Inverell Landfill

Sampling Point: All Monitoring Points	**EPL No. 7463**
Licence Period 19 November 2022 to 18 November 2023	**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	**23-Nov-22**
Date Reported	**16-Dec-22**
Date Published	**13-Jan-23**

Sampling Notes:

All groundwater monitoring bores (BH1-BH5) and leachate pond (LP1) were sampled on 23 November 2022. 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	BH1	BH2a	BH2b	BH3a	D01 (BH3	BH3b	BH4	BH5	LP1
EPA Identification	6	7	8	9	10		11	12	1
pH (field)	6.87	6.74	6.83	6.97	-	6.85	7.09	7.03	8.16
Conductivity	1183	2068	2535	2082	-	1256	1052	813	1542
Standing Water Level (SWL)	607.775	594.33	592.63	594.205	-	591.52	597.827	610.325	-
pH (laboratory)	7.2	7	7.1	6.9	6.9	7	7.2	7.3	8
TDS	750	1410	1780	1440	1470	880	730	625	1140
Sodium	42	160	305	150	160	115	23	44	185
Calcium	105	145	61	130	125	125	100	96	21
Potassium	2.3	1.4	2	2.2	1.9	3	2.7	2.5	20
Magnesium	120	195	240	215	220	83	105	63	155
Chloride	12	200	270	355	365	39	115	12	405
Fluoride	0.12	0.21	0.18	<0.1	0.1	<0.1	0.12	<0.1	0.13
Nitrate	110	<0.1	<0.1	39	40	<0.1	23	28	<0.1
Nitrite	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Sulfate as SO_4^{2-}	28	17	9	16	15	8	46	97	13
Bicarbonate (Alkalinity as $CaCO_3$)	895	1470	1750	1210	1200	1020	610	550	700
Total alkalinity as $CaCO_3$	735	1200	1430	990	985	835	500	450	575
Phosphate	<0.1	<0.1	0.12	<0.1	<0.1	<0.1	<0.1	0.12	0.11
Ammonia as N	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	5.9
L/N	42.13	0.34	0.38	8.36		1.02	11.36	15.12	7.23
Total Kjeldahl N (TKN)	-	-	-	-	-	-	-	-	20
Dissolved Iron	0.02	0.04	0.05	0.28	0.25	0.01	0.01	<0.01	0.11
Dissolved Manganese	0.02	0.71	0.02	0.19	0.19	0.14	0.05	0.02	0.93
Dissolved Copper	-	-	-	-	-	-	-	-	-
Dissolved Lead	-	-	-	-	-	-	-	-	-
Dissolved Zinc	-	-	-	-	-	-	-	-	-
Dissolved Cadmium	-	-	-	-	-	-	-	-	-
Dissolved Chromium	-	-	-	-	-	-	-	-	-
Dissolved Arsenic	-	-	-	-	-	-	-	-	-
Dissolved Mercury	-	-	-	-	-	-	-	-	-
Biological oxygen demand (BOD)	<2	<2	<2	<2	<2	<2	<2	<2	40

Total organic carbon (TOC)	1	8	6	6	6	<1	11	3	62
Total Phenols	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Total P	-	-	-	-	-	-	-	-	-
Polychlorinated Biphenyls (PCBs)	-	-	-	-	-	-	-	-	-
Organochlorine Pesticides (OCs)	-	-	-	-	-	-	-	-	-
Organophosphorus Pesticides (OPs)	-	-	-	-	-	-	-	-	-
Fumigants	-	-	-	-	-	-	-	-	-
Halogenated Aliphatic Compounds	-	-	-	-	-	-	-	-	-
Halogenated Aromatic Compounds	-	-	-	-	-	-	-	-	-
Trihalomethanes	-	-	-	-	-	-	-	-	-
Phenolic Compounds (total)	-	-	-	-	-	-	-	-	-
Polynuclear Aromatic Hydrocarbons	-	-	-	-	-	-	-	-	-
Total Petroleum Hydrocarbons	-	-	-	-	-	-	-	-	-
BTEXN	-	-	-	-	-	-	-	-	-
Total Recoverable Hydrocarbons	-	-	-	-	-	-	-	-	-
F1 (C6-C10 fraction minus BTEX)	-	-	-	-	-	-	-	-	-
F2 (>C10-C16 fraction	-	-	-	-	-	-	-	-	-
minus Naphthalene)	-	-	-	-	-	-	-	-	-
>C16-C34	-	-	-	-	-	-	-	-	-
>C34-C40	-	-	-	-	-	-	-	-	-

Table notes:

1. All measurements are in mg/L unless stated otherwise;
2. BD01 = blind field duplicate of BH1;
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 (annual analysis only)
11. Blank cell means that there is no threshold value.