



Inverell Landfill

Sampling Point: All Monitoring Points		EPL No. 7463							
Licence Period 19 November 2019 to 18 November 2020		Licensee: Inverell Shire Council							
http://www.environment.nsw.gov.au/prpoeoapp/Detail.aspx?Instid=/463&id=/463&option=licence&searchrange=licence&range=POEO		144 Otho Street, Inverell							
licence&prp=no&status=Issued		Monitoring Frequency - Quarterly							
Date Sampled	16 and 17 March 2020								
Date Reported	20-Apr-20								
Date Published	22-Apr-20								
Sampling Notes:									
The laboratory and field analysis results indicate that landfill leachate does not appear to be impacting groundwater at the monitoring locations. All groundwater monitoring bores were sampled. A leachate sample was collected from the leachate pond.									
Concentrations of nitrate (43 mg/L) were detected in the up-gradient/ cross-gradient groundwater monitoring bore BH1 above the adopted screening criteria. While the L/N ratio (ratio of leachate to non-leachate indicators) is high (17.19) no other landfill leachate indicators were detected.									
The continuing elevated nitrate and sulphate levels detected in monitoring well BH1 is not associated with any other landfill leachate indicators. Bores down gradient of the landfill did not have these characteristics. As this monitoring well is situated up gradient of the landfill, the elevated level of nitrate could be representative of an outside regional/local influence such as agriculture.									
Sampling point	BH1	BD1 (BH1)	BH2a	BH2b	BH3a	BH3b	BH4	BH5	LP1
EPA Identification Numbers	6	-	7	8	9	10	11	12	1
pH (field)	6.88	-	6.88	6.9	6.76	6.82	6.83	6.82	8.08
Conductivity	1,246	-	3,232	3,071	1,708	1258	4,837	1225	748
Standing Water Level	607.49	-	589.38	587.74	589.64	584.22	592.76	609.29	-
pH (lab)	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	8.06
TDS	800	790	1930	1950	1100	840	3060	900	587
BOD	<2	<2	<2	<2	<2	<2	2	2	12
TOC	4	4	12	9	7	3	17	5	16
Total Phenols	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-
Sodium	38	36	280	370	135	105	280	65	58
Calcium	115	110	110	66	105	110	220	135	50
Potassium	2	1.9	1.2	1.3	1	3.2	2.3	2.4	16
Magnesium	110	115	260	250	145	78	450	65	52
Ammonia as N	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.09
Chloride	16	15	360	340	120	22	1120	36	73
Fluoride	0.18	0.16	0.22	0.18	0.11	<0.1	0.12	<0.1	0.2
Nitrate	43	42	0.53	1.7	<0.1	<0.1	0.35	200	0.93
Sulfate	19	18	11	8	3	8	27	150	111
Bicarbonate	900	910	1780	1890	1180	985	1740	460	285
Phosphate	15	0.14	0.21	0.21	<0.1	<0.1	0.12	0.14	<0.1
Nitrite	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.13	0.59
Total Alkalinity	740	745	1460	1550	965	805	1430	375	234
L/N	17.19	16.9	0.3	0.47	0.34	1.19	0.3	76.46	11.01
TKN	-	-	-	-	-	-	-	-	5.8
Dissolved Iron	0.06	0.04	0.01	0.08	0.06	0.03	0.02	0.03	<0.05
Dissolved Manganese	<0.01	<0.01	0.09	0.01	0.07	0.24	0.66	0.03	0.001
Dissolved Copper	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.009
Dissolved Lead	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Dissolved Zinc	0.005	0.007	0.01	0.011	0.004	0.003	0.009	0.007	<0.005
Dissolved Cadmium	<0.0002	<0.0002	<0.0002	<0.002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0001

Dissolved Chromium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.001
Dissolved Arsenic	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.003
Dissolved Mercury	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001

Table notes:

1. All measurements are in mg/L unless stated otherwise;
2. BD1 = blind field duplicate of BH3b;
3. TDS = Total Dissolved Solids; and
4. BOD = Biological Oxygen Demand; and
5. TOC = Total Organic Carbon.
6. Values with < are below the limit of reporting (LOR)