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: https://apps.epa.nsw.gov.au/prpoeoapp/Detail.aspx?instid=20350&id=20350&option=licence&searchrange=licence&range=POEO%20lice
Version 17FEB2025

EPL Period: 1 May 2025 to 30 April 2026
Reporting Period: **Quarter 4**
1 February 2026 - 30 April 2026
Published Date: May-26

Monitoring Location: Refer to Table 1
Scheduled Activity: Coal seam gas exploration, assessment and production

General Notes:

Monitoring points visited and reported dry : 26, 28, 38, 39, 40, 43, 62, 66 and 78.

Grab samples for monitoring points with "Special Frequency 2" are taken annually in June unless results trigger above baseline values.

Monitoring Point 69, 70 & 76 - no sample required in accordance with EPL20350 Condition M2.8 and M2.9 (ponds did not contain produ

Monitoring Point 77 - no sample required in accordance with EPL20350 Condition M2.7 (Plant not operating).

Monitoring Point 80, 81 & 82 - no sample required in accordance with EPL20350 Condition M2.11 (no irrigation).

Monitoring Point 83, 84, 85 & 86 - no sample required in accordance with EPL20350 Condition M2.11 (no irrigation).

Table 1: EPL20350 Water Monitoring Locations

EPA Identification No	Monitoring Type	Location	Latitude	Longitude
26	Groundwater Quality Monitoring	BWDMW12S	-30.63189	149.64828
27	Groundwater Quality Monitoring	BWDMW12D	-30.63188	149.64829
28	Groundwater Quality Monitoring	BWDMW12I	-30.63189	149.64830
37	Groundwater Quality Monitoring	LWDMW1D	-30.49124	149.61902
38	Groundwater Quality Monitoring	LWDMW1S	-30.49124	149.61903
39	Groundwater Quality Monitoring	LWDMW1I	-30.49125	149.61905
40	Groundwater Quality Monitoring	LWDMW2S	-30.50545	149.61643
41	Groundwater Quality Monitoring	LWDMW2D	-30.50545	149.61642
42	Groundwater Quality Monitoring	LWDMW3D	-30.50645	149.62451
43	Groundwater Quality Monitoring	LWDMW3S	-30.50644	149.62452
56	Groundwater Quality Monitoring	WPKMW9D	-30.36301	149.66006
57	Groundwater Quality Monitoring	WPKMW9S	-30.36299	149.66007
59	Groundwater Quality Monitoring	WPKMW13I	-30.36122	149.65886
60	Groundwater Quality Monitoring	WPKMW13S	-30.36122	149.65889
61	Groundwater Quality Monitoring	WPKMW14D	-30.36252	149.65694
62	Groundwater Quality Monitoring	WPKMW14S	-30.36253	149.65695
63	Groundwater Quality Monitoring	WPKMW15D	-30.36086	149.65691
64	Groundwater Quality Monitoring	WPKMW15S	-30.36088	149.65691
65	Groundwater Quality Monitoring	WPKMW16D	-30.36313	149.65370
66	Groundwater Quality Monitoring	WPKMW16S	-30.36315	149.65369
69	Produced Water Storage Pond	BWDPD2	-30.63370	149.64930
70	Produced Water Storage Pond	BWDPD3	-30.63240	149.64890
71	Produced Water Storage Pond	LWDPD1CELL4	-30.49437	149.62000
72	Produced Water Storage Pond	LWDPD1CELL3	-30.49608	149.61991
73	Produced Water Storage Pond	LWDPD1CELL2	-30.49788	149.61962
74	Produced Water Storage Pond	LWDPD1CELL1	-30.4995960	149.6192690
75	Produced Water Storage Pond	TFDPD1	-30.3618000	149.6595000
76	Produced Water Storage Pond	TFDPD2	-30.3613000	149.6583000
77	Treated Water Quality Monitoring	LWWTPDM1	-30.5033940	149.6220560
78	Groundwater Quality Monitoring	WPKMW18S	-30.3619300	149.6629520
79	Groundwater Quality Monitoring	WPKMW18I	-30.3618930	149.6629630
80	Groundwater Quality Monitoring	LWDMW4	-30.4985200	149.6264300
81	Groundwater Quality Monitoring	LWDMW5	-30.4960700	149.6306400
82	Groundwater Quality Monitoring	LWDMW6	-30.4972600	149.6325100
83	Soil Quality Monitoring	LWDSMP1	-30.4994300	149.6250150
84	Soil Quality Monitoring	LWDSMP2	-30.4975570	149.6272740
85	Soil Quality Monitoring	LWDSMP3	-30.4976290	149.6315310
86	Soil Quality Monitoring	LWDSMP4	-30.5009170	149.6304170

Note:
Monitoring points in accordance with Environmental Protection Licence (EPL) 23050 ammended 17 February 2025.

TABLE 2: GROUNDWATER QUALITY MONITORING (In situ - Quarterly)

		EPA Identification No	26	27	28	37	38	39
		Location	BWDMW12S	BWDMW12D	BWDMW12I	LWDMW1D	LWDMW1S	LWDMW1I
		Date	19/03/2026	19/03/2026	19/03/2026	19/03/2026	19/03/2026	19/03/2026
		Sample Method	No sample - dry	in situ	No sample - dry	in situ	No sample - dry	No sample - dry
Parameter	Units	LOR	RESULT	RESULT	RESULT	RESULT	RESULT	RESULT
Dissolved Oxygen - Field	mg/L	-	-	2.9	-	1.8	-	-
Electrical Conductivity - Field	µS/cm	-	-	4790	-	2237	-	-
pH - Field	pH Unit	-	-	7.01	-	6.3	-	-
Redox - Field	mV	-	-	-11	-	174	-	-
Standing Water Level - Field	mTOC	-	-	30.98	-	30.13	-	-

		EPA Identification No	40	41	42	43	56	57
		Location	LWDMW2S	LWDMW2D	LWDMW3D	LWDMW3S	WPKMW9D	WPKMW9S
		Date	19/03/2026	19/03/2026	19/03/2026	19/03/2026	21/03/2026	21/03/2026
		Sample Method	No sample - dry	in situ	in situ	No sample - dry	in situ	in situ
Parameter	Units	LOR	RESULT	RESULT	RESULT	RESULT	RESULT	RESULT
Dissolved Oxygen - Field	mg/L	-	-	3.1	2.6	-	1.8	2.1
Electrical Conductivity - Field	µS/cm	-	-	2008	915	-	1192	3225
pH - Field	pH Unit	-	-	6.91	6.26	-	8.06	7.58
Redox - Field	mV	-	-	78	63	-	-51	-91
Standing Water Level - Field	mTOC	-	-	26.04	21.16	-	16.45	16.68

		EPA Identification No	59	60	61	62	63	64
		Location	WPKMW13I	WPKMW13S	WPKMW14D	WPKMW14S	WPKMW15D	WPKMW15S
		Date	21/03/2026	21/03/2026	21/03/2026	21/03/2026	21/03/2026	21/03/2026
		Sample Method	in situ	in situ	in situ	No sample - dry	in situ	in situ
Parameter	Units	LOR	RESULT	RESULT	RESULT	RESULT	RESULT	RESULT
Dissolved Oxygen - Field	mg/L	-	2	3	2.3	-	2	1.6
Electrical Conductivity - Field	µS/cm	-	901	2531	1161	-	1230	8450
pH - Field	pH Unit	-	8.34	7.41	8.18	-	7.92	7.71
Redox - Field	mV	-	63	15	54	-	23	91
Standing Water Level - Field	mTOC	-	17.89	17.82	21.83	-	22.13	22.55

		EPA Identification No	65	66	78	79
		Location	WPKMW16D	WPKMW16S	WPKMW18S	WPKMW18I
		Date	21/03/2026	21/03/2026	21/03/2026	21/03/2026
		Sample Method	in situ	No sample - dry	No sample - dry	in situ
Parameter	Units	LOR	RESULT	RESULT	RESULT	RESULT
Dissolved Oxygen - Field	mg/L	-	1.8	-	-	2.9
Electrical Conductivity - Field	µS/cm	-	1201	-	-	1191
pH - Field	pH Unit	-	7.54	-	-	7.87
Redox - Field	mV	-	142	-	-	97
Standing Water Level - Field	mTOC	-	27.58	-	-	17.14

TABLE 2: GROUNDWATER QUALITY MONITORING (Grab Sample - Special Frequency 2)

There were no grab samples taken in the reporting period.

TABLE 3: TREATED WATER QUALITY MONITORING

Point 77 no samples taken, the plant is not operating.

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TABLE 4: PRODUCED WATER STORAGE QUALITY MONITORING

		EPA Identification No	71	72	73	74	75
		Location	LWDPD1CELL4	LWDPD1CELL3	LWDPD1CELL2	LWDPD1CELL1	TFDPD1
		Date	29/03/2026	29/03/2026	29/03/2026	29/03/2026	29/03/2026
		Sample Method	Grab Sample	Grab Sample	Grab Sample	Grab Sample	Grab Sample
Parameter	**Units**	**LOR**	**RESULT**	**RESULT**	**RESULT**	**RESULT**	**RESULT**
Aluminium	mg/L	0.10	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Ammonia as N	mg/L	0.10	1.18	< 0.1	2.33	< 0.1	< 0.1
Arsenic	mg/L	0.010	0.013	< 0.01	< 0.01	< 0.01	< 0.01
Barium	mg/L	0.010	0.467	2.05	1.83	1.26	0.940
Beryllium	mg/L	0.010	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Bicarbonate Alkalinity as CaCO3	mg/L	1	18800	15200	14200	14900	7200
Boron	mg/L	0.10	1.14	3.28	3.00	3.13	0.15
Bromide	mg/L	0.010	3.82	12.9	9.22	12.7	2.67
Cadmium	mg/L	0.0010	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Calcium	mg/L	1	8	13	13	12	8
Carbonate Alkalinity as CaCO3	mg/L	1	35600	31800	27800	27600	6000
Chloride	mg/L	1	2560	6450	5390	5900	1460
Chromium	mg/L	0.010	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Cobalt	mg/L	0.010	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Copper	mg/L	0.010	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Dissolved Oxygen*	mg/L	-	5.5	6.49	10.1	9.8	8.4
Electrical Conductivity*	µS/cm	-	46240	56083	49830	53261	17934
Iron	mg/L	0.10	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Lead	mg/L	0.010	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Magnesium	mg/L	1	22	16	20	18	7
Manganese	mg/L	0.010	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Mercury	mg/L	0.0010	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Molybdenum	mg/L	0.010	< 0.01	< 0.01	< 0.01	0.017	< 0.01
Nickel	mg/L	0.010	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Nitrate as N	mg/L	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Nitrite as N	mg/L	0.10	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
pH*	pH Unit	-	9.8	9.8	9.81	9.78	9.7
Potassium	mg/L	1	124	373	288	416	76
Redox potential*	mV	-	156	74	164	73.4	77
Selenium	mg/L	0.040	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04
Sodium	mg/L	1	24700	24900	22000	23600	7290
Sodium Adsorption Ratio	-	0.10	1020	1090	893	1010	454
Strontium	mg/L	0.010	1.10	1.87	1.85	1.73	2.18
Sulfate as SO4 2-	mg/L	100	< 100	< 100	13	36	< 10
Total Dissolved Solids @180°C	mg/L	10	57900	59400	52300	52600	16300
Total Organic Carbon	mg/L	1	1	1030	140	374	54
Total Phosphorus as P	mg/L	0.01	0.48	0.40	0.77	0.09	0.08
Uranium	mg/L	0.010	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Vanadium	mg/L	0.10	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Zinc	mg/L	0.050	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05