------------------------|---------|-----------------------|-------------------|-------------------|-------------|-------------|-------------|-------------|-------------|
| | | Location | BWDPD2 | BWDPD3 | LWDPD1CELL4 | LWDPD1CELL3 | LWDPD1CELL2 | LWDPD1CELL1 | TFDPD1 |
| | | Date | 15/03/2022 | 15/03/2022 | 15/03/2022 | 15/03/2022 | 15/03/2022 | 15/03/2022 | 14/03/2022 |
| | | Sample Method | No produced water | No produced water | Grab Sample | Grab Sample | Grab Sample | Grab Sample | Grab Sample |
| Parameter | Units | LOR | RESULT | RESULT | RESULT | RESULT | RESULT | RESULT | RESULT |
| Aluminium | mg/L | 0.1 | - | - | - | - | - | - | 0.08 |
| Ammonia as N | mg/L | 0.1 | - | - | - | 0.04 | <0.01 | - | <0.01 |
| Arsenic | mg/L | 0.01 | - | - | - | - | - | - | 0.003 |
| Barium | mg/L | 0.01 | - | - | - | - | - | - | 0.631 |
| Beryllium | mg/L | 0.01 | - | - | - | - | - | - | <0.001 |
| Bicarbonate Alkalinity as CaCO3 | mg/L | 1 | - | - | 10900 | 7210 | 9380 | 15100 | 902 |
| Boron | mg/L | 0.1 | - | - | - | - | - | - | 0.4 |
| Bromide | mg/L | 0.01 | - | - | 65.7 | 4.03 | 7.14 | 51.9 | 5.26 |
| Cadmium | mg/L | 0.001 | - | - | - | - | - | - | <0.0001 |
| Calcium | mg/L | 1 | - | - | 9 | 8 | 12 | 12 | 3 |
| Carbonate Alkalinity as CaCO3 | mg/L | 1 | - | - | 77400 | 11900 | 15100 | 57400 | 6430 |
| Chloride | mg/L | 1 | - | - | 16000 | 1830 | 3140 | 10700 | 1640 |
| Chromium | mg/L | 0.01 | - | - | - | - | - | - | <0.001 |
| Cobalt | mg/L | 0.01 | - | - | - | - | - | - | <0.001 |
| Copper | mg/L | 0.01 | - | - | - | - | - | - | <0.001 |
| Dissolved Oxygen | mg/L | - | - | - | 3.04 | 4.6 | 7.9 | 2.69 | 5.11 |
| Electrical Conductivity | µS/cm | - | - | - | 108680 | 30357 | 37524 | 88471 | 16791 |
| Iron | mg/L | 0.1 | - | - | - | - | - | - | <0.05 |
| Lead | mg/L | 0.01 | - | - | - | - | - | - | <0.001 |
| Magnesium | mg/L | 1 | - | - | 20 | 11 | 15 | 20 | <1 |
| Manganese | mg/L | 0.01 | - | - | - | - | - | - | 0.002 |
| Mercury | mg/L | 0.0005 | - | - | - | <0.0001 | <0.0001 | - | <0.0001 |
| Molybdenum | mg/L | 0.01 | - | - | - | - | - | - | 0.002 |
| Nickel | mg/L | 0.01 | - | - | - | - | - | - | <0.001 |
| Nitrate as N | mg/L | 0.1 | - | - | - | - | 0.46 | - | 0.24 |
| Nitrite as N | mg/L | 0.01 | - | - | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| pH | pH Unit | - | - | - | 9.69 | 9.26 | 9.36 | 9.67 | 9.28 |
| Potassium | mg/L | 1 | - | - | 1340 | 90 | 140 | 956 | 53 |
| Redox | mV | - | - | - | 27 | 40 | 43 | 53 | 20.3 |
| Selenium | mg/L | 0.1 | - | - | - | - | - | - | <0.01 |
| Sodium Adsorption Ratio | - | 0.1 | - | - | - | - | - | - | 549 |
| Sodium | mg/L | 1 | - | - | 56700 | 9720 | 12100 | 39300 | 3900 |
| Strontium | mg/L | 0.01 | - | - | - | - | - | - | 0.29 |
| Sulfate as SO4 2- | mg/L | 1 | - | - | - | 113 | 534 | - | 44 |
| Total Dissolved Solids @180°C | mg/L | 10 | - | - | - | 23200 | 30600 | - | 10000 |
| Total Organic Carbon | mg/L | 1 | - | - | 735 | 125 | 214 | 146 | 48 |
| Total Phosphorus as P | mg/L | 0.1 | - | - | 6.97 | 2.09 | 2.36 | 5.31 | 2.28 |
| Uranium | mg/L | 0.01 | - | - | - | - | - | - | <0.001 |
| Vanadium | mg/L | 0.1 | - | - | - | - | - | - | <0.01 |
| Zinc | mg/L | 0.05 | - | - | - | - | - | - | <0.005 |

TABLE 6: GROUNDWATER LEVEL MONITORING

| EPA Identification No | 44 | 45 | 46 | 47 | 48 | 49 |
|----------------------------|---------------------------------|---------------------------------|---------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|
| Location | Dewhurst 8A-1 (DWH8AQGDGY01) | Dewhurst 8A-2 (DWH8AQGARK02) | Dewhurst 8A-3 (DWH8AQGPOR03) | Bibbiewindi 28A (BWD28QGUPS01) | Bibbiewindi 28B (BWD28QGLPS01) | Bibbiewindi 28C (BWD28QGPUR01) |
| Start Date | 1/02/2022 | 1/02/2022 | 1/02/2022 | 1/02/2022 | 1/02/2022 | 1/02/2022 |
| End Date | 30/04/2022 | 30/04/2022 | 30/04/2022 | 30/04/2022 | 30/04/2022 | 30/04/2022 |
| Sample Obtained | Standing Water Level | Standing Water Level | Standing Water Level | Standing Water Level | Standing Water Level | Standing Water Level |
| Number of Samples Required | Continuous | Continuous | Continuous | Continuous | Continuous | Continuous |
| Lowest sample value | -36.496 | 15.954 | -60.575 | - | - | - |
| Mean of sample | -36.511 | 16.047 | -57.485 | - | - | - |
| Highest sample value | -36.526 | 16.14 | -54.395 | - | - | - |

Note: Monitoring points 47,48 and 49: Sensor is faulty and data not available since 21 April 2021