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	**21 and 22 October 2024**
Date Reported	**11-Nov-24**
Date Published	**17-Dec-24**

Sampling Notes:

All groundwater monitoring bores (BH1-BH5) and leachate pond (LP1) were sampled on 21 October 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	6.83	6.73	6.87	6.8	6.79	-	7.15	6.82	7.71
Conductivity	µS/cm	1228	2039	2975	2438	1607	-	3065	1170	1137
Standing Water Level	mAHD	607.9	592.4	591.9	593.8	588.4	-	593	610.1	-
pH (laboratory)	pH unit	7	6.9	7.1	7	7	7	7	7	7
TDS	mg/L	810	1330	1460	985	870	880	1570	555	540
Sodium	mg/L	44	160	275	125	130	135	165	60	74
Calcium	mg/L	110	120	54	105	110	115	145	76	24
Potassium	mg/L	3	2.4	3.3	3.6	4.1	4.3	3.5	2.8	15
Magnesium	mg/L	105	170	185	110	78	81	220	42	69
Chloride	mg/L	12	175	255	270	44	44	460	20	130
Fluoride	mg/L	0.1	0.18	0.15	*<0.1*	*<0.1*	*<0.1*	*0.11*	*<0.1*	0.12
Nitrate	mg/L	36	*<0.1*	*<0.1*	14	*<0.1*	*<0.1*	*<0.1*	84	*<0.1*
Nitrite	mg/L	0.17	*<0.1*	*<0.1*	*<0.1*	*<0.1*	*<0.1*	*<0.1*	*<0.1*	0.22
Sulfate as SO_4^{2-}	mg/L	42	31	14	25	13	12	30	110	19
Bicarbonate (Alkalinity as $CaCO_3$)	mg/L	880	1320	1330	660	980	1010	1150	340	410
Phosphate	mg/L	0.12	*<0.1*	*0.13*	*<0.1*	*<0.1*	*<0.1*	*<0.1*	0.15	0.66
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	15	1	1	5	1	1	1	49	9
Total Kjeldahl N	mg/L									24
Total alkalinity as $CaCO_3$	mg/L	720	1080	270	540	805	830	945	280	335
Dissolved Iron	mg/L	0.05	0.06	0.04	0.06	0.04	0.05	0.03	0.02	0.13
Dissolved Manganese	mg/L	0.02	0.51	0.01	0.16	0.15	0.16	0.52	0.01	1.1
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	3	2	2	3	3	3	*<2*	**200**
Total organic carbon	mg/L	3	9	8	5	2	2	8	4	**140**
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 Naphthalene)	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.