

Adani Carmichael Coal Mine Project

Groundwater Quality data

October 2020

	Sample Type:	REG	REG	REG	REG	REG	REG	REG	REG	REG	REG	REG	REG	REG	REG	REG
	Sample Date:	19/10/2020	19/10/2020	19/10/2020	19/10/2020	18/10/2020	18/10/2020	18/10/2020	18/10/2020	19/10/2020	19/10/2020	19/10/2020	19/10/2020	20/10/2020	20/10/2020	20/10/2020
	Client sample ID (1st):	C19014SP	C19015SP	C919016SPR	C19018SP	C14024SP	C19004SP	C9849SPR	C833SP	Duplicate I	C19010SP	C19011SP	C19012SP	C19007SP	C006P3R	C007P2
	Hydro-stratigraphic unit:	Clematis SSt	Dunda Beds	Rewan	Bandanna	Composite bor	Sub-E Seam	Colinlea SSt	Colinlea SSt	Duplicate I	Clematis SSt	Dunda Beds	Rewan	Dunda Beds	Colinlea SSt	Bandanna
Analyte grouping/Analyte	Unit															
pH Value	pH Unit	8.18	8.23	8.54	12.2	6.66	8.77	7.72	10.1	8.44	8.4	8.39	12.4	8.5	8.12	7.53
Electrical Conductivity @ 25°C	µS/cm	653	706	842	9500	484	2640	2810	1190	750	594	755	20900	1280	1130	12900
Total Dissolved Solids @180°C	mg/L	360	389	510	3380	293	1480	1830	660	442	367	436	9540	750	720	9110
Total Alkalinity as CaCO3	mg/L	140	144	204	1940	72	110	282	272	146	164	145	4640	158	420	259
Sulfate as SO4 - Turbidimetric	mg/L	1	1	28	140	12	<1	<1	2	1	<1	1	98	18	6	356
Chloride	mg/L	119	142	131	256	104	789	809	205	171	104	167	869	343	140	4870
Calcium	mg/L	2	4	5	360	3	6	36	1	4	4	4	69	12	16	253
Magnesium	mg/L	<1	<1	<1	<1	6	2	19	<1	<1	<1	<1	<1	3	3	261
Sodium	mg/L	129	140	177	530	82	535	558	221	166	131	161	2240	253	247	2320
Potassium	mg/L	8	5	3	421	8	7	20	50	4	6	4	836	7	5	37
Aluminium	mg/L	<0.01	0.02	0.05	0.22	<0.01	<0.01	<0.01	0.01	0.04	0.05	0.04	1.74	0.08	<0.01	<0.01
Arsenic	mg/L	<0.001	0.001	0.003	<0.001	<0.001	<0.001	<0.001	<0.001	0.001	0.001	0.001	0.006	0.002	<0.001	<0.001
Cadmium	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0003	<0.0001	<0.0001	<0.0001
Chromium	mg/L	<0.001	<0.001	<0.001	0.191	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.594	<0.001	<0.001	<0.001
Cobalt	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Copper	mg/L	<0.001	<0.001	<0.001	0.014	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.217	<0.001	<0.001	0.002
Lead	mg/L	<0.001	<0.001	<0.001	0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.002	<0.001	<0.001	<0.001
Manganese	mg/L	0.036	0.043	0.006	<0.001	0.057	0.024	0.261	<0.001	0.033	0.016	0.032	0.043	0.081	0.021	0.209
Molybdenum	mg/L	0.001	<0.001	0.009	0.4	0.002	0.011	<0.001	0.009	0.001	<0.001	<0.001	0.758	0.04	0.002	<0.001
Nickel	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.001	<0.001	<0.001	<0.001
Selenium	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Silver	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Uranium	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Vanadium	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.02	<0.01	<0.01	<0.01
Zinc	mg/L	<0.005	<0.005	<0.005	0.006	0.029	<0.005	<0.005	<0.005	0.007	<0.005	<0.005	<0.005	0.134	0.044	0.024
Boron	mg/L	0.1	0.1	0.06	<0.05	0.12	0.4	0.2	0.18	<0.05	0.11	<0.05	0.09	0.08	0.16	0.65
Iron	mg/L	0.27	<0.05	<0.05	0.06	<0.05	<0.05	5.24	<0.05	<0.05	<0.05	<0.05	0.08	<0.05	0.15	1.3
Mercury	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0005	<0.0001	<0.0001	<0.0001	<0.0005	<0.0001	<0.0001	<0.0001
Fluoride	mg/L	0.3	0.4	0.3	1.5	0.1	3.1	0.3	1.4	0.2	0.3	0.4	2.1	0.4	2.3	0.5
Ammonia as N	mg/L	0.2	0.02	0.36	2.16	0.06	0.44	0.11	0.6	0.26	0.16	0.23	1.01	0.44	0.29	0.75
Nitrite as N	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.02	<0.01	<0.01	<0.01
Nitrate as N	mg/L	<0.01	<0.01	<0.01	0.02	0.06	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.03	<0.01	<0.01	<0.01
Total Phosphorus as P	mg/L	0.21	0.03	0.01	0.01	<0.01	0.02	0.03	<0.01	0.01	0.21	0.03	0.94	<0.05	0.02	<0.05
Sulfide as S2-	mg/L	<0.1	<0.1	0.4	<0.1	<0.1	<0.1	<0.1	1	<0.1	<0.1	<0.1	<0.1	1.3	0.4	<0.1
C6 - C9 Fraction	µg/L	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
C6 - C10 Fraction	µg/L	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
>C10 - C40 Fraction (sum)	µg/L	<100	<100	<100	250	<100	110	<100	<100	<100	<100	<100	630	<100	<100	<100
Sum of BTEX	µg/L	<1	<1	4	<1	<1	5	<1	<1	<1	<1	<1	3	<1	<1	<1

	Sample Type:	REG	REG	REG	REG	REG
	Sample Date:	20/10/2020	20/10/2020	20/10/2020	20/10/2020	20/10/2020
	Client sample ID (1st):	C19026SP	C655P1	C008P1	C008P2	Duplicate J
	Hydro-stratigraphic unit:	Colinlea SSt (use C007P3 trigg	Rewan	Bandanna	Duplicate J	
Analyte grouping/Analyte	Unit					
pH Value	pH Unit	8.14	7.4	7.06	7.98	8.19
Electrical Conductivity @ 25°C	µS/cm	835	770	20300	2750	859
Total Dissolved Solids @180°C	mg/L	588	424	15500	1600	522
Total Alkalinity as CaCO3	mg/L	440	141	335	417	418
Sulfate as SO4 - Turbidimetric	mg/L	<1	<1	219	90	<1
Chloride	mg/L	37	183	7780	662	33
Calcium	mg/L	9	6	426	28	9
Magnesium	mg/L	2	8	398	17	2
Sodium	mg/L	205	140	3770	575	214
Potassium	mg/L	4	7	86	8	4
Aluminium	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Arsenic	mg/L	<0.001	0.003	0.003	<0.001	<0.001
Cadmium	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Chromium	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Cobalt	mg/L	<0.001	0.001	0.007	<0.001	<0.001
Copper	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Lead	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Manganese	mg/L	0.014	0.218	1.89	0.058	0.014
Molybdenum	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Nickel	mg/L	<0.001	<0.001	0.01	<0.001	<0.001
Selenium	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Silver	mg/L	<0.001	<0.001	0.001	<0.001	<0.001
Uranium	mg/L	<0.001	<0.001	0.014	<0.001	<0.001
Vanadium	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Zinc	mg/L	<0.005	0.013	0.052	0.022	<0.005
Boron	mg/L	0.16	0.28	1.24	0.31	0.18
Iron	mg/L	<0.05	1.63	1.04	<0.05	<0.05
Mercury	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Fluoride	mg/L	2.2	0.6	0.3	0.7	2.1
Ammonia as N	mg/L	0.31	0.09	0.88	1.21	0.3
Nitrite as N	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Nitrate as N	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Total Phosphorus as P	mg/L	0.02	0.09	0.11	0.02	0.02
Sulfide as S2-	mg/L	<0.1	<0.1	<0.1	2.2	<0.1
C6 - C9 Fraction	µg/L	<20	<20	<20	<20	<20
C6 - C10 Fraction	µg/L	<20	<20	<20	<20	<20
>C10 - C40 Fraction (sum)	µg/L	<100	<100	200	<100	<100
Sum of BTEX	µg/L	<1	<1	<1	<1	<1