Inverell Landfill

Sampling Point: All Monitoring Points	**EPL No. 7463**
Licence Period 19 November 2023 to 18 November 2024	**Licensee: Inverell Shire Council**
http://www.environment.nsw.gov.au/prpoeoapp/Detail.aspx?instid=7463&id=7463&option=licence&searchrange=licence&range=POEO licence&prp=no&status=Issued	**144 Otho Street, Inverell**
	Monitoring Frequency - Quarterly
Date Sampled	**8-May-24**
Date Reported	**21-Jun-24**
Date Published	**26-Jun-24**

Sampling Notes:

All groundwater monitoring bores (BH1-BH5) and leachate pond (LP1) were sampled on 8 May 2024. The laboratory and field analysis indicate that landfill leachate does not appear to be impacting groundwater. These results remain consistent with historical data for this site.

Sampling point	Units	BH1	BH2a	BH2b	BH3a	BH3b	BD01	BH4	BH5	LP1
EPA Identification		6	7	8	9	10	-	11	12	1
pH (field)	pH unit	6.74	8.52	6.53	7.96	6.73	-	6.87	6.87	7.81
Conductivity	µS/cm	1206	1980	2712	2036	1427	-	2872	1034	1035
Standing Water Level	mAHD	607.71	593.56	592.45	593.6	588.45	-	592.95	607.4	-
pH (laboratory)	pH unit	7	6.8	7	7	7.1	7.1	7	7	7.6
TDS	mg/L	780	1290	1740	1290	890	875	1770	690	635
Sodium	mg/L	41	150	300	170	125	120	150	57	72
Calcium	mg/L	100	115	67	120	110	115	170	96	69
Potassium	mg/L	4.3	4.4	3.6	3.2	4.6	4.3	3.8	4.2	21
Magnesium	mg/L	105	170	210	155	85	87	260	61	66
Chloride	mg/L	19	170	245	225	45	48	440	22	100
Fluoride	mg/L	0.13	0.22	0.17	<0.1	<0.1	<0.1	0.13	<0.1	0.18
Nitrate	mg/L	48	<0.1	<0.1	9.2	<0.1	<0.1	<0.1	88	<0.1
Nitrite	mg/L	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Sulfate as $SO4^{2-}$	mg/L	21	24	11	12	9	10	30	120	28
Bicarbonate (Alkalinity as $CaCO_3$)	mg/L	850	1260	1700	1170	995	1000	1410	470	565
Phosphate	mg/L	0.12	<0.1	<0.1	0.18	0.12	<0.1	<0.1	0.14	<0.1
Ammonia as N	mg/L	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
L/N	ratio	**21.34**	1.08	0.68	2.83	1.53	1.43	0.71	**43.18**	10.29
Total Kjeldahl N	mg/L	-	-	-	-	-	-	-	-	4.5
Total alkalinity as $CaCO_3$	mg/L	700	1030	1390	960	815	820	1160	385	465
Dissolved Iron	mg/L	0.05	0.09	0.06	0.11	0.04	0.05	0.08	0.05	0.2
Dissolved Manganese	mg/L	0.04	0.72	0.05	0.17	0.15	0.18	0.46	0.03	0.07
Dissolved Copper	mg/L	-	-	-	-	-	-	-	-	-
Dissolved Lead	mg/L	-	-	-	-	-	-	-	-	-
Dissolved Zinc	mg/L	-	-	-	-	-	-	-	-	-
Dissolved Cadmium	mg/L	-	-	-	-	-	-	-	-	-
Dissolved Chromium	mg/L	-	-	-	-	-	-	-	-	-
Dissolved Arsenic	mg/L	-	-	-	-	-	-	-	-	-
Dissolved Mercury	mg/L	-	-	-	-	-	-	-	-	-
Biological oxygen demand	mg/L	<2	<2	<2	<2	<2	<2	<2	<2	9
Total organic carbon	mg/L	4	10	8	6	3	3	9	5	21
Total Phenols	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Total P	Mg/L	-	-	-	-	-	-	-	-	-
Polychlorinated Biphenyls (PCBs)	µg/L	-	-	-	-	-	-	-	-	-
Organochlorine Pesticides (OCs)	µg/L	-	-	-	-	-	-	-	-	-
Organophosphorus Pesticides (OPs)	µg/L	-	-	-	-	-	-	-	-	-
Fumigants	µg/L	-	-	-	-	-	-	-	-	-
Halogenated Aliphatic Compounds	µg/L	-	-	-	-	-	-	-	-	-
Halogenated Aromatic Compounds	µg/L	-	-	-	-	-	-	-	-	-
Trihalomethanes	µg/L	-	-	-	-	-	-	-	-	-
Polynuclear Aromatic Hydrocarbons	µg/L	-	-	-	-	-	-	-	-	-
Total Petroleum Hydrocarbons (C15 – C28) 2	µg/L	-	-	-	-	-	-	-	-	-
BTEXN	µg/L	-	-	-	-	-	-	-	-	-
Total Recoverable Hydrocarbons	µg/L	-	-	-	-	-	-	-	-	-
F1 (C6-C10 fraction minus BTEX)	µg/L	-	-	-	-	-	-	-	-	-
F2 (>C10-C16 fraction minus BTEX)	µg/L	-	-	-	-	-	-	-	-	-
>C16-C34	µg/L	-	-	-	-	-	-	-	-	-
>C34-C40	µg/L	-	-	-	-	-	-	-	-	-
>C10-C40	µg/L	-	-	-	-	-	-	-	-	-

Table notes:

1. All measurements are in mg/L unless stated otherwise;
2. BD01 = blind field duplicate of BH3b;
3. Values preceded with < are below the limit of reporting (LOR);
4. Values highlight in red exceed threshold criteria;
5. * Threshold concentration derived from background aquifer chemistry;
6. (A1) Threshold concentration derived ANZG (2018); and
7. (H) Hardness Modified Trigger Value adjusted as per ANZG (2018) Table 3.
8. n.d not detected as various detection limits (reported in the laboratory results in the Letter report)
9. [2] All other compounds tested were n.d.
10. – not analysed or measured
11. Blank cell means that there is no threshold value.