



BURRUP TAN PROJECT TEAM

To  
Mark Rust  
Senior Environmental Officer  
Office of the Environmental Protection Authority  
Locked Bag 10, East Perth  
WA - 6892

Date: 21/12/2015

**Attn: Mr. Mark Rust**

**Subject: Report to OEPA for Groundwater Monitoring Result as per Conditions 8-4 of Ministerial Statement No. 870 for Month of November 2015.**

Dear Sir,

Reference is made to Contractor's letter 02080-TRS-BNP-L-01212 dated 14 December 2015. Condition 8-4 of Ministerial Statement No. 870, requires YPNPL to sample/monitor all groundwater bores every six months as per Condition 8-3 on a biannual basis. The condition sets a trigger value of 10% above the screening contaminant concentrations as established based on the 2011 data. In accordance with Condition 8-5 of Ministerial Statement No. 870, YPNPL is required to report findings to the CEO of the OEPA within 7 days of the exceedance being identified. It is anticipated that this will be the last pre-operational groundwater monitoring event (GME) prior to the start of plant operations, planned for February 2016.

This letter is intended to inform the OEPA on the outcomes of the latest GME which was undertaken by ERM on behalf of YPNPL at the five existing bores on 23.11.2015, using the consistent sampling methodology applied for the last GMEs (i.e. peristaltic pump low –flow).

In general the results of the recent GME display similar (or even improved) conditions to those documented in the previous GMEs with several parameters having values closer to those identified at the beginning of the construction works in 2012-2013. There were fewer exceedances of the trigger values in November 2015 compared to previous events and in most cases as previously stated, these are considered to be reflective of a natural variability rather than a result of site related potential contamination sources as a result of ongoing construction activities.

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## YPN TAN Burrup Project

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More specific, in November 2015 reactive phosphorus, manganese, total nitrogen (oxidised and neutral forms), total Kjendahl nitrogen and total alkalinity were detected at concentrations slightly above trigger values. Due to high salinity of water in the sample from MW4 the detection limit for specific parameters had to be raised (dilution required) by the laboratory. It is noted that three of the seven exceedances relate to various nitrogen based parameters being identified at well MW04.

The details of the exceedances are outlined below:

### **Reactive Phosphorus as P**

- Exceedance at MW3 – 0.021 mg/L compared to the maximum acceptable screening value of 0.011 mg/L. Historical results have been below the maximum acceptable screening value with concentrations between <0.002 and 0.021 mg/L, with a previous exceedance of 0.020 mg/L in April 2015 .

### **Manganese (Filtered)**

- Exceedance at MW4 - 0.975mg/L (value actually identified in the field duplicate QC01 of MW04) compared to the maximum acceptable screening value of 0.242 mg/L, however improved compared to Apr 2015. Historical results have been mostly below the maximum acceptable screening value with concentrations between 0.0029 and 0.277 mg/L, with the highest exceedance of 3.29 mg/L in Apr 2015.

### **Nitrogen (Total oxidised)**

- Exceedance at MW2 – 5.44 mg/L compared to the maximum acceptable screening value of 3.63 mg/L. Historical results have been mostly below the maximum acceptable screening value with concentrations between 0.51 and 3.55 mg/L, with a previous exceedance of 4.95 mg/L in Apr 2014.

### **Nitrogen (Total)**

- Exceedance at MW2 – 6,840 mg/L compared to the maximum acceptable screening value of 5,610 mg/L. Historical results have been consistently below the maximum acceptable screening value with concentrations between 700 and 4,960 mg/L.

### **Kjeldahl Nitrogen Total**

- Exceedance (marginal) at MW5 – 3.05 mg/L compared to the maximum acceptable screening value of 2.97 mg/L. Historical results have been consistently general below the maximum acceptable screening value with concentrations between 0.17 and 2.7 mg/L.

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### Total alkalinity

- Exceedance (marginal) at MW3 - 582 mg/L compared to the maximum acceptable screening value of 561 mg/L. Historical results have been generally below the maximum acceptable screening value with concentrations between 400 and 560 mg/L and one previous exceedance of 570 mg/L in Apr 2015.

### Fluoride

- Exceedance at MW03 – 1.9 mg/L compared to the maximum acceptable screening value of 1.65 mg/L. Historical results have been consistently below the maximum acceptable screening value with concentrations between <0.1 and 1,6 mg/L and a single previous exceedance of 1.7 mg/L in Apr 2014.

In general other analytes were reported at concentrations similar or lower to those recorded in the previous monitoring events. The water quality conditions at one particular well (MW4) that appeared to be different in April 2015 to previously documented levels for some parameters (including salinity, total dissolved solids (TDS), hardness, sulphate, iron, calcium) have returned to historical values, indicating that April 2015 was rather an isolated spike that could be associated with less freshwater contributing to the already hypersaline aquifer at this particular location, in the fall period.

It is noted that at based on the field measurements at well MW05, TDS values have decreased steadily since Oct 2012 (94,705 mg/L) to Nov 2015 (19,949 mg/L), a trend that could be related to additional fresh water inputs. This well is located down gradient from the TAN and therefore could be considered that the source of freshwater that decreases the salinity of the aquifer at this location may be related to construction activities (such as dust suppression water infiltrating into the ground, infiltration from onsite water evaporation ponds, etc.). However, no other parameters that could be of concern (such as heavy metals or nutrients) have increased in concentrations over time and the pH and Eh values at this location have been generally consistent over the monitoring period.

As a general note the dissolved oxygen field measurements at all five wells are as expected, during spring events and deteriorating during fall events, trend confirmed by the November 2015 data.

In conclusion, the GME November 2015 results continue to support the fact that the observed variability in the groundwater chemistry with no clear trends suggests the results depict a combination of natural variability in groundwater chemistry and off site contributions as opposed to increasing concentrations of analytes associated with site activities. Based on the current results, none of the analytes observed exceeding the trigger levels are regarded as directly attributed to current on site activities.

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The full GME report is in preparation by ERM and if required by the OEPA this can be provided as further reference to the above stated facts.

Attached to this letter is the summary table showing the November 2015 groundwater monitoring results as well as the historical monitoring data, to enable a review of the variability of the discussed parameters over time since 2011.

Yours sincerely,

A handwritten signature in black ink, appearing to read "Rajan Sinha".

Rajan Sinha  
Technical Services & Business Development Manager

**Attachment: Full groundwater monitoring results**

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Well ID	Gauging Date	Coord. Easting (MGA94)	Coord. Northing (MGA94)	Depth of Well (mbTOC)	Depth to Water (mbTOC)	Depth to Water (mAHD)*	DO (mg/L)	EC (mScm <sup>-1</sup> )	pH	Eh (mV)	TEMP (°C)	TDS (mg/L)	Method of sampling	Purge Volume (L)	Comments
Trigger value									6.0-8.4			143000			
MW1**	11-Oct-12	477747.17	7719628.2	8.72		3.78	2.30	7.09	149.60	29.8		1495	Bailer	19.0	Slightly turbid, pale grey, becoming turbid at 15L, slight light brown. Dry purged sampled upon recovery
	6-Mar-13	477747.17	7719628.2	8.74		1.82	2.66	7.26	78.50	30.7		1729	Bailer	22.5	Slight cloudy no odour,
	17-Apr-14	477747.17	7719628.2	8.74		0.58	1.56	6.71	2.69	32.4		1016	Low flow peristaltic pump	4.0	
	17-Oct-13	477660.51	7719656.72	17.40	6.440	4.400	0.30	1.74	5.60	81.40	31.2	1131	Low flow peristaltic pump	3.5	Clear, colourless no odour
	9-Apr-14	477660.51	7719656.72	17.56	5.861	4.979	0.64	1.88	7.13	40.20	32.6	1222	Low flow peristaltic pump	2.5	Clear, no odour
	29-Oct-14	477660.51	7719656.72	17.40	6.297	4.543	1.01	2.05	7.44	-6.30	32.1	1333	Low flow peristaltic pump	1.7	Clear, no odour, the drawdown was higher than 10 cm at a flow rate of 150 ml/min
	30-Apr-15	477660.51	7719656.72	17.35	6.260	4.580	0.30	1.96	7.31	-20.40	30.2	1274	Low flow peristaltic pump	3.5	Clear, no odour
	23-Nov-15	477660.51	7719656.72	17.25	6.586	4.254	0.80	1.90	7.22	120.40	33.2	1235	Low flow peristaltic pump	5.0	Clear, no odour.
MW2	11-Oct-12	477982.18	7719632.25	8.20	4.481	2.22	4.29	7.12	142.50	29.2		2789	Bailer	24.0	Turbid, pale brown, no odour, moderate recharge, good yield
	6-Mar-13	477982.18	7719632.25	8.20	4.432	1.65	4.21	7.28	37.90	32.0		2737	Bailer	21.0	Turbid, slightly brown no odour
	17-Apr-14	477982.18	7719632.25	8.21	4.600	3.44	4.69	6.90	101.00	32.2		3049	Bailer	33.0	
	17-Oct-13	477982.18	7719632.25	8.19	5.800	1.17	3.51	5.34	158.60	29.9		2282	Low flow peristaltic pump	3.0	Clear, colourless no odour
	9-Apr-14	477982.18	7719632.25	8.21	3.906	0.49	3.10	6.98	66.90	34.7		2015	Low flow peristaltic pump	3.0	Clear, no odour
	29-Oct-14	477982.18	7719632.25	8.20	4.145	0.90	3.31	7.14	4.80	30.1		2148	Low flow peristaltic pump	1.7	Clear, no odour, good recharge, low drawdown
	30-Apr-15	477982.18	7719632.25	6.80	2.772	2.698	0.45	3.48	7.19	32.10	31.3	2262	Low flow peristaltic pump	4.0	Clear, no odour, good recharge, low drawdown
	23-Nov-15	477982.18	7719632.25	6.70	3.265	2.205	1.77	2.97	7.03	124.70	32.2	1931	Low flow peristaltic pump	7.0	Clear, no odour.
MW3	11-Oct-12	478228.57	7719614.88	8.17	2.867	1.983	2.88	14.05	7.47	75.30	28.0	9133	Bailer	44.0	Slightly turbid, grey becoming pale brown, moderate recharge
	6-Mar-13	478228.57	7719614.88	7.18	2.801	2.049	1.49	20.90	7.32	33.20	31.1	13585	Bailer	24.0	Turbid, Pale brown, no odour
	17-Apr-14	478228.57	7719614.88	8.19	3.010	1.840	1.78	17.95	7.19	27.50	31.9		Bailer	33.0	
	17-Oct-13	478228.57	7719614.88	8.17	2.020	2.830	1.75	14.70	6.17	145.90	29.3	9555	Low flow peristaltic pump	3.5	Clear, colourless no odour
	9-Apr-14	478228.57	7719614.88	8.12	2.446	2.404	1.67	16.08	7.50	73.10	29.3	10452	Low flow peristaltic pump	3.5	Clear, no odour
	29-Oct-14	478228.57	7719614.88	8.12	2.577	2.273	6.16	14.15	7.97	11.90	30.3	9198	Low flow peristaltic pump	2.3	Clear, no odour, good recharge, low drawdown
	29-Apr-15	478228.57	7719614.88	8.18	2.854	1.996	0.33	12.74	7.36	-6.50	31.6	8281	Low flow peristaltic pump	3.0	Clear, no odour, good recharge, low drawdown
	23-Nov-15	478228.57	7719614.88	8.10	3.156	1.694	1.75	13.56	7.31	-29.50	30.9	8814	Low flow peristaltic pump	9.0	Clear, no odour.
MW4**	11-Oct-12	47717.79	7719296.04	4.64	1.519	2.06	126.60	7.66	123.20	28.7		82290	Bailer	24.0	Highly turbid, silty, orange, no odour, fast recharge
	6-Mar-13	47717.79	7719296.04	7.21	3.949	-	-	-	-	-	-	-	-	-	Unable to be sampled due to curve in PVC Pipe extension
	17-Apr-14	47717.79	7719296.04	7.35	4.070	0.13	67.40	7.17	15.72	33.9		43810	Low flow peristaltic pump	2.5	Turbid, red brown
	17-Oct-13	477794.2	7719237.25	14.40	3.820	2.480	1.99	124.40	4.32	135.00	31.0	80860	Low flow peristaltic pump	4.5	Clear, colourless no odour
	9-Apr-14	477794.2	7719237.25	14.53	3.840	2.460	1.30	118.10	6.99	62.90	33.0	76765	Low flow peristaltic pump	3.0	Clear, no odour
	29-Oct-14	477794.2	7719237.25	13.96	4.265	2.035	3.56	68.90	7.15	41.80	31.5	44785	Low flow peristaltic pump	2.0	clear, no odour, good recharge, well head partially damaged
	30-Apr-15	477794.2	7719237.25	13.94	4.220	2.080	0.07	168.20	6.81	11.40	30.1	109330	Low flow peristaltic pump	6.0	slightly cloudy, some suspended solids, no odour, good recharge
	23-Nov-15	477794.2	7719237.25	14.90	4.389	1.911	0.43	139.40	6.80	79.30	32.0	90610	Low flow peristaltic pump	7.0	Clear, no odour.
MW5	11-Oct-12	477976.98	7719306.26	5.01	1.054	5.636	1.73	145.70	6.90	193.20	29.3	94705	Bailer	24.0	Slightly turbid, pale brown, no odour, recharge becoming turbid, red-brown
	6-Mar-13	25-Aug-08	7719306.26	5.07	0.905	5.785	0.99	141.20	6.84	135.90	34.3	91780	Bailer	24.0	Turbid, cream to pale colour, no odour
	17-Apr-14	25-Aug-08	7719306.26	5.97	2.020	4.670	2.24	147.30	6.77	210.70	34.4	95745	Bailer	33.0	
	17-Oct-13	25-Aug-08	7719306.26	8.95	4.530	2.160	0.51	104.00	6.21	125.60	30.3	67600	Low flow peristaltic pump	5.5	Clear, no odour
	9-Apr-14	477976.98	7719306.26	9.01	4.415	2.275	1.03	70.80	7.08	69.20	32.0	46020	Low flow peristaltic pump	2.5	Clear, no odour
	28-Oct-14	477976.98	7719306.26	9.00	4.505	2.185	0.78	69.70	7.24	46.00	31.6	45305	Low flow peristaltic pump	1.1	clear, no odour, good recharge
	29-Apr-15	477976.98	7719306.26	9.00	4.470	2.220	0.17	44.78	7.25	-20.30	30.0	29107	Low flow peristaltic pump	3.0	slightly cloudy, some solids in suspension, no odour, good recharge
	23-Nov-15	477976.98	7719306.26	8.96	4.756	1.934	0.90	30.69	7.37	54.00	31.4	19949	Low flow peristaltic pump	7.0	Slightly cloudy, no odour.

Notes:  
 \*\*MW1 and MW4 Were Replaced in September 2013  
 \* Calculations based on data from April 2015 survey (Handley surveyors)



	BTEX								PAH	TPH										
	Benzene	Ethylbenzene	Toluene	Total BTEX	Xylene (m & p)	Xylene (o)	Xylene Total	C6-C10 less BTEX (F1)	Naphthalene	C10-C16	C16-C34	C34-C40	F2-NAPHTHALENE	C6 - C9	C10 - C14	C15 - C28	C29-C36	+C10 - C36 (Sum of total)	C10 - C40 (Sum of total)	C6-C10
EQL	1	2	2	0.001	2	2	2	0.02	5	0.1	0.1	0.1	0.1	20	50	100	50	50	100	0.02
Trigger Values ( Max Baseline + 10%)																				

LocCode	Sampled_Date-Time	Benzene	Ethylbenzene	Toluene	Total BTEX	Xylene (m & p)	Xylene (o)	Xylene Total	C6-C10 less BTEX (F1)	Naphthalene	C10-C16	C16-C34	C34-C40	F2-NAPHTHALENE	C6 - C9	C10 - C14	C15 - C28	C29-C36	+C10 - C36 (Sum of total)	C10 - C40 (Sum of total)	C6-C10
MW1	30/04/2011	-	-	-	-	-	-	-	-	-	-	-	-	-	<40	<50	<200	<200	<450	-	-
	17/10/2013	<1	<2	<2	<0.001	<2	<2	<2	<0.02	<5	<0.1	<0.1	<0.1	<0.1	<20	<50	<100	<50	<50	<100	<0.02
	9/04/2014	<1	<2	<2	<0.001	<2	<2	<2	<0.02	<5	<0.1	<0.1	<0.1	<0.1	<20	<50	<100	<50	<50	<100	<0.02
	30/10/2014	<1	<2	<2	<0.001	<2	<2	<2	<0.02	<5	<0.1	<0.1	<0.1	<0.1	<20	<50	<100	<50	<50	<100	<0.02
	30/04/2015	<1	<2	<2	<0.001	<2	<2	<2	<0.02	<5	<0.1	<0.1	<0.1	<0.1	<20	<50	<100	<50	<50	<100	<0.02
23/11/2015	<1	<2	<2	<0.001	<2	<2	<2	<0.02	<5	<0.1	<0.1	<0.1	<0.1	<20	<50	<100	<50	<50	<100	<0.02	
MW2	30/04/2011	-	-	-	-	-	-	-	-	-	-	-	-	-	<40	<50	<200	<200	<450	-	-
	17/10/2013	<1	<2	<2	<0.001	<2	<2	<2	<0.02	<5	<0.1	<0.1	<0.1	<0.1	<20	<50	<100	<50	<50	<100	<0.02
	9/04/2014	<1	<2	<2	<0.001	<2	<2	<2	<0.02	<5	<0.1	<0.1	<0.1	<0.1	<20	<50	<100	<50	<50	<100	<0.02
	29/10/2014	<1	<2	<2	<0.002	<2	<2	<2	<0.03	<6	<0.1	<0.1	<0.1	<0.1	<20	<50	<100	<50	<50	<100	<0.03
	30/04/2015	<1	<2	<2	<0.001	<2	<2	<2	<0.02	<5	<0.1	<0.1	<0.1	<0.1	<20	<50	<100	<50	<50	<100	<0.02
23/11/2015	<1	<2	<2	<0.001	<2	<2	<2	<0.02	<5	<0.1	<0.1	<0.1	<0.1	<20	<50	<100	<50	<50	<100	<0.02	
MW3	30/04/2011	-	-	-	-	-	-	-	-	-	-	-	-	-	<40	<50	<200	<200	<450	-	-
	17/10/2013	<1	<2	<2	<0.001	<2	<2	<2	<0.02	<5	<0.1	<0.1	<0.1	<0.1	<20	<50	<100	<50	<50	<100	<0.02
	9/04/2014	<1	<2	<2	<0.001	<2	<2	<2	<0.02	<5	<0.1	<0.1	<0.1	<0.1	<20	<50	<100	<50	<50	<100	<0.02
	29/10/2014	<1	<2	<2	<0.001	<2	<2	<2	<0.02	<5	<0.1	<0.1	<0.1	<0.1	<20	<50	<100	<50	<50	<100	<0.02
	29/04/2015	<1	<2	<2	<0.001	<2	<2	<2	<0.02	<5	<0.1	<0.1	<0.1	<0.1	<20	<50	<100	<50	<50	<100	<0.02
23/11/2015	<1	<2	<2	<0.001	<2	<2	<2	<0.02	<5	<0.1	<0.1	<0.1	<0.1	<20	<50	<100	<50	<50	<100	<0.02	
MW4	30/04/2011	-	-	-	-	-	-	-	-	-	-	-	-	-	<40	<50	<200	<200	<450	-	-
	17/10/2013	<1	<2	<2	<0.001	<2	<2	<2	<0.02	<5	<0.1	<0.1	<0.1	<0.1	<20	<50	<100	<50	<50	<100	<0.02
	9/04/2014	<1	<2	<2	<0.001	<2	<2	<2	<0.02	<5	<0.1	<0.1	<0.1	<0.1	<20	<50	<100	<50	<50	<100	<0.02
	30/10/2014	<1	<2	<2	<0.001	<2	<2	<2	<0.02	<5	<0.1	<0.1	<0.1	<0.1	<20	<50	<100	<50	<50	<100	<0.02
	30/04/2015	<1	<2	<2	<0.001	<2	<2	<2	<0.02	<5	<0.1	<0.1	<0.1	<0.1	<20	<50	<100	<50	<50	<100	<0.02
23/11/2015	<1	<2	<2	<0.001	<2	<2	<2	<0.02	<5	<0.1	<0.1	<0.1	<0.1	<20	<50	<100	<50	<50	<100	<0.02	
MW5	30/04/2011	-	-	-	-	-	-	-	-	-	-	-	-	-	<40	81	<200	<200	281	-	-
	17/10/2013	<1	<2	<2	<0.001	<2	<2	<2	<0.02	<5	<0.1	<0.1	<0.1	<0.1	<20	<50	<100	<50	<50	<100	<0.02
	9/04/2014	<1	<2	<2	<0.001	<2	<2	<2	<0.02	<5	<0.1	<0.1	<0.1	<0.1	<20	<50	<100	<50	<50	<100	<0.02
	30/10/2014	<1	<2	<2	<0.001	<2	<2	<2	<0.02	<5	<0.1	<0.1	<0.1	<0.1	<20	<50	<100	<50	<50	<100	<0.02
	29/04/2015	<1	<2	<2	<0.001	<2	<2	<2	<0.02	<5	<0.1	<0.1	<0.1	<0.1	<20	<50	<100	<50	<50	<100	<0.02
23/11/2015	<1	<2	<2	<0.001	<2	<2	<2	<0.02	<5	<0.1	<0.1	<0.1	<0.1	<20	<50	<100	<50	<50	<100	<0.02	

		Inorganics																					
	Alkalinity (Bicarbonate as CaCO3)	Alkalinity (total) as CaCO3	Ammonia as N	Anions Total	Cations Total	Chloride	Fluoride	Hydrogen sulfide	Ionic Balance	Kjeldahl Nitrogen Total	Nitrate (as N)	Nitrite (as N)	Nitrite (as NO2-)	Nitrogen (Total Oxidised)	Nitrogen (Total)	Reactive Phosphorus as P	Sodium (Filtered)	Sulphate as SO4	Sulphide	TDS	Hardness as CaCO3 (Filtered)	TSS	
	mg/L	mg/L	µg/L	meq/L	meq/L	mg/L	mg/L	mg/L	%	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	
EQL	1	1	5	0.01	0.01	1	0.1	0.5	-100	0.05	0.002	0.002	0.05	0.002	50	0.001	0.5	1	0.1	10	1	5	
Trigger Values ( Max Baseline + 10%)**		561	40	-	-	95,700	1.65	N/A	-	2.97	9.67	N/A	-	3.63	5610	0.011	62,700	5720	N/A	143,000	20,900	2090	
LocCode	Sampled_Date-Time																						
MW1	30/04/2011	-	350	38	-	-	780	-	<0.5	-	-	1.7	<0.005	-	1.7	2500	<0.002	350	170	-	2000	-	-
	20/09/2011	-	320	18	-	-	710	0.4	-	-6	0.28	-	-	-	3.1	3400	0.008	300	150	<0.5	-	-	180
	27/02/2012	-	300	<5	-	-	670	0.5	-	-	0.17	2	<0.005	<0.05	2	2100	<0.002	340	140	<0.5	-	-	220
	11/10/2012	-	300	53	-	-	600	0.4	-	1	0.49	1.1	<0.005	<0.05	1.1	1500	0.003	290	100	<0.5	-	-	520
	6/03/2013	-	300	15	-	-	570	0.5	<0.5	-	0.14	1.9	0.025	0.08	1.9	2000	0.003	280	100	<0.5	-	-	2900
	17/04/2013	-	290	<5	-	-	560	0.4	-	-	0.15	2.2	0.022	0.07	2.2	2400	0.004	270	120	<0.5	-	-	16
	17/10/2013	367	367	32	17.2	17.5	300	0.8	-	0.87	0.15	0.086	<0.002	-	0.086	240	0.007	265	-	<0.1	940	284	25
	9/04/2014	358	358	114	18.1	17.3	345	0.8	-	2.42	0.49	1.6	0.004	-	1.6	2090	0.006	267	59	<0.1	995	270	<5
	30/10/2014	361	361	<5	19.1	17.1	366	0.6	-	5.42	2.46	0.162	<0.002	-	0.162	2620	0.018	226	75	<0.1	981	352	<5
	30/04/2015	272	272	31	18.5	18.8	374	0.6	<0.1	0.79	0.72	2.24	0.079	-	2.32	3040	0.014	258	119	<0.1	1010	366	<5
23/11/2015	<b>316</b>	<b>316</b>	<b>&lt;5</b>	<b>19.6</b>	<b>17.8</b>	<b>394</b>	<b>0.8</b>	<b>&lt;0.1</b>	<b>4.68</b>	<b>&lt;0.05</b>	<b>0.248</b>	<b>0.003</b>	-	<b>0.251</b>	<b>260</b>	<b>0.01</b>	<b>229</b>	<b>103</b>	<b>&lt;0.1</b>	<b>1110</b>	<b>381</b>	<b>&lt;5</b>	
MW2	30/04/2011	-	280	200	-	-	930	-	<0.5	-	-	3.3	<0.005	-	3.3	3900	0.004	570	170	-	2000	-	-
	20/09/2011	-	290	<5	-	-	1200	0.6	-	-3	0.2	-	-	-	1.2	1400	0.004	610	210	<0.5	-	-	190
	27/02/2012	-	300	30	-	-	1400	0.7	-	0.26	0.62	<0.005	<0.05	0.62	880	<0.002	1000	220	<0.5	-	-	84	
	11/10/2012	-	370	<5	-	-	1300	0.5	-	-5	0.51	0.63	<0.005	<0.05	0.63	1100	<0.002	600	180	<0.5	-	-	440
	6/03/2013	-	360	<5	-	-	1000	0.6	<0.5	-	0.1	0.6	<0.005	<0.05	0.6	700	<0.002	580	170	<0.5	-	-	320
	17/10/2013	281	281	<5	31.7	34.4	811	0.6	-	3.95	0.42	2.28	<0.002	-	2.28	2700	0.003	507	-	<0.1	2040	593	10
	17/04/2013	-	340	<5	-	-	1100	0.6	-	-	0.21	0.51	<0.005	<0.05	0.51	720	0.003	610	200	<0.5	-	-	290
	9/04/2014	250	250	<5	28.4	28.8	730	0.8	-	0.7	<0.05	4.94	0.007	-	4.95	4960	0.007	463	135	<0.1	1550	412	<5
	29/10/2014	276	276	<5	30.1	27	771	0.6	-	5.54	0.23	2.49	<0.002	-	2.49	2720	0.01	376	138	<0.1	1650	508	<5
	30/04/2015	304	304	17	30.8	32.2	758	0.6	<0.1	2.16	0.8	3.55	<0.002	-	3.55	4350	0.008	487	163	<0.1	1720	529	<5
23/11/2015	<b>292</b>	<b>292</b>	<b>&lt;5</b>	<b>29.1</b>	<b>27.4</b>	<b>692</b>	<b>0.7</b>	<b>&lt;0.1</b>	<b>2.91</b>	<b>1.4</b>	<b>5.44</b>	<b>&lt;0.002</b>	-	<b>5.44</b>	<b>6840</b>	<b>0.006</b>	<b>405</b>	<b>180</b>	<b>&lt;0.1</b>	<b>1680</b>	<b>469</b>	<b>&lt;5</b>	
MW3	30/04/2011	-	400	54	-	-	5400	-	<0.5	-	-	1.9	<0.005	-	1.9	2600	0.003	3400	800	-	9800	-	-
	20/09/2011	-	450	57	-	-	3700	1.4	-	2	0.18	-	-	-	0.033	220	0.006	2500	810	<0.5	-	-	280
	27/02/2012	-	460	<5	-	-	4000	1.5	-	-	0.29	0.32	<0.005	<0.05	0.32	610	<0.002	3200	940	<0.5	-	-	230
	11/10/2012	-	540	12	-	-	4200	<0.1	-	3	0.22	0.12	<0.005	<0.05	0.12	330	0.003	2800	710	<0.5	-	-	270
	6/03/2013	-	470	<5	-	-	5900	1.4	<0.5	-	0.16	0.26	<0.005	<0.05	0.26	420	0.003	3500	670	<0.5	-	-	180
	17/04/2013	-	560	770	-	-	28,000	1	-	-	1.5	0.031	<0.005	<0.05	0.031	1500	0.006	8000	1400	<0.5	-	-	470
	17/10/2013	479	479	<5	111	121	3140	1.6	-	4.37	<0.05	0.611	0.002	-	0.613	530	<0.001	2180	-	<0.1	7280	1180	54
	9/04/2014	466	466	<5	164	164	5000	1.7	-	0.14	0.35	0.464	0.029	-	0.493	840	0.009	3050	647	<0.1	9050	1440	6
	29/10/2014	533	533	<5	120	112	3480	1.4	-	3.6	0.22	0.175	<0.002	-	0.175	400	0.021	2060	537	<0.1	6520	977	<5
	29/04/2015	570	570	19	128	124	3780	1.3	<0.1	1.64	0.88	2.37	0.008	-	2.38	3260	0.02	2300	475	<0.1	7020	1040	<5
23/11/2015	<b>582</b>	<b>582</b>	<b>10</b>	<b>135</b>	<b>118</b>	<b>3980</b>	<b>1.9</b>	<b>&lt;0.1</b>	<b>6.9</b>	<b>1.33</b>	<b>2.03</b>	<b>0.002</b>	-	<b>2.03</b>	<b>3360</b>	<b>0.021</b>	<b>2140</b>	<b>548</b>	<b>&lt;0.1</b>	<b>7620</b>	<b>1080</b>	<b>&lt;5</b>	
MW4	30/04/2011	-	510	740	-	-	3900	-	<0.5	-	-	0.82	<0.005	-	0.82	2100	0.008	2700	350	-	6700	-	-
	21/09/2011	-	370	18	-	-	2500	0.7	-	1	0.31	-	-	-	0.24	540	0.009	1800	280	<0.5	-	-	670
	28/02/2012	-	390	<5	-	-	3200	0.6	-	-	0.59	0.17	<0.005	<0.05	0.17	760	0.007	2700	410	<0.5	-	-	1900
	11/10/2012	-	420	<5	-	-	3700	0.4	-	1	0.72	0.44	<0.005	<0.05	0.44	1200	0.007	2400	380	<0.5	-	-	2900
	17/04/2013	-	390	<5	-	-	4700	0.4	-	-	0.49	0.24	<0.005	<0.05	0.24	730	0.01	2600	440	<0.5	-	-	210
	17/10/2013	109	109	877	2090	2390	69,800	0.3	-	6.66	0.71	2.89	<0.002	-	2.89	3600	<0.001	45,400	3540	<0.1	136,000	18,500	74
	9/04/2014	148	148	14	1460	1620	49,000	0.4	-	5.39	3.8	4.07	<0.002	-	4.07	7870	<0.001	31,800	2290	<0.1	88,300	10,600	43
	29/10/2014	317	317	<5	779	724	25,700	0.4	-	3.65	0.99	2.17	<0.002	-	2.17	3160	0.009	14,200	-	<0.1	41,000	4410	14
	30/04/2015	118	118	<5	2480	2680	83,600	0.2	<0.1	3.7	<0.05	0.441	<0.002	-	0.441	410	0.004	50,400	5960	<0.1	134,000	21700	201
	23/11/2015	<b>203</b>	<b>203</b>	<b>&lt;5</b>	<b>2120</b>	<b>2240</b>	<b>72,200</b>	<b>0.3</b>	<b>&lt;0.1</b>	<b>2.71</b>	<b>0.22</b>	<b>1.21</b>	<b>&lt;0.002</b>	-	<b>1.21</b>	<b>1430</b>	<b>0.009</b>	<b>41,600</b>	<b>4070</b>	<b>&lt;0.1</b>	<b>128,000</b>	<b>18,800</b>	<b>133</b>
MW5	29/04/2015	-	370	56	-	-	87,000	-	<0.5	-	-	1.1	<0.005	-	1.1	5100	0.007	48,000	5200	-	130,000	-	-
	21/09/2011	-	210	47	-	-	87,000	0.3	-	0	2.7	-	-	-	0.02	2700	0.01	48,000	4100	<0.5	-	-	1100
	28/02/2012	-	150	<5	-	-	80,000	0.4	-	-	2.2	1.2	<0.005	<0.05	1.2	3400	0.006	57,000	4400	<0.5	-	-	1400
	11/10/2012	-	160	620	-	-	77,000	0.3	-	-4	0.72	1.1	<0.005	<0.05	1.1	1800	0.005	39,000	3500	<0.5	-	-	2600
	6/03/2013	-	170	1000	-	-	64,000	0.4	<0.5	-	2.1	1.3	<0.005	<0.05	1.3	3400	0.007	36,000	3800	<0.5	-	-	660
	17/04/2013	-	170	<5	-	-	58,000	0.4	-	-	1	1.6	<0.005	<0.05	1.6	2600	0.014	33,000	3300	<0.5	-	-	1600
	17/10/2013	207	207	<5	1210	1340	40,500	0.6	-														

		Metals																					
		Lead (Filtered)	Aluminium	Aluminium (Filtered)	Arsenic (Filtered)	Cadmium (Filtered)	Calcium (Filtered)	Chromium (hexavalent)	Chromium IV (Filtered)	Chromium (III+VI) (Filtered)	Chromium III (Filtered)	Copper (Filtered)	Iron	Iron (Filtered)	Magnesium (Filtered)	Manganese (Filtered)	Mercury	Nickel (Filtered)	Phosphorus	Potassium (Filtered)	Selenium (Filtered)	Silicon (Filtered)	Zinc (Filtered)
		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	mg/L
EQL		0.001	0.005	0.001	0.0002	0.00005	0.2	0.002	0.001	0.0002	0.001	0.0005	0.005	0.002	0.1	0.0005	0.00005	0.0005	0.005	0.1	0.0002	20	0.001
Trigger Values ( Max Baseline + 10%)		N/A	-	0.0209	N/A	N/A	1210	N/A	N/A	N/A	N/A	N/A	143	0.264	5170	0.242	0.0001	N/A	0.869	2310	-		0.052
LocCode	Sampled_Date-Tim																						
MW1	30/04/2011	<0.001	-	0.01	<0.001	<0.0001	200	<0.002	-	<0.001	-	-	-	0.008	63	0.17	<0.00005	-	0.06	10	<0.002	14,000	0.016
	20/09/2011	-	1.8	0.002	<0.001	<0.0001	170	-	-	<0.001	-	-	1.8	<0.005	54	0.046	-	<0.001	0.05	7.9	<0.002	13,000	0.027
	27/02/2012	-	3.6	0.002	<0.001	<0.0001	180	-	-	<0.001	-	-	4.2	<0.005	53	0.088	-	<0.001	0.08	7.7	<0.002	-	0.038
	11/10/2012	-	21	0.005	<0.001	<0.0001	170	-	-	<0.001	-	-	30	0.009	51	0.038	-	<0.001	10	8.6	<0.002	-	0.008
	6/03/2013	-	10	<0.005	<0.001	<0.0001	160	-	-	<0.001	-	-	14	<0.005	49	0.17	-	<0.001	<0.01	8.2	<0.002	15,000	0.01
	17/04/2013	<0.001	0.33	<0.005	<0.001	0.0004	160	-	-	<0.001	-	0.001	0.39	<0.005	49	0.087	-	<0.001	0.02	8.2	<0.002	16,000	0.01
	17/10/2013	<0.0001	0.38	0.006	0.0008	<0.00005	66	-	<0.001	<0.0002	<0.001	<0.0005	1.47	0.437	29	0.425	<0.0001	0.001	0.015	13	0.0005	14,800	0.005
	9/04/2014	<0.0001	0.06	<0.005	0.0008	<0.00005	57	-	<0.001	<0.0002	<0.001	<0.0005	0.57	0.43	31	0.272	<0.0001	<0.0005	0.049	10	0.001	17,500	<0.001
	30/10/2014	<0.0001	0.03	0.018	0.0006	<0.00005	88	-	<0.001	<0.0002	<0.001	<0.0005	0.33	0.052	32	0.204	<0.0001	0.0008	0.034	11	0.0006	17,100	0.009
	30/04/2015	<0.0001	0.09	0.006	0.0004	<0.00005	92	<0.001	<0.001	<0.0002	<0.0001	0.0005	0.32	0.044	33	0.08	<0.0001	0.0007	0.046	9	0.001	18000	0.003
	23/11/2015	<0.0002	1.37	0.006	0.0008	<0.0001	98	<0.001	-	<0.0005	<0.001	<0.001	0.42	<0.005	33	0.0087	<0.0001	0.001	0.023	10	<0.002	21,100	<0.005
MW2	30/04/2011	<0.001	-	0.005	<0.001	<0.0001	99	<0.002	-	<0.001	-	-	-	<0.005	66	<0.005 - 0.005	<0.00005	-	0.09	19	<0.002	12,000	0.013
	20/09/2011	-	4.2	0.002	<0.001	<0.0001	150	-	-	<0.001	-	-	6	<0.005	98	0.001	-	<0.001	0.06	20	<0.002	11,000	0.021
	27/02/2012	-	3.6	0.005	<0.001	<0.0001	240	-	-	<0.001	-	-	4.6	0.24	140	0.22	-	<0.001	0.03	24	<0.002	-	0.047
	11/10/2012	-	9.2	0.002	<0.001	<0.0001	160	-	-	<0.001	-	-	12	<0.005	94	0.01	-	<0.001	0.17	21	<0.002	-	0.021
	6/03/2013	-	10	0.006	<0.001	<0.0001	150	-	-	<0.001	-	-	15	<0.005	87	0.012	-	<0.001	<0.01	21	<0.002	13,000	0.017
	17/10/2013	<0.0001	0.04	<0.005	<0.0002	<0.00005	112	-	<0.001	<0.0002	<0.001	<0.0005	0.06	<0.002	76	<0.0005	<0.0001	<0.0005	0.008	18	0.0031	10,600	<0.001
	17/04/2013	<0.001	3.5	<0.005	<0.001	0.0003	160	-	-	<0.001	-	<0.001	5.2	<0.005	100	0.012	-	<0.001	0.1	23	<0.002	13,000	0.012
	9/04/2014	<0.0001	0.02	<0.005	<0.0002	<0.00005	71	-	<0.001	<0.0002	<0.001	<0.0005	<0.05	<0.002	57	0.0009	<0.0001	<0.0005	0.032	17	0.0011	11,700	<0.001
	29/10/2014	<0.0001	0.01	0.017	<0.0002	<0.00005	98	-	<0.001	<0.0002	<0.001	<0.0005	<0.05	<0.002	64	0.0024	<0.0001	<0.0005	0.039	18	0.0016	10,800	0.006
	30/04/2015	0.0001	0.1	<0.005	0.0002	<0.00005	103	<0.001	<0.002	<0.0002	<0.0001	0.0015	0.14	0.004	66	0.001	<0.0001	0.0005	0.019	18	0.0025	13,900	0.021
	23/11/2015	<0.0002	0.02	<0.005	<0.0005	<0.0001	94	<0.001	-	<0.0005	<0.001	<0.001	<0.05	<0.005	57	<0.0005	<0.0001	<0.0005	0.01	18	0.004	14,400	<0.005
MW3	30/04/2011	<0.005	-	0.013	<0.005	<0.0005	120	<0.002	-	<0.005	-	-	-	<0.025	300	0.02 - 0.022	<0.00005	-	0.16	130	<0.01	16,000	0.02
	20/09/2011	-	5.8	0.019	<0.005	<0.0005	85	-	-	<0.005	-	-	7.4	<0.025	210	0.014	-	<0.005	0.05	90	<0.01	15,000	0.047
	27/02/2012	-	6.5	0.005	<0.005	<0.0005	95	-	-	<0.005	-	-	6.8	<0.025	210	0.026	-	<0.005	0.05	120	<0.01	-	0.032
	11/10/2012	-	5	<0.01	<0.01	<0.001	100	-	-	<0.01	-	-	5.8	<0.05	260	0.027	-	<0.01	0.06	120	<0.02	-	0.031
	6/03/2013	-	5.8	<0.025	<0.005	<0.0005	130	-	-	<0.005	-	-	6.3	<0.025	340	0.018	-	<0.005	1.6	130	<0.01	17,000	<0.025
	17/04/2013	<0.01	14	0.072	<0.01	<0.001	350	-	-	<0.01	-	<0.01	21	0.52	910	1.7	-	<0.01	0.16	340	<0.02	14,000	<0.05
	17/10/2013	<0.0001	<0.01	0.021	0.0008	<0.00005	91	-	<0.001	<0.0002	<0.001	0.0005	<0.05	0.01	232	0.0038	<0.0001	0.0006	<0.005	97	0.0038	17,400	<0.001
	9/04/2014	<0.0001	0.02	<0.005	0.001	<0.00005	104	-	<0.001	<0.0002	<0.001	0.0017	<0.05	<0.002	286	0.0133	<0.0001	<0.0005	0.044	115	0.0035	16,600	<0.001
	29/10/2014	<0.0001	0.03	0.024	0.0014	<0.00005	68	-	<0.001	0.0004	<0.001	0.0014	<0.05	0.005	196	0.002	<0.0001	0.0012	0.038	100	0.0024	17,100	0.025
	29/04/2015	<0.0001	0.03	<0.005	0.0009	<0.00005	75	<0.010	-	0.0003	0.0003	0.0006	<0.05	<0.002	208	0.0131	<0.0001	<0.0005	0.025	114	0.0032	19,800	0.003
	23/11/2015	<0.0002	0.04	0.013	0.0013	<0.0001	78	<0.001	-	<0.0005	<0.001	0.002	0.08	0.055	214	0.102	<0.0001	<0.0005	0.02	129	0.003	22,000	0.012
MW4	30/04/2011	<0.005	-	<0.005	<0.005	<0.0005	39	<0.002	-	<0.005	-	-	-	<0.025	100	0.013 - 0.014	<0.00005	-	0.79	110	<0.01	8700	0.01
	21/09/2011	-	21	<0.005	<0.005	<0.0005	28	-	-	<0.005	-	-	31	<0.025	68	0.011	-	<0.005	0.14	69	<0.01	7500	0.029
	28/02/2012	-	82	<0.005	<0.005	<0.0005	49	-	-	<0.005	-	-	130	<0.025	96	0.033	-	<0.005	0.48	110	<0.01	-	0.047
	11/10/2012	-	65	<0.01	<0.01	<0.001	69	-	-	<0.01	-	-	130	<0.05	150	0.041	-	<0.01	0.54	110	<0.02	-	0.012
	17/04/2013	<0.005	4.4	0.031	<0.005	<0.0005	94	-	-	<0.005	-	<0.005	7.4	<0.025	190	0.12	-	<0.005	0.05	120	<0.01	11,000	<0.025
	17/10/2013	<0.001	1.33	<0.025	<0.0025	<0.001	972	-	<0.01	<0.0025	<0.02	0.005	1.63	<0.025	3900	0.277	<0.0001	0.0479	0.014	1640	<0.01	7380	<0.025
	9/04/2014	<0.001	0.17	<0.025	<0.001	598	-	<0.001	<0.0025	<0.001	<0.005	<0.5	0.034	2210	0.0029	<0.0001	0.035	<0.005	1200	<0.01	7400	0.042	
	29/10/2014	<0.0004	0.66	0.013	0.0022	<0.0004	248	-	0.002	0.0018	<0.001	<0.002	1.02	0.019	921	0.0746	<0.0001	0.021	0.078	724	<0.004	5820	0.042
	30/04/2015	<0.001	4.8	<0.025	<0.0025	<0.001	1120	<0.010	-	0.004	0.004	<0.005	6.76	<0.025	4590	3.29	<0.0001	0.037	<0.005	1970	<0.01	6670	<0.025
	23/11/2015	0.0002*	3.4*	<0.005	0.002*	0.0005	1020	0.005*	-	0.0051*	<0.001	0.003	4.71*	<0.005	3960	0.975*	<0.0001	0.034	0.047*	2270	0.004	6850*	0.006*
	MW5	29/04/2015	<0.05	-	<0.05	<0.05	<0.005	1000	0.01	-	<0.05	-	-	-	<0.25	4100	0.2 - 0.22	0.00011	-	0.11	1900	<0.1	4900





Field Duplicates (WATER)  
 Filter: SDG in('EP1516256')

SDG	EP1516256	EP1516256	RPD
Field_ID	MW04	QC01_231115	
Sampled_Date-Time	23/11/2015	23/11/2015	
Sample Type	Duplicate		

Chem_Group	ChemName	Units	LOR			
	Silicon as SiO2 (Filtered)	mg/l	0.1	14.5	14.7	1
	Sulfate as SO4 - Turbidimetric (Filtered)	mg/l	1	4070.0	4190.0	3
	Unionized Hydrogen Sulfide	mg/l	0.1	<0.1	<0.1	0
BTEX	Benzene	µg/L	1	<1.0	<1.0	0
	Ethylbenzene	µg/L	2	<2.0	<2.0	0
	Toluene	µg/L	2	<2.0	<2.0	0
	Total BTEX	mg/l	0.001	<0.001	<0.001	0
	Xylene (m & p)	µg/L	2	<2.0	<2.0	0
	Xylene (o)	µg/L	2	<2.0	<2.0	0
	Xylene Total	µg/L	2	<2.0	<2.0	0
	C6-C10 less BTEX (F1)	mg/l	0.02	<0.02	<0.02	0
Inorganics	Alkalinity (Bicarbonate as CaCO3)	mg/l	1	203.0	179.0	13
	Alkalinity (Carbonate as CaCO3)	mg/l	1	<1.0	<1.0	0
	Alkalinity (Hydroxide) as CaCO3	µg/l	1000	<1000.0	<1000.0	NA
	Alkalinity (total) as CaCO3	mg/l	1	203.0	179.0	13
	Ammonia as N	µg/l	5	<5.0	7.0	<b>33</b>
	Anions Total	meq/L	0.01	2120.0	2190.0	3
	Cations Total	meq/L	0.01	2240.0	1970.0	13
	Chloride	mg/l	1	72200.0	74400.0	3
	Fluoride	mg/l	0.1	0.3	0.3	0
	Kjeldahl Nitrogen Total	mg/l	0.05	<b>0.22</b>	<b>0.51</b>	<b>79</b>
	Nitrate (as N)	mg/l	0.002	1.21	0.989	20
	Nitrite (as N)	mg/l	0.002	<0.002	0.002	NA
	Nitrogen (Total Oxidised)	mg/l	0.002	1.21	0.991	20
	Nitrogen (Total)	µg/l	50	1430.0	1500.0	5
	Reactive Phosphorus as P	mg/l	0.001	0.009	0.008	12
	Sodium (Filtered)	mg/l	1	41600.0	36300.0	14
	Sulphide	mg/l	0.1	<0.1	<0.1	NA
	TDS	mg/l	10	128000.0	129000.0	1
	Hardness as CaCO3 (Filtered)	mg/l	1	18800.0	17200.0	9
	TSS	mg/l	5	133.0	143.0	7
Lead	Lead (Filtered)	mg/l	0.0002	<0.0002	0.0002	NA
Metals	Aluminium (Filtered)	mg/l	0.005	<0.005	<0.005	NA
	Aluminium	mg/l	0.01	<b>1.45</b>	<b>3.4</b>	<b>80</b>
	Arsenic (Filtered)	mg/l	0.0005	0.0014	0.0023	<b>49</b>
	Cadmium (Filtered)	mg/l	0.0002	0.0005	0.0005	0
	Calcium (Filtered)	mg/l	1	1020.0	920.0	10
	Chromium (hexavalent) (Filtered)	mg/l	0.001	0.004	0.005	22
	Chromium (III+VI) (Filtered)	mg/l	0.0005	0.0048	0.0051	6
	Chromium (Trivalent)	mg/l	0.001	<0.001	<0.001	NA
	Copper (Filtered)	mg/l	0.001	0.003	0.003	0
	Iron (Filtered)	mg/l	0.005	<0.005	0.006	NA
	Iron	mg/l	0.05	<b>1.82</b>	<b>4.71</b>	<b>89</b>
	Magnesium (Filtered)	mg/l	1	3960.0	3630.0	9
	Manganese (Filtered)	mg/l	0.0005	0.903	0.975	8
	Mercury	mg/l	0.0001	<0.0001	<0.0001	0
	Nickel (Filtered)	mg/l	0.0005	<b>&lt;0.0005</b>	<b>0.0342</b>	NA
	Phosphorus	mg/l	0.005	<b>0.013</b>	<b>0.047</b>	<b>113</b>
	Potassium (Filtered)	mg/l	1	2270.0	2000.0	13
	Selenium (Filtered)	mg/l	0.002	0.004	0.003	29
	Silicon (Filtered)	µg/l	50	6760.0	6850.0	1
	Zinc (Filtered)	mg/l	0.005	<0.005	0.006	18
PAH/Phenols	Naphthalene	µg/L	5	<5.0	<5.0	NA
TPH	C10-C16	mg/l	0.1	<0.1	<0.1	NA
	C16-C34	mg/l	0.1	<0.1	<0.1	NA
	C34-C40	mg/l	0.1	<0.1	<0.1	NA
	F2-NAPHTHALENE	mg/l	0.1	<0.1	<0.1	NA
	C6 - C9	µg/L	20	<20.0	<20.0	NA
	C10 - C14	µg/L	50	<50.0	<50.0	NA
	C15 - C28	µg/L	100	<100.0	<100.0	NA
	C29-C36	µg/L	50	<50.0	<50.0	NA
	+C10 - C36 (Sum of total)	µg/L	50	<50.0	<50.0	NA
	C10 - C40 (Sum of total)	µg/L	100	<100.0	<100.0	NA
	C6-C10	mg/l	0.02	<0.02	<0.02	NA

\*RPDs have only been considered where a concentration is greater than 1 times the EQL.

\*\*High RPDs are in bold (Acceptable RPDs for each EQL multiplier range are: 100 (1-5 x EQL); 40 (5-10 x EQL); 40 (> 10 x EQL) )

\*\*\*Interlab Duplicates are matched on a per compound basis as methods vary between laboratories. Any methods in the row header relate to those used in the primary laboratory

Field Blanks (WATER)  
 Filter: SDG in('EP1516256')

SDG	EP1516256
Field_ID	QA01_231115
Sampled_Date-Time	23/11/2015
Sample_Type	Rinsate

Chem_Group	ChemName	Units	LOR	
	Silicon as SiO2 (Filtered)	mg/l	0.1	-
	Sulfate as SO4 - Turbidimetric (Filtered)	mg/l	1	<1
	Unionized Hydrogen Sulfide	mg/l	0.1	-
Inorganics	Alkalinity (Bicarbonate as CaCO3)	mg/l	1	<1
	Alkalinity (Carbonate as CaCO3)	mg/l	1	<1
	Alkalinity (Hydroxide) as CaCO3	µg/l	1000	<1000
	Alkalinity (total) as CaCO3	mg/l	1	<1
	Ammonia as N	µg/l	5	-
	Anions Total	meq/L	0.01	<0.01
	Cations Total	meq/L	0.01	<0.01
	Chloride	mg/l	1	<1
	Fluoride	mg/l	0.1	<0.1
	Ionic Balance	%	0.01	-
	Kjeldahl Nitrogen Total	mg/l	0.05	-
	Nitrate (as N)	mg/l	0.002	-
	Nitrite (as N)	mg/l	0.002	-
	Nitrogen (Total Oxidised)	mg/l	0.002	-
	Nitrogen (Total)	µg/l	50	-
	Reactive Phosphorus as P	mg/l	0.001	-
	Sodium (Filtered)	mg/l	1	<1
	Sulphide	mg/l	0.1	-
	TDS	mg/l	10	-
	Hardness as CaCO3 (Filtered)	mg/l	1	<1
	TSS	mg/l	5	-
Lead	Lead (Filtered)	mg/l	0.0002	<0.0002
Metals	Aluminium	mg/l	0.01	-
	Aluminium (Filtered)	mg/l	0.005	<0.005
	Arsenic (Filtered)	mg/l	0.0005	<0.0005
	Cadmium (Filtered)	mg/l	0.0002	<0.0001
	Calcium (Filtered)	mg/l	1	<1
	Chromium (hexavalent) (Filtered)	mg/l	0.001	-
	Chromium (III+VI) (Filtered)	mg/l	0.0005	<0.0005
	Chromium (Trivalent)	mg/l	0.001	-
	Copper (Filtered)	mg/l	0.001	<0.001
	Iron	mg/l	0.05	-
	Iron (Filtered)	mg/l	0.005	<0.005
	Magnesium (Filtered)	mg/l	1	<1
	Manganese (Filtered)	mg/l	0.0005	<0.0005
	Mercury	mg/l	0.0001	<0.0001
	Nickel (Filtered)	mg/l	0.0005	<0.0005
	Phosphorus	mg/l	0.005	-
	Potassium (Filtered)	mg/l	1	<1
	Selenium (Filtered)	mg/l	0.002	<0.002
	Silicon (Filtered)	µg/l	50	-
	Zinc (Filtered)	mg/l	0.005	<0.005
PAH/Phenols	Naphthalene	µg/L	5	-
TPH	C10-C16	mg/l	0.1	-
	C16-C34	mg/l	0.1	-
	C34-C40	mg/l	0.1	-
	F2-NAPHTHALENE	mg/l	0.1	-
	C6 - C9	µg/L	20	-
	C10 - C14	µg/L	50	-
	C15 - C28	µg/L	100	-
	C29-C36	µg/L	50	-
	+C10 - C36 (Sum of total)	µg/L	50	-
	C10 - C40 (Sum of total)	µg/L	100	-
	C6-C10	mg/l	0.02	-