DATA VALIDATION REPORT_June 2012

URS Project number:	42213719	**Data verified by:**	Bek Aagaard	Date: 14/03/2013
Client:	Darwin Waterfront Corporation			
Site:	Waterfront Precinct	Signed:	Bekke Aagaard	
URS Project Manager:	Tim Smith			
		Validation by:	Mitch Bacon	Date: 14/03/2013
Matrix type:	Groundwater			
No Primary samples:	23			
Laboratory:	ALS; Envirolab	Signed:		3/4/2013
Lab reference:	ES1214335, ES1214577, ES1214657, ES1214894, 74692	**Project Manager:**	Tim Smith	Date: 14/03/2013
		Signed:		

Data quality objectives

Field data comparison

No apparent anomalies were observed between laboratory results (Batches ES1214577, ES1214657 and ES12144894) and field observations.

Frequency of field QC

Inter-laboratory field QC samples were not analysed to project specifications (1 in 20) for the 23 primary samples collected. Two intra-laboratory duplicates and two inter-laboratory duplicates were taken; however, one of the inter-laboratory duplicates was not forwarded to a secondary laboratory, resulting in three samples were analysed at the primary laboratory.

		Discrepancy	Frequency	Requested Frequency
Intra-laboratory Duplicates Taken	2	None noted	2	2
Inter-laboratory Duplicates Taken	2	None noted	2	2
Intra-laboratory Duplicates Analysed	3	More than target frequency	3	2
Inter-laboratory Duplicates Analysed	1	Less than target frequency	1	2
		Total Frequency	**4**	**4**

The precision of the data could not adequately be assessed as per AS4482.1 recommendations. However, an assessment of the accuracy and precision of the analytical data can be measured on more than just the repeatability of the results. Although secondary laboratory data is an important part of any data validation, the lack of this data does not signify that the analytical proficiency of the primary laboratory cannot be assessed. As quality control data for the primary laboratory (such as method blanks, matrix spikes, laboratory duplicates, LCS recoveries and surrogate recoveries) is present (in the majority) and reliable, the accuracy of the primary laboratory data can be assessed. As inter-laboratory data (where reported) agrees and validates the primary laboratory data for these samples dates, there is no reason to doubt the accuracy (lack of precision is discussed on a batch by batch basis) of the results provided by the primary laboratory.

Batch ES1214335

Intra- and Inter-laboratory duplicates were not analysed at the required frequency for PAHs, trihalomethanes, oxygenated compounds, monocyclic aromatic hydrocarbons, aliphatic and aromatic halogenated compounds, carbon disulfide and total anions and cations analytes. However, the presence of laboratory duplicates for these analytes is considered sufficient for interpretation of the precision of the results except for PAHs. No laboratory duplicate was performed for PAHs; however, as PAHs were reported below LOR, both for the current GME and historically (except for field sample MW120_29102007), the precision and accuracy of the results for PAH is considered acceptable.

Batch ES1214657

No Inter-Laboratory duplicates were reported for Batch ES1214657; however, as the required frequency of Intra-laboratory field duplicates and laboratory duplicates were performed, the precision of the results is assessed as acceptable.

Frequency of laboratory QC

Batches ES1214335, ES1214577 and ES1214657

No laboratory duplicates were reported for PAHs, TPH C10-C40 and ferric iron. The precision of the data has been considered acceptable based on the presence of intra- and inter-laboratory duplicates where available and acceptable for TPH C10-C40 and ferric iron. However, no Intra- and Inter-

	Laboratory duplicates were reported PAHs. The precision of the data has been considered acceptable based on the presence of other laboratory quality control samples, such as method blanks and LCS for PAHs, and as the reported results were consistent with historical results and field observations. **Batch ES1214894** No laboratory duplicates were reported for ferric ilron. The precision of the data has been considered acceptable based on the presence of intra- and inter-laboratory duplicates were available and acceptable.
Tests requested/reported	Samples were analysed and reported as requested on the COC for ES1214335, ES1214577, ES1214894 and 74692; however, on the COC for Batch ES1214657 field sample MW116 was mislabelled as MW113. This sample was reported as MW116, which corresponds to the field notes. According to the Sample Receipt Notification Report (SRN), this sample was placed on hold. One VOC vial was broken in Batch ES1214657 (MW103); however, sufficient sample was available for analysis of volatile organic compounds.
Limits of reporting	LORs were sufficiently low to enable assessment against adopted guideline criteria with the following limitations: • Protocol LOR for anthracene (1 µg/L) above the adopted ILs (0.4 µg/L) • Protocol LOR for benzo(a)pyrene (0.5 µg/L) above the adopted ILs (0.2 µg/L) The limits of reporting were above the adopted investigation levels for anthracene and benzo(a)pyrene. As a result, potential exists for samples to contain concentrations of these analytes above the adopted investigation levels, but below detection limits. This lack of definitive data should be taken into consideration when interpreting analytical results below LOR for these PAHs. • Protocol LOR exceeds the guideline trigger value for arsenic (0.1 mg/L) • Protocol LOR exceeds the guideline trigger value for cadmium (0.0055 mg/L) • Protocol LOR exceeds the guideline trigger value for chromium (0.0044 mg/L) • Protocol LOR exceeds the guideline trigger value for copper (0.0013 mg/L) • Protocol LOR exceeds the guideline trigger value for iron (0.2 mg/L) • Protocol LOR exceeds the guideline trigger value for lead (0.0044 mg/L) • Protocol LOR exceeds the guideline trigger value for nickel (0.07 mg/L) • Protocol LOR exceeds the guideline trigger value for zinc (0.015 mg/L) The limits of reporting exceeded the guideline trigger levels for several metals. As a result, potential exists for samples to contain concentrations of these analytes above the adopted investigation levels, but below detection limits. This lack of definitive data should be taken into consideration when interpreting analytical results below these metals.
Data transcription	A random 10% check of the laboratory results identified no anomalies within the electronic data, the laboratory reports, and tables generated by URS.
Sample management	
Chain of Custody	Chain of custody documents completed.
Handling and preservation	Samples were correctly preserved, chilled with ice and received at the laboratory at 1.8-3.6°C.
Holding time compliance	**Batch ES1221657** The holding time for nitrite as N was exceeded by two days for field samples MW102_13/6/2012, MW103_13/6/2012, MW115_13/6/2012, MW116_13/6/2012, MW125_13/6/2012, MW135_13/6/2012 and MW135_13/6/2012 (ES1214657). Care should be taken with interpreting results for nitrite as N for these field samples, as reported concentrations may be biased low. **Batch ES1221894** The holding time for ferrous iron was exceeded by one day for field samples MW108_14/6/2012, MW121_14/6/2012 and MW129_14/6/2012 (ES1214894). Care should be taken with interpreting results for ferrous iron for these field samples, as reported concentrations may be biased low.
Data precision	
Field duplicate RPDs	RPDs exceeded control limits for the following sample analysis (Sample with higher reported concentrations are in bold): • **MW119_7/6/2012** and QAQC01_7/6/2012 for carbonate (74%); and • MW134_12/6/2012 and **QAQC04_12/6/2012** for ionic balance (111%). Although carbonate and ionic balance are not considered parameters of potential concern and no ILs has been adopted, care should be taken when using the data for these analytes for any quantitative purposes.
Inter-laboratory Replicate (Field triplicate) RPDs	RPDs exceeded control limits for the following sample analysis (Sample with higher reported concentrations is in bold):

- **MW119_7/6/2012** and QAQC02_7/6/2012 for manganese (179%), and similar for ionic balance (200%) and sulphate (34%).

The potential imprecision in manganese concentrations should be taken into consideration when interpreting results close to the ILs. Although manganese is not considered a chemical of potential concern and no ILs has been adopted, care should be taken when using the data for this analyte for any quantitative purposes.

Laboratory duplicate RPDs

The following laboratory duplicate RPD exceeded LOR based limits

Batch	Analyte	Data	LCL (%)	UCL (%)	Comment
ES1214894	TPH >C10 - C16	20.7%	0	20	Exceeded by 0.7%. Anonymous sample

Although this indicates a potential lack of precision for TPH >C10- C16, field duplicate RPDs are acceptable and this is not considered o affect the interpretation of the results.

Data accuracy

Laboratory control spike recovery

The following recoveries were outside control limits and may affect data interpretation:

Batch	Analyte	Recovery (%)	LCL (%)	UCL (%)	Comment
ES1214335	Chromium	85.4	91	111	Recovery 15% less than LCL
ES1214335	Lead	89.3	90	110	Recovery 11% less than LCL
ES1214335	Vanadium	89.6	91	109	Recovery 10% less than LCL
ES1214577	Iodomethane	66.8	70.2	128	Recovery 33% less than LCL
ES1214577	Phenanthrene	119	62.6	116	Recovery 19% greater than UCL
ES1214657	Calcium	115	88	110	Recovery 15% greater than UCL
ES1214657	Potassium	88.1	89	109	Recovery 12% less than LCL
ES1214657	Iodomethane	66.8	70.2	128	Recovery 33% less than LCL

For LCS recoveries reported greater than the upper control limit, the potential exists for reported concentrations to be biased high by up to 19% for phenanthrene and 15% for calcium. Care should be taken with interpreting results for phenanthrene close to the adopted guidelines. As no IL has been adopted for calcium, this potential for over-reporting is not considered to affect the interpretation of the results.

For LCS recoveries reported lower than the lower control limit, the potential exists for reported concentrations to be biased low for chromium (15%), lead (11%), vanadium (10%), iodomethane (33%) and potassium (12%). Care should be taken with interpreting results for chromium and lead close to the adopted guidelines. As no IL has been adopted for vanadium, iodomethane and potassium, this potential for under-reporting is not considered to affect the interpretation of the results.

Matrix spike recovery

The following recoveries were outside control limits and may affect data interpretation:

Sample	Analyte	Recovery (%)	LCL (%)	UCL (%)	Comment
Anonymous (ES1214335)	Sulphate as SO4	ND	-	-	MS recovery not determined, background level greater than or equal to 4x spike level. Anonymous
MW122_07062012	Sulphate as SO4	ND	-	-	MS recovery not determined, background level greater than or equal to 4x spike level.
MW122_07062012	Chloride	ND	-	-	MS recovery not determined, background level greater than or equal to 4x spike level.
Anonymous (ES1214335)	Ferrous Iron	ND	-	-	MS recovery not determined, background level greater than or equal to 4x spike level. Anonymous
Anonymous (ES1214577)	Sulphate as SO4	ND	-	-	MS recovery not determined, background level greater than or equal to 4x spike level. Anonymous

MW122_12062012	Methane	ND	-	-	MS recovery not determined, background level greater than or equal to 4x spike level.
MW103_13062012	Sulphate as SO4	ND	-	-	MS recovery not determined, background level greater than or equal to 4x spike level.
MW116_13062012	Sulphate as SO4	ND	-	-	MS recovery not determined, background level greater than or equal to 4x spike level.
Anonymous (ES1214894)	Manganese	ND	-	-	MS recovery not determined, background level greater than or equal to 4x spike level.
ND – Not determined					

As all matrix spike issues were related to non-determination due to background levels being greater than the spike level, this is not considered to affect the interpretation of the accuracy of the results, due to the presence of other laboratory quality control data, including method blanks, LCS recoveries and matrix spikes for analytes analysed under the same analytical method (where applicable).

Batches ES1214335 and ES1214577
Matrix spike recoveries were not reported for PAHs, TPH C10-C36, calcium, magnesium, potassium, sodium, ferric iron, oxygenated compounds, monocyclic aromatic hydrocarbons and carbon disulphide. The accuracy of the data for these compound groups is considered acceptable based on the presence of other quality control data, such as method blanks, LCS recoveries and surrogate recoveries (where applicable).

Batch ES1214657
Matrix spike recoveries were not reported for calcium, magnesium, potassium, sodium, oxygenated compound and carbon disulphide. The accuracy of the data for these compound groups is considered acceptable based on the presence of other quality control data, such as method blanks LCS recoveries and surrogate recoveries (where applicable).

Batch ES1214894
Matrix spike recoveries were not reported for calcium, magnesium, potassium, sodium, oxygenated compounds, monocyclic aromatic hydrocarbons and carbon disulphide. The accuracy of the data for these compound groups is considered acceptable based on the presence of other quality control data, such as method blanks LCS recoveries and surrogate recoveries (where applicable).

Surrogate spike recovery

The following recoveries were outside control limits and may affect data interpretation:

Sample	Analyte	Recovery (%)	LCL (%)	UCL (%)	Comment
MW122_07062012	Toluene_D8	132	79	131	Recovery greater than upper data quality objective

Surrogate recoveries were reported greater than the upper data quality objective for Toluene_D8; hence, there is the potential for the volatile TPH C6-C10 and benzene, toluene, ethylbenzene and xylenes (BTEX) results to be biased high. This is not considered to affect the interpretation of the results, as volatile TPH C6-C10 and BTEX were not reported above the laboratory LOR in this sample.

Batches ES1214577, ES1214657 and ES1214894
Nitrobenzene-D5 surrogate recovery was not reported, representing a surrogate for oxygenated compounds, such as ketones. Due to the presence of other laboratory quality controls, including method blanks, matrix spikes and LCS recoveries, this is not considered to affect the interpretation of the results.

Blank monitoring

Equipment rinsate blank

Batches ES1214335 and ESES1214657

Concentrations of all analytes were reported below the LOR.

Batch ES1214577

The rinsate blank reported concentrations for chromium (0.001 mg/L), lead (0.002 mg/L), manganese (0.007 mg/L) and nickel (0.004 mg/L) above LOR in QCC01_12/6/2012. As the manganese concentration in the rinsate blank is reported well below those reported in primary samples, the potential for cross contamination by inadequate decontamination is not considered to affect the results.
The nickel concentration (0.004 mg/L) in the rinsate blank was reported at equal concentrations as in the primary samples. However, as the reported nickel concentrations in the primary samples (0.037

	mg/L) were well below the adopted guidelines (0.07 mg/L) this is not considered to affect the interpretation of the results. As chromium and lead concentrations were reported below LOR in primary samples, it is apparent that these results are not caused by cross contamination during sampling or transportation is not considered to affect the results.
Field blank	Concentrations of all analytes were reported below the LOR.
Trip blank	Concentrations of all analytes were reported below the LOR. **Batches ES1214577, ES1214657 and ES1214894** No trip blanks were analysed; however, due to the presence of a rinsate blank , which did not report any volatile analytes above laboratory LOR, this is not considered to affect the interpretation of cross-contamination
Method blank	Concentrations of all analytes were reported below the LOR. **Batches ES1214335, ES1214577 and ES1214894** Method blank recoveries were not reported for ferric iron and alkalinity. The accuracy of alkalinity and ferric iron data could not be assessed. This should be taken into consideration when interpreting the accuracy of the results for these analytes. **Batch ES1214657** Method blank recoveries were not reported for alkalinity. The accuracy of alkalinity data could not be assessed. This should be taken into consideration when interpreting the accuracy of the results for this analyte.

Site Name	Waterfront Precinct
Project No.	42213719
Project Manager	Tim Smith
Matrix	Water
Laboratory	ALS / EnviroLab
Batch File Number	ES1214335 / 74692

Analytical Method	Analytical Parameter	Number of Tests Requested	Number of Tests Reported	Number of Primary Samples	Holding Times (a)	Limits of Reporting (b)	Field Blank (1 per day)		Rinsate Blank (1 per day)		Trip Blank (1 per esky with VOCs)		Method Blank (1 per batch)		Intra-Laboratory Duplicate Sample (1 in 20)		Inter-Laboratory Duplicate Sample (1 in 20)		Lab Duplicate (1 in 10)		Matrix Spike (1 in 20)		LCS (1 per batch)		Surrogates (GC-MS organics)	
							Number Required	Number Reported	Number Required	Number Reported	Number Required	Number Reported	Number Required	Number Reported	Number Required	Number Reported	Number Required	Number Reported	Number Required	Number Reported	Number Required	Number Reported	Number Required	Number Reported	Reported	OK
METALS ANALYSIS/ALS/EG020F	Arsenic	11	11	7	✓	×	1	1	1	1	0	0	1	2	1	1	1	1	2	3	1	2	1	2	-	-
	Cadmium	11	11	7	✓	×	1	1	1	1	0	0	1	2	1	1	1	1	2	3	1	2	1	2	-	-
	Chromium	11	11	7	✓	×	1	1	1	1	0	0	1	2	1	1	1	1	2	3	1	2	1	2	-	-
	Copper	11	11	7	✓	×	1	1	1	1	0	0	1	2	1	1	1	1	2	3	1	2	1	2	-	-
	Lead	11	11	7	✓	×	1	1	1	1	0	0	1	2	1	1	1	1	2	3	1	2	1	2	-	-
	Manganese	11	11	7	✓	✓	1	1	1	1	0	0	1	2	1	1	1	1	2	3	1	2	1	2	-	-
	Nickel	11	11	7	✓	×	1	1	1	1	0	0	1	2	1	1	1	1	2	3	1	2	1	2	-	-
	Vanadium	11	11	7	✓	×	1	1	1	1	0	0	1	2	1	1	1	1	2	3	1	2	1	2	-	-
	Zinc	11	11	7	✓	×	1	1	1	1	0	0	1	2	1	1	1	1	2	3	1	2	1	2	-	-
METALS ANALYSIS/ALS/EG035F	Mercury	11	11	7	✓	✓	1	1	1	1	0	0	1	2	1	1	1	1	2	3	1	2	1	2	-	-
VOLATILES ANALYSIS/ALS/EP080	Benzene	12	12	7	✓	✓	1	1	1	1	1	1	1	1	1	1	1	1	2	2	1	1	1	1	✓	✓
	Ethylbenzene	12	12	7	✓	✓	1	1	1	1	1	1	1	1	1	1	1	1	2	2	1	1	1	1	✓	✓
	meta- & para-Xylene	12	12	7	✓	✓	1	1	1	1	1	1	1	1	1	1	1	1	2	2	1	1	1	1	✓	✓
	Naphthalene	12	12	7	✓	✓	1	1	1	1	1	1	1	2	1	1	1	1	2	3	1	1	1	2	✓	✓
	ortho-Xylene	12	12	7	✓	✓	1	1	1	1	1	1	1	1	1	1	1	1	2	2	1	1	1	1	✓	✓
	Toluene	12	12	7	✓	✓	1	1	1	1	1	1	1	2	1	1	1	1	2	3	1	2	1	2	✓	✓
SEMIVOLATILES ANALYSIS/ALS/EP075(SIM)B	Acenaphthene	2	2	2	✓	✓	0	0	0	0	0	0	1	1	1	0	1	0	1	0	1	0	1	1	✓	✓
	Acenaphthylene	2	2	2	✓	✓	0	0	0	0	0	0	1	1	1	0	1	0	1	0	1	0	1	1	✓	✓
	Anthracene	2	2	2	✓	×	0	0	0	0	0	0	1	1	1	0	1	0	1	0	1	0	1	1	✓	✓
	Benz(a)anthracene	2	2	2	✓	✓	0	0	0	0	0	0	1	1	1	0	1	0	1	0	1	0	1	1	✓	✓
	Benzo(a)pyrene	2	2	2	✓	×	0	0	0	0	0	0	1	1	1	0	1	0	1	0	1	0	1	1	✓	✓
	Benzo(b)fluoranthene	2	2	2	✓	✓	0	0	0	0	0	0	1	1	1	0	1	0	1	0	1	0	1	1	✓	✓
	Benzo(g,h,i)perylene	2	2	2	✓	✓	0	0	0	0	0	0	1	1	1	0	1	0	1	0	1	0	1	1	✓	✓
	Benzo(k)fluoranthene	2	2	2	✓	✓	0	0	0	0	0	0	1	1	1	0	1	0	1	0	1	0	1	1	✓	✓
	Chrysene	2	2	2	✓	✓	0	0	0	0	0	0	1	1	1	0	1	0	1	0	1	0	1	1	✓	✓
	Dibenz(a,h)anthracene	2	2	2	✓	✓	0	0	0	0	0	0	1	1	1	0	1	0	1	0	1	0	1	1	✓	✓
	Fluoranthene	2	2	2	✓	✓	0	0	0	0	0	0	1	1	1	0	1	0	1	0	1	0	1	1	✓	✓
	Fluorene	2	2	2	✓	✓	0	0	0	0	0	0	1	1	1	0	1	0	1	0	1	0	1	1	✓	✓
	Indeno(1,2,3-cd)pyrene	2	2	2	✓	✓	0	0	0	0	0	0	1	1	1	0	1	0	1	0	1	0	1	1	✓	✓
	Naphthalene	2	2	2	✓	✓	1	1	1	1	1	1	1	1	1	1	1	0	1	0	1	0	1	1	✓	✓
	Phenanthrene	2	2	2	✓	✓	0	0	0	0	0	0	1	1	1	0	1	0	1	0	1	0	1	1	✓	✓
	Pyrene	2	2	2	✓	✓	0	0	0	0	0	0	1	1	1	0	1	0	1	0	1	0	1	1	✓	✓
VOLATILES ANALYSIS/ALS/EP080/071	C6 - C10 Fraction	12	12	7	✓	✓	1	1	1	1	1	1	1	1	1	1	1	1	2	2	1	1	1	1	✓	✓
	C6 - C10 Fraction minus BTEX (F1)	12	12	7	✓	✓	1	1	1	1	1	1	1	1	1	1	1	1	2	2	1	1	1	1	✓	✓
	C6 - C9 Fraction	12	12	7	✓	✓	1	1	1	1	1	1	1	1	1	1	1	1	2	2	1	1	1	1	✓	✓
SEMIVOLATILES ANALYSIS/ALS/EP080/071	>C10 - C16 Fraction	12	12	7	✓	✓	1	1	1	1	0	0	1	1	1	1	1	1	2	0	1	0	1	1	-	-
	>C16 - C34 Fraction	12	12	7	✓	✓	1	1	1	1	0	0	1	1	1	1	1	1	2	0	1	0	1	1	-	-
	>C34 - C40 Fraction	12	12	7	✓	✓	1	1	1	1	0	0	1	1	1	1	1	1	2	0	1	0	1	1	-	-
	C10 - C14 Fraction	12	12	7	✓	✓	1	1	1	1	0	0	1	1	1	1	1	1	2	0	1	0	1	1	-	-
	C15 - C28 Fraction	12	12	7	✓	✓	1	1	1	1	0	0	1	1	1	1	1	1	2	0	1	0	1	1	-	-
	C29 - C36 Fraction	12	12	7	✓	✓	1	1	1	1	0	0	1	1	1	1	1	1	2	0	1	0	1	1	-	-
VOLATILES ANALYSIS/ALS/EP033	Methane	9	9	7	✓	✓	0	0	0	0	0	0	1	1	1	1	1	1	1	2	1	1	1	1	-	-
METALS ANALYSIS/ALS/ED093F	Calcium	9	9	7	✓	✓	0	0	0	0	0	0	1	2	1	1	1	1	1	4	1	0	1	2	-	-
	Magnesium	9	9	7	✓	✓	0	0	0	0	0	0	1	2	1	1	1	1	1	4	1	0	1	2	-	-
	Potassium	9	9	7	✓	✓	0	0	0	0	0	0	1	2	1	1	1	1	1	4	1	0	1	2	-	-
	Sodium	9	9	7	✓	✓	0	0	0	0	0	0	1	2	1	1	1	1	1	4	1	0	1	2	-	-
INSTRUMENT LABORATORY (NON-METALL	Nitrite as N	9	9	7	✓	✓	0	0	0	0	0	0	1	1	1	1	1	1	1	2	1	1	1	1	-	-
INSTRUMENT LABORATORY (NON-METALL	Nitrite + Nitrate as N	9	9	7	✓	✓	0	0	0	0	0	0	1	2	1	1	1	1	1	1	1	`	1	1	-	-
INSTRUMENT LABORATORY (NON-METALL	Sulfate as SO4 - Turbidimetric	9	9	7	✓	✓	0	0	0	0	0	0	1	2	1	1	1	1	1	4	1	2	1	2	-	-
WET CHEMISTRY AND PREPARATION/ALS/E	Sulfide as S2-	9	9	7	✓	✓	0	0	0	0	0	0	1	1	1	1	1	1	1	2	1	1	1	1	-	-
WET CHEMISTRY AND PREPARATION/ALS/E	Sulfite as SO3 2-	9	9	7	✓	✓	0	0	0	0	0	0	1	1	1	1	1	1	1	2	1	0	1	1	-	-
METALS ANALYSIS/ALS/ED040F	Sulfur as S	9	9	7	✓	✓	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	0	1	1	-	-
INSTRUMENT LABORATORY (NON-METALL	Chloride	9	9	7	✓	✓	0	0	0	0	0	0	1	2	1	1	1	1	1	3	1	2	1	4	-	-
METALS ANALYSIS/ALS/EG052FG-MS	Ferric Iron	9	9	7	✓	✓	0	0	0	0	0	0	1	0	1	1	1	1	1	0	1	0	1	0	-	-
INSTRUMENT LABORATORY (NON-METALL	Ferrous Iron	9	9	7	✓	✓	0	0	0	0	0	0	1	1	1	1	1	1	1	2	1	1	1	1	-	-
VOLATILES ANALYSIS/ALS/EP074G	Bromodichloromethane	2	2	2	✓	✓	0	0	0	0	0	0	1	1	1	0	1	0	1	1	0	0	1	1	✓	✓
	Bromoform	2	2	2	✓	✓	0	0	0	0	0	0	1	1	1	0	1	0	1	1	0	0	1	1	✓	✓
	Chloroform	2	2	2	✓	✓	0	0	0	0	0	0	1	1	1	0	1	0	1	1	0	0	1	1	✓	✓
	Dibromochloromethane	2	2	2	✓	✓	0	0	0	0	0	0	1	1	1	0	1	0	1	1	0	0	1	1	✓	✓
VOLATILES ANALYSIS/ALS/EP074B	2-Butanone (MEK)	2	2	2	✓	✓	0	0	0	0	0	0	1	1	1	0	1	0	1	1	1	0	1	1	✓	×
	2-Hexanone (MBK)	2	2	2	✓	✓	0	0	0	0	0	0	1	1	1	0	1	0	1	1	1	0	1	1	✓	×
	4-Methyl-2-pentanone (MIBK)	2	2	2	✓	✓	0	0	0	0	0	0	1	1	1	0	1	0	1	1	1	0	1	1	✓	×
	Vinyl Acetate	2	2	2	✓	✓	0	0	0	0	0	0	1	1	1	0	1	0	1	1	1	0	1	1	✓	×

Site Name	Waterfront Precinct
Project No.	42213719
Project Manager	Tim Smith
Matrix	Water
Laboratory	ALS / EnviroLab
Batch File Number	ES1214335 / 74692

Analytical Method	Analytical Parameter	Number of Tests Requested	Number of Tests Reported	Number of Primary Samples	Holding Times (a)	Limits of Reporting (b)	Field Blank (1 per day)		Rinsate Blank (1 per day)		Trip Blank (1 per esky with VOCs)		Method Blank (1 per batch)		Intra-Laboratory Duplicate Sample (1 in 20)		Inter-Laboratory Duplicate Sample (1 in 20)		Lab Duplicate (1 in 10)		Matrix Spike (1 in 20)		LCS (1 per batch)		Surrogates (GC-MS organics)	
							Number Required	Number Reported	Number Required	Number Reported	Number Required	Number Reported	Number Required	Number Reported	Number Required	Number Reported	Number Required	Number Reported	Number Required	Number Reported	Number Required	Number Reported	Number Required	Number Reported	Reported	OK
VOLATILES ANALYSIS/ALS/EP074A	1.2.4-Trimethylbenzene	2	2	2	✓	✓	0	0	0	0	0	0	1	1	1	0	1	0	1	1	1	0	1	1	✓	✓
	1.3.5-Trimethylbenzene	2	2	2	✓	✓	0	0	0	0	0	0	1	1	1	0	1	0	1	1	1	0	1	1	✓	✓
	Isopropylbenzene	2	2	2	✓	✓	0	0	0	0	0	0	1	1	1	0	1	0	1	1	1	0	1	1	✓	✓
	n-Butylbenzene	2	2	2	✓	✓	0	0	0	0	0	0	1	1	1	0	1	0	1	1	1	0	1	1	✓	✓
	n-Propylbenzene	2	2	2	✓	✓	0	0	0	0	0	0	1	1	1	0	1	0	1	1	1	0	1	1	✓	✓
	p-Isopropyltoluene	2	2	2	✓	✓	0	0	0	0	0	0	1	1	1	0	1	0	1	1	1	0	1	1	✓	✓
	sec-Butylbenzene	2	2	2	✓	✓	0	0	0	0	0	0	1	1	1	0	1	0	1	1	1	0	1	1	✓	✓
	Styrene	2	2	2	✓	✓	0	0	0	0	0	0	1	1	1	0	1	0	1	1	1	0	1	1	✓	✓
	tert-Butylbenzene	2	2	2	✓	✓	0	0	0	0	0	0	1	1	1	0	1	0	1	1	1	0	1	1	✓	✓
VOLATILES ANALYSIS/ALS/EP074E	1.1.1.2-Tetrachloroethane	2	2	2	✓	✓	0	0	0	0	0	0	1	1	1	0	1	0	1	1	1	0	1	1	✓	✓
	1.1.1-Trichloroethane	2	2	2	✓	✓	0	0	0	0	0	0	1	1	1	0	1	0	1	1	1	0	1	1	✓	✓
	1.1.2.2-Tetrachloroethane	2	2	2	✓	✓	0	0	0	0	0	0	1	1	1	0	1	0	1	1	1	0	1	1	✓	✓
	1.1.2-Trichloroethane	2	2	2	✓	✓	0	0	0	0	0	0	1	1	1	0	1	0	1	1	1	0	1	1	✓	✓
	1.1-Dichloroethane	2	2	2	✓	✓	0	0	0	0	0	0	1	1	1	0	1	0	1	1	1	0	1	1	✓	✓
	1.1-Dichloroethene	2	2	2	✓	✓	0	0	0	0	0	0	1	1	1	0	1	0	1	1	1	0	1	1	✓	✓
	1.1-Dichloropropylene	2	2	2	✓	✓	0	0	0	0	0	0	1	1	1	0	1	0	1	1	1	0	1	1	✓	✓
	1.2.3-Trichloropropane	2	2	2	✓	✓	0	0	0	0	0	0	1	1	1	0	1	0	1	1	1	0	1	1	✓	✓
	1.2-Dibromo-3-chloropropane	2	2	2	✓	✓	0	0	0	0	0	0	1	1	1	0	1	0	1	1	1	0	1	1	✓	✓
	1.2-Dichloroethane	2	2	2	✓	✓	0	0	0	0	0	0	1	1	1	0	1	0	1	1	1	0	1	1	✓	✓
	1.3-Dichloropropane	2	2	2	✓	✓	0	0	0	0	0	0	1	1	1	0	1	0	1	1	1	0	1	1	✓	✓
	Bromomethane	2	2	2	✓	✓	0	0	0	0	0	0	1	1	1	0	1	0	1	1	1	0	1	1	✓	✓
	Carbon Tetrachloride	2	2	2	✓	✓	0	0	0	0	0	0	1	1	1	0	1	0	1	1	1	0	1	1	✓	✓
	Chloroethane	2	2	2	✓	✓	0	0	0	0	0	0	1	1	1	0	1	0	1	1	1	0	1	1	✓	✓
	Chloromethane	2	2	2	✓	✓	0	0	0	0	0	0	1	1	1	0	1	0	1	1	1	0	1	1	✓	✓
	cis-1.2-Dichloroethene	2	2	2	✓	✓	0	0	0	0	0	0	1	1	1	0	1	0	1	1	1	0	1	1	✓	✓
	cis-1.4-Dichloro-2-butene	2	2	2	✓	✓	0	0	0	0	0	0	1	1	1	0	1	0	1	1	1	0	1	1	✓	✓
	Dibromomethane	2	2	2	✓	✓	0	0	0	0	0	0	1	1	1	0	1	0	1	1	1	0	1	1	✓	✓
	Dichlorodifluoromethane	2	2	2	✓	✓	0	0	0	0	0	0	1	1	1	0	1	0	1	1	1	0	1	1	✓	✓
	Hexachlorobutadiene	2	2	2	✓	✓	0	0	0	0	0	0	1	1	1	0	1	0	1	1	1	0	1	1	✓	✓
	Iodomethane	2	2	2	✓	✓	0	0	0	0	0	0	1	1	1	0	1	0	1	1	1	0	1	1	✓	✓
	Pentachloroethane	2	2	2	✓	✓	0	0	0	0	0	0	1	1	1	0	1	0	1	1	1	0	1	1	✓	✓
	Tetrachloroethene	2	2	2	✓	✓	0	0	0	0	0	0	1	1	1	0	1	0	1	1	1	0	1	1	✓	✓
	trans-1.2-Dichloroethene	2	2	2	✓	✓	0	0	0	0	0	0	1	1	1	0	1	0	1	1	1	0	1	1	✓	✓
	trans-1.4-Dichloro-2-butene	2	2	2	✓	✓	0	0	0	0	0	0	1	1	1	0	1	0	1	1	1	0	1	1	✓	✓
	Trichloroethene	2	2	2	✓	✓	0	0	0	0	0	0	1	1	1	0	1	0	1	1	1	1	1	1	✓	✓
	Trichlorofluoromethane	2	2	2	✓	✓	0	0	0	0	0	0	1	1	1	0	1	0	1	1	1	0	1	1	✓	✓
	Vinyl chloride	2	2	2	✓	✓	0	0	0	0	0	0	1	1	1	0	1	0	1	1	1	0	1	1	✓	✓
VOLATILES ANALYSIS/ALS/EP074F	1.2.3-Trichlorobenzene	2	2	2	✓	✓	0	0	0	0	0	0	1	1	1	0	1	0	1	1	1	0	1	1	✓	✓
	1.2.4-Trichlorobenzene	2	2	2	✓	✓	0	0	0	0	0	0	1	1	1	0	1	0	1	1	1	0	1	1	✓	✓
	1.2-Dichlorobenzene	2	2	2	✓	✓	0	0	0	0	0	0	1	1	1	0	1	0	1	1	1	0	1	1	✓	✓
	1.3-Dichlorobenzene	2	2	2	✓	✓	0	0	0	0	0	0	1	1	1	0	1	0	1	1	1	0	1	1	✓	✓
	1.4-Dichlorobenzene	2	2	2	✓	✓	0	0	0	0	0	0	1	1	1	0	1	0	1	1	1	0	1	1	✓	✓
	2-Chlorotoluene	2	2	2	✓	✓	0	0	0	0	0	0	1	1	1	0	1	0	1	1	1	0	1	1	✓	✓
	4-Chlorotoluene	2	2	2	✓	✓	0	0	0	0	0	0	1	1	1	0	1	0	1	1	1	0	1	1	✓	✓
	Bromobenzene	2	2	2	✓	✓	0	0	0	0	0	0	1	1	1	0	1	0	1	1	1	0	1	1	✓	✓
	Chlorobenzene	2	2	2	✓	✓	0	0	0	0	0	0	1	1	1	0	1	0	1	1	1	1	1	1	✓	✓
VOLATILES ANALYSIS/ALS/EP074C	Carbon disulfide	2	2	2	✓	✓	0	0	0	0	0	0	1	1	1	0	1	0	1	1	1	0	1	1	-	-
VOLATILES ANALYSIS/ALS/EP074D	1.2-Dibromoethane (EDB)	2	2	2	✓	✓	0	0	0	0	0	0	1	1	1	0	1	0	1	1	0	0	1	1	✓	✓
	1.2-Dichloropropane	2	2	2	✓	✓	0	0	0	0	0	0	1	1	1	0	1	0	1	1	0	0	1	1	✓	✓
	2.2-Dichloropropane	2	2	2	✓	✓	0	0	0	0	0	0	1	1	1	0	1	0	1	1	0	0	1	1	✓	✓
	cis-1.3-Dichloropropylene	2	2	2	✓	✓	0	0	0	0	0	0	1	1	1	0	1	0	1	1	0	0	1	1	✓	✓
	trans-1.3-Dichloropropylene	2	2	2	✓	✓	0	0	0	0	0	0	1	1	1	0	1	0	1	1	0	0	1	1	✓	✓
INSTRUMENT LABORATORY (NON-METALL	Bicarbonate Alkalinity as CaCO3	9	9	7	✓	✓	0	0	0	0	0	0	1	0	1	1	1	1	1	2	0	0	1	0	-	-
	Carbonate Alkalinity as CaCO3	9	9	7	✓	✓	0	0	0	0	0	0	1	0	1	1	1	1	1	2	0	0	1	0	-	-
	Hydroxide Alkalinity as CaCO3	9	9	7	✓	✓	0	0	0	0	0	0	1	0	1	1	1	1	1	2	0	0	1	0	-	-
	Total Alkalinity as CaCO3	9	9	7	✓	✓	0	0	0	0	0	0	1	0	1	1	1	1	1	2	0	0	1	1	-	-
INSTRUMENT LABORATORY (NON-METALL	Ionic Balance	9	9	7	✓	✓	0	0	0	0	0	0	1	1	1	1	1	1	1	1	0	0	1	1	-	-
WET CHEMISTRY AND PREPARATION/ALS/E	Total Dissolved Solids @180°C	9	9	7	✓	✓	0	0	0	0	0	0	1	2	1	1	1	1	1	4	0	0	1	4	-	-

Site Name	Waterfront Precinct
Project No.	42213719
Project Manager	Tim Smith
Matrix	Water
Laboratory	ALS
Batch File Number	ES1214577

Analytical Method	Analytical Parameter	Number of Tests Requested	Number of Tests Reported	Number of Primary Samples	Holding Times (a)	Limits of Reporting (b)	Field Blank (1 per day)		Rinsate Blank (1 per day)		Trip Blank (1 per esky with VOCs)		Method Blank (1 per batch)		Intra-Laboratory Duplicate Sample (1 in 20)		Inter-Laboratory Duplicate Sample (1 in 20)		Lab Duplicate (1 in 10)		Matrix Spike (1 in 20)		LCS (1 per batch)		Surrogates (GC-MS organics)	
							Number Required	Number Reported	Number Required	Number Reported	Number Required	Number Reported	Number Required	Number Reported	Number Required	Number Reported	Number Required	Number Reported	Number Required	Number Reported	Number Required	Number Reported	Number Required	Number Reported	Reported	OK
METALS ANALYSIS/ALS/EG020F	Arsenic	10	10	6	✓	×	1	1	1	1	0	0	1	1	1	2	1	0	1	2	1	1	1	1	-	-
	Cadmium	10	10	6	✓	×	1	1	1	1	0	0	1	1	1	2	1	0	1	2	1	1	1	1	-	-
	Chromium	10	10	6	✓	×	1	1	1	1	0	0	1	1	1	2	1	0	1	2	1	1	1	1	-	-
	Copper	10	10	6	✓	×	1	1	1	1	0	0	1	1	1	2	1	0	1	2	1	1	1	1	-	-
	Lead	10	10	6	✓	×	1	1	1	1	0	0	1	1	1	2	1	0	1	2	1	1	1	1	-	-
	Manganese	10	10	6	✓	✓	1	1	1	1	0	0	1	1	1	2	1	0	1	2	1	1	1	1	-	-
	Nickel	10	10	6	✓	×	1	1	1	1	0	0	1	1	1	2	1	0	1	2	1	1	1	1	-	-
	Vanadium	10	10	6	✓	×	1	1	1	1	0	0	1	1	1	2	1	0	1	2	1	1	1	1	-	-
	Zinc	10	10	6	✓	×	1	1	1	1	0	0	1	1	1	2	1	0	1	2	1	1	1	1	-	-
METALS ANALYSIS/ALS/EG035F	Mercury	10	10	6	✓	✓	1	1	1	1	0	0	1	1	1	2	1	0	1	2	1	1	1	1	-	-
VOLATILES ANALYSIS/ALS/EP080	Benzene	10	10	6	✓	✓	1	1	1	1	1	1	1	1	1	2	1	0	1	2	1	1	1	1	✓	✓
	Ethylbenzene	10	10	6	✓	✓	1	1	1	1	1	1	1	1	1	2	1	0	1	2	1	1	1	1	✓	✓
	meta- & para-Xylene	10	10	6	✓	✓	1	1	1	1	1	1	1	1	1	2	1	0	1	2	1	1	1	1	✓	✓
	Naphthalene	10	10	6	✓	✓	1	1	1	1	1	1	1	1	1	2	1	0	1	2	1	1	1	1	✓	✓
	ortho-Xylene	10	10	6	✓	✓	1	1	1	1	1	1	1	1	1	2	1	0	1	2	1	1	1	1	✓	✓
	Toluene	10	10	6	✓	✓	1	1	1	1	1	1	1	1	1	2	1	0	1	2	1	1	1	1	✓	✓
SEMIVOLATILES ANALYSIS/ALS/EP075(SIM)	Acenaphthene	6	6	2	✓	✓	0	0	0	0	0	0	1	1	1	2	1	0	1	0	1	0	1	1	✓	✓
	Acenaphthylene	6	6	2	✓	✓	0	0	0	0	0	0	1	1	1	2	1	0	1	0	1	0	1	1	✓	✓
	Anthracene	6	6	2	✓	×	0	0	0	0	0	0	1	1	1	2	1	0	1	0	1	0	1	1	✓	✓
	Benz(a)anthracene	6	6	2	✓	✓	0	0	0	0	0	0	1	1	1	2	1	0	1	0	1	0	1	1	✓	✓
	Benzo(a)pyrene	6	6	2	✓	×	0	0	0	0	0	0	1	1	1	2	1	0	1	0	1	0	1	1	✓	✓
	Benzo(b)fluoranthene	6	6	2	✓	✓	0	0	0	0	0	0	1	1	1	2	1	0	1	0	1	0	1	1	✓	✓
	Benzo(g,h,i)perylene	6	6	2	✓	✓	0	0	0	0	0	0	1	1	1	2	1	0	1	0	1	0	1	1	✓	✓
	Benzo(k)fluoranthene	6	6	2	✓	✓	0	0	0	0	0	0	1	1	1	2	1	0	1	0	1	0	1	1	✓	✓
	Chrysene	6	6	2	✓	✓	0	0	0	0	0	0	1	1	1	2	1	0	1	0	1	0	1	1	✓	✓
	Dibenz(a,h)anthracene	6	6	2	✓	✓	0	0	0	0	0	0	1	1	1	2	1	0	1	0	1	0	1	1	✓	✓
	Fluoranthene	6	6	2	✓	✓	0	0	0	0	0	0	1	1	1	2	1	0	1	0	1	0	1	1	✓	✓
	Fluorene	6	6	2	✓	✓	0	0	0	0	0	0	1	1	1	2	1	0	1	0	1	0	1	1	✓	✓
	Indeno(1,2,3-cd)pyrene	6	6	2	✓	✓	0	0	0	0	0	0	1	1	1	2	1	0	1	0	1	0	1	1	✓	✓
	Naphthalene	6	6	2	✓	✓	1	1	1	1	1	1	1	1	1	2	1	0	1	0	1	0	1	1	✓	✓
	Phenanthrene	6	6	2	✓	✓	0	0	0	0	0	0	1	1	1	2	1	0	1	0	1	0	1	1	✓	✓
	Pyrene	6	6	2	✓	✓	0	0	0	0	0	0	1	1	1	2	1	0	1	0	1	0	1	1	✓	✓
VOLATILES ANALYSIS/ALS/EP080/071	C6 - C10 Fraction	11	11	6	✓	✓	1	1	1	1	1	1	1	1	1	2	1	0	2	2	1	1	1	1	✓	✓
	C6 - C10 Fraction minus BTEX (F1)	11	11	6	✓	✓	1	1	1	1	1	1	1	1	1	2	1	0	1	2	1	1	1	1	✓	✓
	C6 - C9 Fraction	11	11	6	✓	✓	1	1	1	1	1	1	1	1	1	2	1	0	2	2	1	1	1	1	✓	✓
SEMIVOLATILES ANALYSIS/ALS/EP080/071	>C10 - C16 Fraction	10	10	6	✓	✓	1	1	1	1	0	0	1	1	1	2	1	0	1	0	1	0	1	1	-	-
	>C16 - C34 Fraction	10	10	6	✓	✓	1	1	1	1	0	0	1	1	1	2	1	0	1	0	1	0	1	1	-	-
	>C34 - C40 Fraction	10	10	6	✓	✓	1	1	1	1	0	0	1	1	1	2	1	0	1	0	1	0	1	1	-	-
	C10 - C14 Fraction	10	10	6	✓	✓	1	1	1	1	0	0	1	1	1	2	1	0	1	0	1	0	1	1	-	-
	C15 - C28 Fraction	10	10	6	✓	✓	1	1	1	1	0	0	1	1	1	2	1	0	1	0	1	0	1	1	-	-
	C29 - C36 Fraction	10	10	6	✓	✓	1	1	1	1	0	0	1	1	1	2	1	0	1	0	1	0	1	1	-	-
VOLATILES ANALYSIS/ALS/EP033	Methane	8	8	6	✓	✓	0	0	0	0	0	0	1	1	1	2	1	0	1	2	1	1	1	1	-	-
METALS ANALYSIS/ALS/ED093F	Calcium	8	8	6	✓	✓	0	0	0	0	0	0	1	2	1	2	1	0	1	3	1	0	1	2	-	-
	Magnesium	8	8	6	✓	✓	0	0	0	0	0	0	1	2	1	2	1	0	1	3	1	0	1	2	-	-
	Potassium	8	8	6	✓	✓	0	0	0	0	0	0	1	2	1	2	1	0	1	3	1	0	1	2	-	-
	Sodium	8	8	6	✓	✓	0	0	0	0	0	0	1	2	1	2	1	0	1	3	1	0	1	2	-	-
INSTRUMENT LABORATORY (NON-METALL	Nitrite as N	8	8	6	✓	✓	0	0	0	0	0	0	1	1	1	2	1	0	1	2	1	1	1	1	-	-
INSTRUMENT LABORATORY (NON-METALL	Nitrite + Nitrate as N	8	8	6	✓	✓	0	0	0	0	0	0	1	1	1	2	1	0	1	2	1	1	1	1	-	-
INSTRUMENT LABORATORY (NON-METALL	Sulfate as SO4 - Turbidimetric	8	8	6	✓	✓	0	0	0	0	0	0	1	1	1	2	1	0	1	2	1	1	1	1	-	-
WET CHEMISTRY AND PREPARATION/ALS/E	Sulfide as S2-	8	8	6	✓	✓	0	0	0	0	0	0	1	1	1	2	1	0	1	2	1	1	1	1	-	-
WET CHEMISTRY AND PREPARATION/ALS/E	Sulfite as SO3 2-	8	8	6	✓	✓	0	0	0	0	0	0	1	1	1	2	1	0	1	2	1	0	1	1	-	-
METALS ANALYSIS/ALS/ED040F	Sulfur as S	8	8	6	✓	✓	0	0	0	0	0	0	1	1	1	2	1	0	1	2	1	0	1	1	-	-
INSTRUMENT LABORATORY (NON-METALL	Chloride	8	8	6	✓	✓	0	0	0	0	0	0	1	2	1	2	1	0	1	3	1	2	1	4	-	-
METALS ANALYSIS/ALS/EG052FG-MS	Ferric Iron	8	8	6	✓	✓	0	0	0	0	0	0	1	0	1	2	1	0	1	0	1	0	1	0	-	-
INSTRUMENT LABORATORY (NON-METALL	Ferrous Iron	8	8	6	✓	✓	0	0	0	0	0	0	1	1	1	2	1	0	1	2	1	1	1	1	-	-
VOLATILES ANALYSIS/ALS/EP074G	Bromodichloromethane	4	4	2	✓	✓	0	0	0	0	0	0	1	1	1	2	1	0	1	1	0	0	1	1	✓	✓
	Bromoform	4	4	2	✓	✓	0	0	0	0	0	0	1	1	1	2	1	0	1	1	0	0	1	1	✓	✓
	Chloroform	4	4	2	✓	✓	0	0	0	0	0	0	1	1	1	2	1	0	1	1	0	0	1	1	✓	✓
	Dibromochloromethane	4	4	2	✓	✓	0	0	0	0	0	0	1	1	1	2	1	0	1	1	0	0	1	1	✓	✓
VOLATILES ANALYSIS/ALS/EP074B	2-Butanone (MEK)	4	4	2	✓	✓	0	0	0	0	0	0	1	1	1	2	1	0	1	1	1	0	1	1	✓	×
	2-Hexanone (MBK)	4	4	2	✓	✓	0	0	0	0	0	0	1	1	1	2	1	0	1	1	1	0	1	1	✓	×
	4-Methyl-2-pentanone (MIBK)	4	4	2	✓	✓	0	0	0	0	0	0	1	1	1	2	1	0	1	1	1	0	1	1	✓	×
	Vinyl Acetate	4	4	2	✓	✓	0	0	0	0	0	0	1	1	1	2	1	0	1	1	1	0	1	1	✓	×

Site Name	Waterfront Precinct
Project No.	42213719
Project Manager	Tim Smith
Matrix	Water
Laboratory	ALS
Batch File Number	ES1214577

Analytical Method	Analytical Parameter	Number of Tests Requested	Number of Tests Reported	Number of Primary Samples	Holding Times (a)	Limits of Reporting (b)	Field Blank (1 per day)		Rinsate Blank (1 per day)		Trip Blank (1 per esky with VOCs)		Method Blank (1 per batch)		Intra-Laboratory Duplicate Sample (1 in 20)		Inter-Laboratory Duplicate Sample (1 in 20)		Lab Duplicate (1 in 10)		Matrix Spike (1 in 20)		LCS (1 per batch)		Surrogates (GC-MS organics)	
							Number Required	Number Reported	Number Required	Number Reported	Number Required	Number Reported	Number Required	Number Reported	Number Required	Number Reported	Number Required	Number Reported	Number Required	Number Reported	Number Required	Number Reported	Number Required	Number Reported	Reported	OK
VOLATILES ANALYSIS/ALS/EP074A	1.2.4-Trimethylbenzene	4	4	2	✓	✓	0	0	0	0	0	0	1	1	1	2	1	0	1	1	1	0	1	1	✓	✓
	1.3.5-Trimethylbenzene	4	4	2	✓	✓	0	0	0	0	0	0	1	1	1	2	1	0	1	1	1	0	1	1	✓	✓
	Isopropylbenzene	4	4	2	✓	✓	0	0	0	0	0	0	1	1	1	2	1	0	1	1	1	0	1	1	✓	✓
	n-Butylbenzene	4	4	2	✓	✓	0	0	0	0	0	0	1	1	1	2	1	0	1	1	1	0	1	1	✓	✓
	n-Propylbenzene	4	4	2	✓	✓	0	0	0	0	0	0	1	1	1	2	1	0	1	1	1	0	1	1	✓	✓
	p-Isopropyltoluene	4	4	2	✓	✓	0	0	0	0	0	0	1	1	1	2	1	0	1	1	1	0	1	1	✓	✓
	sec-Butylbenzene	4	4	2	✓	✓	0	0	0	0	0	0	1	1	1	2	1	0	1	1	1	0	1	1	✓	✓
	Styrene	4	4	2	✓	✓	0	0	0	0	0	0	1	1	1	2	1	0	1	1	1	0	1	1	✓	✓
	tert-Butylbenzene	4	4	2	✓	✓	0	0	0	0	0	0	1	1	1	2	1	0	1	1	1	0	1	1	✓	✓
VOLATILES ANALYSIS/ALS/EP074E	1.1.1.2-Tetrachloroethane	4	4	2	✓	✓	0	0	0	0	0	0	1	1	1	2	1	0	1	1	1	0	1	1	✓	✓
	1.1.1-Trichloroethane	4	4	2	✓	✓	0	0	0	0	0	0	1	1	1	2	1	0	1	1	1	0	1	1	✓	✓
	1.1.2.2-Tetrachloroethane	4	4	2	✓	✓	0	0	0	0	0	0	1	1	1	2	1	0	1	1	1	0	1	1	✓	✓
	1.1.2-Trichloroethane	4	4	2	✓	✓	0	0	0	0	0	0	1	1	1	2	1	0	1	1	1	0	1	1	✓	✓
	1.1-Dichloroethane	4	4	2	✓	✓	0	0	0	0	0	0	1	1	1	2	1	0	1	1	1	0	1	1	✓	✓
	1.1-Dichloroethene	4	4	2	✓	✓	0	0	0	0	0	0	1	1	1	2	1	0	1	1	1	1	1	1	✓	✓
	1.1-Dichloropropylene	4	4	2	✓	✓	0	0	0	0	0	0	1	1	1	2	1	0	1	1	1	0	1	1	✓	✓
	1.2.3-Trichloropropane	4	4	2	✓	✓	0	0	0	0	0	0	1	1	1	2	1	0	1	1	1	0	1	1	✓	✓
	1.2-Dibromo-3-chloropropane	4	4	2	✓	✓	0	0	0	0	0	0	1	1	1	2	1	0	1	1	1	0	1	1	✓	✓
	1.2-Dichloroethane	4	4	2	✓	✓	0	0	0	0	0	0	1	1	1	2	1	0	1	1	1	0	1	1	✓	✓
	1.3-Dichloropropane	4	4	2	✓	✓	0	0	0	0	0	0	1	1	1	2	1	0	1	1	1	0	1	1	✓	✓
	Bromomethane	4	4	2	✓	✓	0	0	0	0	0	0	1	1	1	2	1	0	1	1	1	0	1	1	✓	✓
	Carbon Tetrachloride	4	4	2	✓	✓	0	0	0	0	0	0	1	1	1	2	1	0	1	1	1	0	1	1	✓	✓
	Chloroethane	4	4	2	✓	✓	0	0	0	0	0	0	1	1	1	2	1	0	1	1	1	0	1	1	✓	✓
	Chloromethane	4	4	2	✓	✓	0	0	0	0	0	0	1	1	1	2	1	0	1	1	1	0	1	1	✓	✓
	cis-1.2-Dichloroethene	4	4	2	✓	✓	0	0	0	0	0	0	1	1	1	2	1	0	1	1	1	0	1	1	✓	✓
	cis-1.4-Dichloro-2-butene	4	4	2	✓	✓	0	0	0	0	0	0	1	1	1	2	1	0	1	1	1	0	1	1	✓	✓
	Dibromomethane	4	4	2	✓	✓	0	0	0	0	0	0	1	1	1	2	1	0	1	1	1	0	1	1	✓	✓
	Dichlorodifluoromethane	4	4	2	✓	✓	0	0	0	0	0	0	1	1	1	2	1	0	1	1	1	0	1	1	✓	✓
	Hexachlorobutadiene	4	4	2	✓	✓	0	0	0	0	0	0	1	1	1	2	1	0	1	1	1	0	1	1	✓	✓
	Iodomethane	4	4	2	✓	✓	0	0	0	0	0	0	1	1	1	2	1	0	1	1	1	0	1	1	✓	✓
	Pentachloroethane	4	4	2	✓	✓	0	0	0	0	0	0	1	1	1	2	1	0	1	1	1	0	1	1	✓	✓
	Tetrachloroethene	4	4	2	✓	✓	0	0	0	0	0	0	1	1	1	2	1	0	1	1	1	0	1	1	✓	✓
	trans-1.2-Dichloroethene	4	4	2	✓	✓	0	0	0	0	0	0	1	1	1	2	1	0	1	1	1	0	1	1	✓	✓
	trans-1.4-Dichloro-2-butene	4	4	2	✓	✓	0	0	0	0	0	0	1	1	1	2	1	0	1	1	1	0	1	1	✓	✓
	Trichloroethene	4	4	2	✓	✓	0	0	0	0	0	0	1	1	1	2	1	0	1	1	1	1	1	1	✓	✓
	Trichlorofluoromethane	4	4	2	✓	✓	0	0	0	0	0	0	1	1	1	2	1	0	1	1	1	0	1	1	✓	✓
	Vinyl chloride	4	4	2	✓	✓	0	0	0	0	0	0	1	1	1	2	1	0	1	1	1	0	1	1	✓	✓
VOLATILES ANALYSIS/ALS/EP074F	1.2.3-Trichlorobenzene	4	4	2	✓	✓	0	0	0	0	0	0	1	1	1	2	1	0	1	1	1	0	1	1	✓	✓
	1.2.4-Trichlorobenzene	4	4	2	✓	✓	0	0	0	0	0	0	1	1	1	2	1	0	1	1	1	0	1	1	✓	✓
	1.2-Dichlorobenzene	4	4	2	✓	✓	0	0	0	0	0	0	1	1	1	2	1	0	1	1	1	0	1	1	✓	✓
	1.3-Dichlorobenzene	4	4	2	✓	✓	0	0	0	0	0	0	1	1	1	2	1	0	1	1	1	0	1	1	✓	✓
	1.4-Dichlorobenzene	4	4	2	✓	✓	0	0	0	0	0	0	1	1	1	2	1	0	1	1	1	0	1	1	✓	✓
	2-Chlorotoluene	4	4	2	✓	✓	0	0	0	0	0	0	1	1	1	2	1	0	1	1	1	0	1	1	✓	✓
	4-Chlorotoluene	4	4	2	✓	✓	0	0	0	0	0	0	1	1	1	2	1	0	1	1	1	0	1	1	✓	✓
	Bromobenzene	4	4	2	✓	✓	0	0	0	0	0	0	1	1	1	2	1	0	1	1	1	0	1	1	✓	✓
	Chlorobenzene	4	4	2	✓	✓	0	0	0	0	0	0	1	1	1	2	1	0	1	1	1	1	1	1	✓	✓
VOLATILES ANALYSIS/ALS/EP074C	Carbon disulfide	4	4	2	✓	✓	0	0	0	0	0	0	1	1	1	2	1	0	1	1	1	0	1	1	-	-
VOLATILES ANALYSIS/ALS/EP074D	1.2-Dibromoethane (EDB)	4	4	2	✓	✓	0	0	0	0	0	0	1	1	1	2	1	0	1	1	0	0	1	1	✓	✓
	1.2-Dichloropropane	4	4	2	✓	✓	0	0	0	0	0	0	1	1	1	2	1	0	1	1	0	0	1	1	✓	✓
	2.2-Dichloropropane	4	4	2	✓	✓	0	0	0	0	0	0	1	1	1	2	1	0	1	1	0	0	1	1	✓	✓
	cis-1.3-Dichloropropylene	4	4	2	✓	✓	0	0	0	0	0	0	1	1	1	2	1	0	1	1	0	0	1	1	✓	✓
	trans-1.3-Dichloropropylene	4	4	2	✓	✓	0	0	0	0	0	0	1	1	1	2	1	0	1	1	0	0	1	1	✓	✓
INSTRUMENT LABORATORY (NON-METALL	Bicarbonate Alkalinity as CaCO3	6	8	6	✓	✓	0	0	0	0	0	0	1	0	1	2	1	0	1	4	0	0	1	0	-	-
	Carbonate Alkalinity as CaCO3	6	8	6	✓	✓	0	0	0	0	0	0	1	0	1	2	1	0	1	4	0	0	1	0	-	-
	Hydroxide Alkalinity as CaCO3	6	8	6	✓	✓	0	0	0	0	0	0	1	0	1	2	1	0	1	4	0	0	1	0	-	-
	Total Alkalinity as CaCO3	6	8	6	✓	✓	0	0	0	0	0	0	1	0	1	2	1	0	1	4	0	0	1	2	-	-
INSTRUMENT LABORATORY (NON-METALL	Ionic Balance	6	8	6	✓	✓	0	0	0	0	0	0	1	1	1	2	1	0	1	1	0	0	1	1	-	-
WET CHEMISTRY AND PREPARATION/ALS/E	Total Dissolved Solids @180°C	6	8	6	✓	✓	0	0	0	0	0	0	1	1	1	2	1	0	1	2	0	0	1	2	-	-

Site Name	Waterfront Precinct
Project No.	42213719
Project Manager	Tim Smith
Matrix	Water
Laboratory	ALS / EnviroLab
Batch File Number	ES1214657

Analytical Method	Analytical Parameter	Number of Tests Requested	Number of Tests Reported	Number of Primary Samples	Holding Times (a)	Limits of Reporting (b)	Field Blank (1 per day)		Rinsate Blank (1 per day)		Trip Blank (1 per esky with VOCs)		Method Blank (1 per batch)		Intra-Laboratory Duplicate Sample (1 in 20)		Inter-Laboratory Duplicate Sample (1 in 20)		Lab Duplicate (1 in 10)		Matrix Spike (1 in 20)		LCS (1 per batch)		Surrogates (GC-MS organics)	
							Number Required	Number Reported	Number Required	Number Reported	Number Required	Number Reported	Number Required	Number Reported	Number Required	Number Reported	Number Required	Number Reported	Number Required	Number Reported	Number Required	Number Reported	Number Required	Number Reported	Reported	OK
METALS ANALYSIS/ALS/EG020F	Arsenic	9	9	7	✓	×	1	1	1	1	0	0	1	4	0	0	0	0	1	6	1	3	1	4	-	-
	Cadmium	9	9	7	✓	×	1	1	1	1	0	0	1	4	0	0	0	0	1	6	1	3	1	4	-	-
	Chromium	9	9	7	✓	×	1	1	1	1	0	0	1	4	0	0	0	0	1	6	1	3	1	4	-	-
	Copper	9	9	7	✓	×	1	1	1	1	0	0	1	4	0	0	0	0	1	6	1	3	1	4	-	-
	Lead	9	9	7	✓	×	1	1	1	1	0	0	1	4	0	0	0	0	1	6	1	3	1	4	-	-
	Manganese	9	9	7	✓	✓	1	1	1	1	0	0	1	4	0	0	0	0	1	6	1	3	1	4	-	-
	Nickel	9	9	7	✓	×	1	1	1	1	0	0	1	4	0	0	0	0	1	6	1	3	1	4	-	-
	Vanadium	9	9	7	✓	×	1	1	1	1	0	0	1	4	0	0	0	0	1	6	1	3	1	4	-	-
	Zinc	9	9	7	✓	×	1	1	1	1	0	0	1	4	0	0	0	0	1	6	1	3	1	4	-	-
METALS ANALYSIS/ALS/EG035F	Mercury	9	9	7	✓	✓	1	1	1	1	0	0	1	2	0	0	0	0	1	4	1	2	1	2	-	-
VOLATILES ANALYSIS/ALS/EP080	Benzene	9	9	7	✓	✓	1	1	1	1	1	0	1	2	0	0	0	0	1	4	1	2	1	2	✓	✓
	Ethylbenzene	9	9	7	✓	✓	1	1	1	1	1	0	1	2	0	0	0	0	1	4	1	2	1	2	✓	✓
	meta- & para-Xylene	9	9	7	✓	✓	1	1	1	1	1	0	1	2	0	0	0	0	1	4	1	2	1	2	✓	✓
	Naphthalene	9	9	7	✓	✓	1	1	1	1	1	0	1	3	0	0	0	0	1	5	1	1	1	1	✓	✓
	ortho-Xylene	9	9	7	✓	✓	1	1	1	1	1	0	1	2	0	0	0	0	1	4	1	2	1	2	✓	✓
	Toluene	9	9	7	✓	✓	1	1	1	1	1	0	1	2	0	0	0	0	1	4	1	2	1	2	✓	✓
SEMIVOLATILES ANALYSIS/ALS/EP075(SIM)B	Acenaphthene	4	4	2	✓	✓	1	1	1	1	0	0	1	1	0	0	0	0	1	2	1	1	1	1	✓	✓
	Acenaphthylene	4	4	2	✓	✓	1	1	1	1	0	0	1	1	0	0	0	0	1	2	1	0	1	1	✓	✓
	Anthracene	4	4	2	✓	×	1	1	1	1	0	0	1	1	0	0	0	0	1	2	1	0	1	1	✓	✓
	Benz(a)anthracene	4	4	2	✓	✓	1	1	1	1	0	0	1	1	0	0	0	0	1	2	1	0	1	1	✓	✓
	Benzo(a)pyrene	4	4	2	✓	×	1	1	1	1	0	0	1	1	0	0	0	0	1	2	1	0	1	1	✓	✓
	Benzo(b)fluoranthene	4	4	2	✓	✓	1	1	1	1	0	0	1	1	0	0	0	0	1	2	1	0	1	1	✓	✓
	Benzo(g,h,i)perylene	4	4	2	✓	✓	1	1	1	1	0	0	1	1	0	0	0	0	1	2	1	0	1	1	✓	✓
	Benzo(k)fluoranthene	4	4	2	✓	✓	1	1	1	1	0	0	1	1	0	0	0	0	1	2	1	0	1	1	✓	✓
	Chrysene	4	4	2	✓	✓	1	1	1	1	0	0	1	1	0	0	0	0	1	2	1	0	1	1	✓	✓
	Dibenz(a,h)anthracene	4	4	2	✓	✓	1	1	1	1	0	0	1	1	0	0	0	0	1	2	1	0	1	1	✓	✓
	Fluoranthene	4	4	2	✓	✓	1	1	1	1	0	0	1	1	0	0	0	0	1	2	1	0	1	1	✓	✓
	Fluorene	4	4	2	✓	✓	1	1	1	1	0	0	1	1	0	0	0	0	1	2	1	0	1	1	✓	✓
	Indeno(1,2,3-cd)pyrene	4	4	2	✓	✓	1	1	1	1	0	0	1	1	0	0	0	0	1	2	1	0	1	1	✓	✓
	Naphthalene	4	4	2	✓	✓	1	1	1	1	0	0	1	1	0	0	0	0	1	2	1	0	1	1	✓	✓
	Phenanthrene	4	4	2	✓	✓	1	1	1	1	0	0	1	1	0	0	0	0	1	2	1	0	1	1	✓	✓
	Pyrene	4	4	2	✓	✓	1	1	1	1	0	0	1	1	0	0	0	0	1	2	1	1	1	1	✓	✓
VOLATILES ANALYSIS/ALS/EP080/071	C6 - C10 Fraction	9	9	7	✓	✓	1	1	1	1	1	1	1	2	0	0	0	0	1	4	1	2	1	2	✓	✓
	C6 - C10 Fraction minus BTEX (F1)	9	9	7	✓	✓	1	1	1	1	0	0	1	2	0	0	0	0	1	4	1	2	1	2	✓	✓
	C6 - C9 Fraction	9	9	7	✓	✓	1	1	1	1	1	1	1	2	0	0	0	0	1	4	1	2	1	2	✓	✓
SEMIVOLATILES ANALYSIS/ALS/EP080/071	>C10 - C16 Fraction	9	9	7	✓	✓	1	1	1	1	0	0	1	1	0	0	0	0	1	2	1	1	1	1	-	-
	>C16 - C34 Fraction	9	9	7	✓	✓	1	1	1	1	0	0	1	1	0	0	0	0	1	2	1	1	1	1	-	-
	>C34 - C40 Fraction	9	9	7	✓	✓	1	1	1	1	0	0	1	1	0	0	0	0	1	2	1	1	1	1	-	-
	C10 - C14 Fraction	9	9	7	✓	✓	1	1	1	1	0	0	1	1	0	0	0	0	1	2	1	1	1	1	-	-
	C15 - C28 Fraction	9	9	7	✓	✓	1	1	1	1	0	0	1	1	0	0	0	0	1	2	1	1	1	1	-	-
	C29 - C36 Fraction	9	9	7	✓	✓	1	1	1	1	0	0	1	1	0	0	0	0	1	2	1	1	1	1	-	-
VOLATILES ANALYSIS/ALS/EP033	Methane	7	7	7	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	1	1	1	1	1	-	-
METALS ANALYSIS/ALS/ED093F	Calcium	7	7	7	✓	✓	0	0	0	0	0	0	1	3	0	0	0	0	1	6	1	0	1	3	-	-
	Magnesium	7	7	7	✓	✓	0	0	0	0	0	0	1	3	0	0	0	0	1	6	1	0	1	3	-	-
	Potassium	7	7	7	✓	✓	0	0	0	0	0	0	1	3	0	0	0	0	1	6	1	0	1	3	-	-
	Sodium	7	7	7	✓	✓	0	0	0	0	0	0	1	3	0	0	0	0	1	6	1	0	1	3	-	-
INSTRUMENT LABORATORY (NON-METALL	Nitrite as N	7	7	7	✓	✓	0	0	0	0	0	0	1	2	0	0	0	0	1	4	1	2	1	2	-	-
INSTRUMENT LABORATORY (NON-METALL	Nitrite + Nitrate as N	7	7	7	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	2	1	1	1	1	-	-
WET CHEMISTRY AND PREPARATION/ALS/E	Sulfide as S2-	7	7	7	✓	✓	0	0	0	0	0	0	1	2	0	0	0	0	1	2	1	1	1	2	-	-
WET CHEMISTRY AND PREPARATION/ALS/E	Sulfite as SO3 2-	7	7	7	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	1	1	0	1	1	-	-
METALS ANALYSIS/ALS/ED040F	Sulfur as S	7	7	7	✓	✓	0	0	0	0	0	0	1	2	0	0	0	0	1	3	1	0	1	2	-	-
INSTRUMENT LABORATORY (NON-METALL	Sulfate as SO4 - Turbidimetric	7	7	7	✓	✓	0	0	0	0	0	0	1	3	0	0	0	0	1	6	1	3	1	3	-	-
INSTRUMENT LABORATORY (NON-METALL	Chloride	7	7	7	✓	✓	0	0	0	0	0	0	1	3	0	0	0	0	1	6	1	3	1	5	-	-
METALS ANALYSIS/ALS/EG052FG-MS	Ferric Iron	7	7	7	✓	✓	0	0	0	0	0	0	1	2	0	0	0	0	1	4	1	0	1	0	-	-
INSTRUMENT LABORATORY (NON-METALL	Ferrous Iron	7	7	7	×	✓	0	0	0	0	0	0	1	2	0	0	0	0	1	4	1	2	1	2	-	-
VOLATILES ANALYSIS/ALS/EP074G	Bromodichloromethane	2	2	2	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	1	0	0	1	1	✓	✓
	Bromoform	2	2	2	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	1	0	0	1	1	✓	✓
	Chloroform	2	2	2	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	1	0	0	1	1	✓	✓
	Dibromochloromethane	2	2	2	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	1	0	0	1	1	✓	✓
VOLATILES ANALYSIS/ALS/EP074B	2-Butanone (MEK)	2	2	2	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	1	1	0	1	1	✓	×
	2-Hexanone (MBK)	2	2	2	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	1	1	0	1	1	✓	×
	4-Methyl-2-pentanone (MIBK)	2	2	2	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	1	1	0	1	1	✓	×
	Vinyl Acetate	2	2	2	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	1	1	0	1	1	✓	×

Site Name	Waterfront Precinct
Project No.	42213719
Project Manager	Tim Smith
Matrix	Water
Laboratory	ALS / EnviroLab
Batch File Number	ES1214657

Analytical Method	Analytical Parameter	Number of Tests Requested	Number of Tests Reported	Number of Primary Samples	Holding Times (a)	Limits of Reporting (b)	Field Blank (1 per day)		Rinsate Blank (1 per day)		Trip Blank (1 per esky with VOCs)		Method Blank (1 per batch)		Intra-Laboratory Duplicate Sample (1 in 20)		Inter-Laboratory Duplicate Sample (1 in 20)		Lab Duplicate (1 in 10)		Matrix Spike (1 in 20)		LCS (1 per batch)		Surrogates (GC-MS organics)	
							Number Required	Number Reported	Number Required	Number Reported	Number Required	Number Reported	Number Required	Number Reported	Number Required	Number Reported	Number Required	Number Reported	Number Required	Number Reported	Number Required	Number Reported	Number Required	Number Reported	Reported	OK
VOLATILES ANALYSIS/ALS/EP074A	1,2,4-Trimethylbenzene	2	2	2	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	1	1	0	1	1	✓	✓
	1,3,5-Trimethylbenzene	2	2	2	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	1	1	0	1	1	✓	✓
	Isopropylbenzene	2	2	2	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	1	1	0	1	1	✓	✓
	n-Butylbenzene	2	2	2	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	1	1	0	1	1	✓	✓
	n-Propylbenzene	2	2	2	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	1	1	0	1	1	✓	✓
	p-Isopropyltoluene	2	2	2	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	1	1	0	1	1	✓	✓
	sec-Butylbenzene	2	2	2	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	1	1	0	1	1	✓	✓
	Styrene	2	2	2	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	1	1	0	1	1	✓	✓
	tert-Butylbenzene	2	2	2	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	1	1	0	1	1	✓	✓
VOLATILES ANALYSIS/ALS/EP074E	1,1,1,2-Tetrachloroethane	2	2	2	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	1	1	0	1	1	✓	✓
	1,1,1-Trichloroethane	2	2	2	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	1	1	0	1	1	✓	✓
	1,1,2,2-Tetrachloroethane	2	2	2	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	1	1	0	1	1	✓	✓
	1,1,2-Trichloroethane	2	2	2	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	1	1	0	1	1	✓	✓
	1,1-Dichloroethane	2	2	2	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	1	1	0	1	1	✓	✓
	1,1-Dichloroethene	2	2	2	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	1	1	1	1	1	✓	✓
	1,1-Dichloropropylene	2	2	2	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	1	1	0	1	1	✓	✓
	1,2,3-Trichloropropane	2	2	2	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	1	1	0	1	1	✓	✓
	1,2-Dibromo-3-chloropropane	2	2	2	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	1	1	0	1	1	✓	✓
	1,2-Dichloroethane	2	2	2	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	1	1	0	1	1	✓	✓
	1,3-Dichloropropane	2	2	2	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	1	1	0	1	1	✓	✓
	Bromomethane	2	2	2	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	1	1	0	1	1	✓	✓
	Carbon Tetrachloride	2	2	2	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	1	1	0	1	1	✓	✓
	Chloroethane	2	2	2	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	1	1	0	1	1	✓	✓
	Chloromethane	2	2	2	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	1	1	0	1	1	✓	✓
	cis-1,2-Dichloroethene	2	2	2	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	1	1	0	1	1	✓	✓
	cis-1,4-Dichloro-2-butene	2	2	2	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	1	1	0	1	1	✓	✓
	Dibromomethane	2	2	2	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	1	1	0	1	1	✓	✓
	Dichlorodifluoromethane	2	2	2	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	1	1	0	1	1	✓	✓
	Hexachlorobutadiene	2	2	2	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	1	1	0	1	1	✓	✓
	Iodomethane	2	2	2	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	1	1	0	1	1	✓	✓
	Pentachloroethane	2	2	2	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	1	1	0	1	1	✓	✓
	Tetrachloroethene	2	2	2	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	1	1	0	1	1	✓	✓
	trans-1,2-Dichloroethene	2	2	2	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	1	1	0	1	1	✓	✓
	trans-1,4-Dichloro-2-butene	2	2	2	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	1	1	0	1	1	✓	✓
	Trichloroethene	2	2	2	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	1	1	1	1	1	✓	✓
	Trichlorofluoromethane	2	2	2	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	1	1	0	1	1	✓	✓
	Vinyl chloride	2	2	2	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	1	1	0	1	1	✓	✓
VOLATILES ANALYSIS/ALS/EP074F	1,2,3-Trichlorobenzene	2	2	2	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	1	1	0	1	1	✓	✓
	1,2,4-Trichlorobenzene	2	2	2	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	1	1	0	1	1	✓	✓
	1,2-Dichlorobenzene	2	2	2	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	1	1	0	1	1	✓	✓
	1,3-Dichlorobenzene	2	2	2	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	1	1	0	1	1	✓	✓
	1,4-Dichlorobenzene	2	2	2	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	1	1	0	1	1	✓	✓
	2-Chlorotoluene	2	2	2	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	1	1	0	1	1	✓	✓
	4-Chlorotoluene	2	2	2	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	1	1	0	1	1	✓	✓
	Bromobenzene	2	2	2	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	1	1	0	1	1	✓	✓
	Chlorobenzene	2	2	2	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	1	1	1	1	1	✓	✓
VOLATILES ANALYSIS/ALS/EP074C	Carbon disulfide	2	2	2	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	1	1	0	1	1	-	-
VOLATILES ANALYSIS/ALS/EP074D	1,2-Dibromoethane (EDB)	2	2	2	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	1	0	0	1	1	✓	✓
	1,2-Dichloropropane	2	2	2	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	1	0	0	1	1	✓	✓
	2,2-Dichloropropane	2	2	2	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	1	0	0	1	1	✓	✓
	cis-1,3-Dichloropropylene	2	2	2	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	1	0	0	1	1	✓	✓
	trans-1,3-Dichloropropylene	2	2	2	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	1	0	0	1	1	✓	✓
INSTRUMENT LABORATORY (NON-METALL	Bicarbonate Alkalinity as CaCO3	7	7	7	✓	✓	0	0	0	0	0	0	1	0	0	0	0	0	1	2	0	0	0	0	-	-
	Carbonate Alkalinity as CaCO3	7	7	7	✓	✓	0	0	0	0	0	0	1	0	0	0	0	0	1	2	0	0	0	0	-	-
	Hydroxide Alkalinity as CaCO3	7	7	7	✓	✓	0	0	0	0	0	0	1	0	0	0	0	0	1	2	0	0	0	0	-	-
	Total Alkalinity as CaCO3	7	7	7	✓	✓	0	0	0	0	0	0	1	0	0	0	0	0	1	2	0	0	1	1	-	-
INSTRUMENT LABORATORY (NON-METALL	Ionic Balance	7	7	7	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	1	0	0	1	1	-	-
WET CHEMISTRY AND PREPARATION/ALS/E	Total Dissolved Solids @180°C	7	7	7	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	2	0	0	1	2	-	-
INSTRUMENT LABORATORY (NON-METALL	Total Organic Carbon	6	6	6	✓	✓	0	0	0	0	0	0	1	2	0	0	0	0	1	4	1	2	1	2	-	-

Site Name	Waterfront Precinct
Project No.	42213719
Project Manager	Tim Smith
Matrix	Water
Laboratory	ALS / EnviroLab
Batch File Number	ES1214894

Analytical Method	Analytical Parameter	Number of Tests Requested	Number of Tests Reported	Number of Primary Samples	Holding Times (a)	Limits of Reporting (b)	Field Blank (1 per day)		Rinsate Blank (1 per day)		Trip Blank (1 per esky with VOCs)		Method Blank (1 per batch)		Intra-Laboratory Duplicate Sample (1 in 20)		Inter-Laboratory Duplicate Sample (1 in 20)		Lab Duplicate (1 in 10)		Matrix Spike (1 in 20)		LCS (1 per batch)		Surrogates (GC-MS organics)	
							Number Required	Number Reported	Number Required	Number Reported	Number Required	Number Reported	Number Required	Number Reported	Number Required	Number Reported	Number Required	Number Reported	Number Required	Number Reported	Number Required	Number Reported	Number Required	Number Reported	Reported	OK
METALS ANALYSIS/ALS/EG020F	Arsenic	3	3	3	✓	×	0	0	0	0	0	0	1	1	0	0	0	0	1	2	1	1	1	1	-	-
	Cadmium	3	3	3	✓	×	0	0	0	0	0	0	1	1	0	0	0	0	1	2	1	1	1	1	-	-
	Chromium	3	3	3	✓	×	0	0	0	0	0	0	1	1	0	0	0	0	1	2	1	1	1	1	-	-
	Copper	3	3	3	✓	×	0	0	0	0	0	0	1	1	0	0	0	0	1	2	1	1	1	1	-	-
	Lead	3	3	3	✓	×	0	0	0	0	0	0	1	1	0	0	0	0	1	2	1	1	1	1	-	-
	Manganese	3	3	3	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	2	1	1	1	1	-	-
	Nickel	3	3	3	✓	×	0	0	0	0	0	0	1	1	0	0	0	0	1	2	1	1	1	1	-	-
	Vanadium	3	3	3	✓	×	0	0	0	0	0	0	1	1	0	0	0	0	1	2	1	1	1	1	-	-
	Zinc	3	3	3	✓	×	0	0	0	0	0	0	1	1	0	0	0	0	1	2	1	1	1	1	-	-
METALS ANALYSIS/ALS/EG035F	Mercury	3	3	3	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	2	1	1	1	1	-	-
VOLATILES ANALYSIS/ALS/EP080	Benzene	3	3	3	✓	✓	0	0	0	0	1	0	1	2	0	0	0	0	1	4	1	2	1	2	✓	✓
	Ethylbenzene	3	3	3	✓	✓	0	0	0	0	1	0	1	2	0	0	0	0	1	4	1	2	1	2	✓	✓
	meta- & para-Xylene	3	3	3	✓	✓	0	0	0	0	1	0	1	2	0	0	0	0	1	4	1	2	1	2	✓	✓
	Naphthalene	3	3	3	✓	✓	0	0	0	0	1	0	1	3	0	0	0	0	1	6	1	2	1	3	✓	✓
	ortho-Xylene	3	3	3	✓	✓	0	0	0	0	1	0	1	2	0	0	0	0	1	4	1	2	1	2	✓	✓
	Toluene	3	3	3	✓	✓	0	0	0	0	1	0	1	2	0	0	0	0	1	4	1	2	1	2	✓	✓
SEMIVOLATILES ANALYSIS/ALS/EP075(SIM)B	Acenaphthene	1	1	1	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	2	1	1	1	1	✓	✓
	Acenaphthylene	1	1	1	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	2	1	0	1	1	✓	✓
	Anthracene	1	1	1	✓	×	0	0	0	0	0	0	1	1	0	0	0	0	1	2	1	0	1	1	✓	✓
	Benz(a)anthracene	1	1	1	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	2	1	0	1	1	✓	✓
	Benzo(a)pyrene	1	1	1	✓	×	0	0	0	0	0	0	1	1	0	0	0	0	1	2	1	0	1	1	✓	✓
	Benzo(b)fluoranthene	1	1	1	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	2	1	0	1	1	✓	✓
	Benzo(g,h,i)perylene	1	1	1	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	2	1	0	1	1	✓	✓
	Benzo(k)fluoranthene	1	1	1	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	2	1	0	1	1	✓	✓
	Chrysene	1	1	1	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	2	1	0	1	1	✓	✓
	Dibenz(a,h)anthracene	1	1	1	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	2	1	0	1	1	✓	✓
	Fluoranthene	1	1	1	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	2	1	0	1	1	✓	✓
	Fluorene	1	1	1	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	2	1	0	1	1	✓	✓
	Indeno(1,2,3-cd)pyrene	1	1	1	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	2	1	0	1	1	✓	✓
	Naphthalene	1	1	1	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	2	1	0	1	1	✓	✓
	Phenanthrene	1	1	1	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	2	1	0	1	1	✓	✓
	Pyrene	1	1	1	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	2	1	1	1	1	✓	✓
VOLATILES ANALYSIS/ALS/EP080/071	C6 - C10 Fraction	3	3	3	✓	✓	0	0	0	0	1	1	1	2	0	0	0	0	1	4	1	2	1	2	✓	✓
	C6 - C10 Fraction minus BTEX (F1)	3	3	3	✓	✓	0	0	0	0	0	0	1	2	0	0	0	0	1	4	1	2	1	2	✓	✓
	C6 - C9 Fraction	3	3	3	✓	✓	0	0	0	0	1	1	1	2	0	0	0	0	1	4	1	2	1	2	✓	✓
SEMIVOLATILES ANALYSIS/ALS/EP080/071	>C10 - C16 Fraction	3	3	3	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	2	1	1	1	1	-	-
	>C16 - C34 Fraction	3	3	3	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	2	1	1	1	1	-	-
	>C34 - C40 Fraction	3	3	3	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	2	1	1	1	1	-	-
	C10 - C14 Fraction	3	3	3	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	2	1	1	1	1	-	-
	C15 - C28 Fraction	3	3	3	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	2	1	1	1	1	-	-
	C29 - C36 Fraction	3	3	3	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	2	1	1	1	1	-	-
VOLATILES ANALYSIS/ALS/EP033	Methane	3	3	3	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	2	1	1	1	1	-	-
METALS ANALYSIS/ALS/ED093F	Calcium	3	3	3	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	2	1	0	1	1	-	-
	Magnesium	3	3	3	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	2	1	0	1	1	-	-
	Potassium	3	3	3	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	2	1	0	1	1	-	-
	Sodium	3	3	3	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	2	1	0	1	1	-	-
INSTRUMENT LABORATORY (NON-METALL	Nitrite as N	3	3	3	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	2	1	1	1	1	-	-
INSTRUMENT LABORATORY (NON-METALL	Nitrite + Nitrate as N	3	3	3	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	2	1	1	1	1	-	-
WET CHEMISTRY AND PREPARATION/ALS/E	Sulfide as S2-	3	3	3	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	2	1	1	1	1	-	-
WET CHEMISTRY AND PREPARATION/ALS/E	Sulfite as SO3 2-	3	3	3	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	1	1	0	1	1	-	-
METALS ANALYSIS/ALS/ED040F	Sulfate as SO4 2-	3	3	3	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	1	1	0	1	1	-	-
	Sulfur as S	3	3	3	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	1	1	0	1	1	-	-
INSTRUMENT LABORATORY (NON-METALL	Chloride	3	3	3	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	2	1	1	1	2	-	-
METALS ANALYSIS/ALS/EG052FG-MS	Ferric Iron	3	3	3	✓	✓	0	0	0	0	0	0	1	0	0	0	0	0	1	0	1	0	1	0	-	-
INSTRUMENT LABORATORY (NON-METALL	Ferrous Iron	3	3	3	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	2	1	1	1	1	-	-
VOLATILES ANALYSIS/ALS/EP074G	Bromodichloromethane	1	1	1	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	2	0	0	1	1	✓	✓
	Bromoform	1	1	1	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	2	0	0	1	1	✓	✓
	Chloroform	1	1	1	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	2	0	0	1	1	✓	✓
	Dibromochloromethane	1	1	1	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	2	0	0	1	1	✓	✓
VOLATILES ANALYSIS/ALS/EP074B	2-Butanone (MEK)	1	1	1	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	2	1	0	1	1	✓	×
	2-Hexanone (MBK)	1	1	1	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	2	1	0	1	1	✓	×
	4-Methyl-2-pentanone (MIBK)	1	1	1	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	2	1	0	1	1	✓	×
	Vinyl Acetate	1	1	1	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	2	1	0	1	1	✓	×

Site Name	Waterfront Precinct
Project No.	42213719
Project Manager	Tim Smith
Matrix	Water
Laboratory	ALS / EnviroLab
Batch File Number	ES1214894

Analytical Method	Analytical Parameter	Number of Tests Requested	Number of Tests Reported	Number of Primary Samples	Holding Times (a)	Limits of Reporting (b)	Field Blank (1 per day)		Rinsate Blank (1 per day)		Trip Blank (1 per esky with VOCs)		Method Blank (1 per batch)		Intra-Laboratory Duplicate Sample (1 in 20)		Inter-Laboratory Duplicate Sample (1 in 20)		Lab Duplicate (1 in 10)		Matrix Spike (1 in 20)		LCS (1 per batch)		Surrogates (GC-MS organics)	
							Number Required	Number Reported	Number Required	Number Reported	Number Required	Number Reported	Number Required	Number Reported	Number Required	Number Reported	Number Required	Number Reported	Number Required	Number Reported	Number Required	Number Reported	Number Required	Number Reported	Reported	OK
VOLATILES ANALYSIS/ALS/EP074A	1,2,4-Trimethylbenzene	1	1	1	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	2	1	0	1	1	✓	✓
	1,3,5-Trimethylbenzene	1	1	1	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	2	1	0	1	1	✓	✓
	Isopropylbenzene	1	1	1	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	2	1	0	1	1	✓	✓
	n-Butylbenzene	1	1	1	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	2	1	0	1	1	✓	✓
	n-Propylbenzene	1	1	1	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	2	1	0	1	1	✓	✓
	p-Isopropyltoluene	1	1	1	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	2	1	0	1	1	✓	✓
	sec-Butylbenzene	1	1	1	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	2	1	0	1	1	✓	✓
	Styrene	1	1	1	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	2	1	0	1	1	✓	✓
	tert-Butylbenzene	1	1	1	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	2	1	0	1	1	✓	✓
VOLATILES ANALYSIS/ALS/EP074E	1,1,1,2-Tetrachloroethane	1	1	1	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	2	1	0	1	1	✓	✓
	1,1,1-Trichloroethane	1	1	1	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	2	1	0	1	1	✓	✓
	1,1,2,2-Tetrachloroethane	1	1	1	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	2	1	0	1	1	✓	✓
	1,1,2-Trichloroethane	1	1	1	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	2	1	0	1	1	✓	✓
	1,1-Dichloroethane	1	1	1	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	2	1	0	1	1	✓	✓
	1,1-Dichloroethene	1	1	1	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	2	1	1	1	1	✓	✓
	1,1-Dichloropropylene	1	1	1	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	2	1	0	1	1	✓	✓
	1,2,3-Trichloropropane	1	1	1	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	2	1	0	1	1	✓	✓
	1,2-Dibromo-3-chloropropane	1	1	1	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	2	1	0	1	1	✓	✓
	1,2-Dichloroethane	1	1	1	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	2	1	0	1	1	✓	✓
	1,3-Dichloropropane	1	1	1	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	2	1	0	1	1	✓	✓
	Bromomethane	1	1	1	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	2	1	0	1	1	✓	✓
	Carbon Tetrachloride	1	1	1	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	2	1	0	1	1	✓	✓
	Chloroethane	1	1	1	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	2	1	0	1	1	✓	✓
	Chloromethane	1	1	1	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	2	1	0	1	1	✓	✓
	cis-1,2-Dichloroethene	1	1	1	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	2	1	0	1	1	✓	✓
	cis-1,4-Dichloro-2-butene	1	1	1	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	2	1	0	1	1	✓	✓
	Dibromomethane	1	1	1	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	2	1	0	1	1	✓	✓
	Dichlorodifluoromethane	1	1	1	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	2	1	0	1	1	✓	✓
	Hexachlorobutadiene	1	1	1	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	2	1	0	1	1	✓	✓
	Iodomethane	1	1	1	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	2	1	0	1	1	✓	✓
	Pentachloroethane	1	1	1	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	2	1	0	1	1	✓	✓
	Tetrachloroethene	1	1	1	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	2	1	0	1	1	✓	✓
	trans-1,2-Dichloroethene	1	1	1	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	2	1	0	1	1	✓	✓
	trans-1,4-Dichloro-2-butene	1	1	1	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	2	1	0	1	1	✓	✓
	Trichloroethene	1	1	1	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	2	1	1	1	1	✓	✓
	Trichlorofluoromethane	1	1	1	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	2	1	0	1	1	✓	✓
	Vinyl chloride	1	1	1	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	2	1	0	1	1	✓	✓
VOLATILES ANALYSIS/ALS/EP074F	1,2,3-Trichlorobenzene	1	1	1	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	2	1	0	1	1	✓	✓
	1,2,4-Trichlorobenzene	1	1	1	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	2	1	0	1	1	✓	✓
	1,2-Dichlorobenzene	1	1	1	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	2	1	0	1	1	✓	✓
	1,3-Dichlorobenzene	1	1	1	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	2	1	0	1	1	✓	✓
	1,4-Dichlorobenzene	1	1	1	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	2	1	0	1	1	✓	✓
	2-Chlorotoluene	1	1	1	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	2	1	0	1	1	✓	✓
	4-Chlorotoluene	1	1	1	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	2	1	0	1	1	✓	✓
	Bromobenzene	1	1	1	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	2	1	0	1	1	✓	✓
	Chlorobenzene	1	1	1	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	2	1	1	1	1	✓	✓
VOLATILES ANALYSIS/ALS/EP074C	Carbon disulfide	1	1	1	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	2	1	0	1	1	-	-
VOLATILES ANALYSIS/ALS/EP074D	1,2-Dibromoethane (EDB)	1	1	1	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	2	0	0	1	1	✓	✓
	1,2-Dichloropropane	1	1	1	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	2	0	0	1	1	✓	✓
	2,2-Dichloropropane	1	1	1	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	2	0	0	1	1	✓	✓
	cis-1,3-Dichloropropylene	1	1	1	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	2	0	0	1	1	✓	✓
	trans-1,3-Dichloropropylene	1	1	1	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	2	0	0	1	1	✓	✓
INSTRUMENT LABORATORY (NON-METALLI	Bicarbonate Alkalinity as CaCO3	3	3	3	✓	✓	0	0	0	0	0	0	1	0	0	0	0	0	1	2	0	0	1	0	-	-
	Carbonate Alkalinity as CaCO3	3	3	3	✓	✓	0	0	0	0	0	0	1	0	0	0	0	0	1	2	0	0	1	0	-	-
	Hydroxide Alkalinity as CaCO3	3	3	3	✓	✓	0	0	0	0	0	0	1	0	0	0	0	0	1	2	0	0	1	0	-	-
	Total Alkalinity as CaCO3	3	3	3	✓	✓	0	0	0	0	0	0	1	0	0	0	0	0	1	2	0	0	1	1	-	-
INSTRUMENT LABORATORY (NON-METALLI	Ionic Balance	3	3	3	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	2	0	0	1	1	-	-
WET CHEMISTRY AND PREPARATION/ALS/E	Total Dissolved Solids @ 180°C	3	3	3	✓	✓	0	0	0	0	0	0	1	2	0	0	0	0	1	4	0	0	1	4	-	-

Table 1
Analytical Results - June 2012 GME
Darwin Waterfront Corporation

Location Code	MW09	MW10	MW101	MW102	MW103	MW108	MW113	MW114	MW115	MW116	MW117	MW118	MW119
Field ID	MW09	MW10	MW101	MW102	MW103	MW108	MW113	MW114	MW115	MW116	MW117	MW118	MW119
Sampled_Date_Time	7/06/2012	7/06/2012	12/06/2012	13/06/2012	13/06/2012	14/06/2012	12/06/2012	12/06/2012	13/06/2012	13/06/2012	7/06/2012	7/06/2012	7/06/2012
Sample Type	Primary sample	Primary sample	Primary sample	Primary sample	Primary sample	Primary sample	Primary sample	Primary sample	Primary sample	Primary sample	Primary sample	Primary sample	Primary Sample
Batch ID	ES1214335	ES1214335	ES1214577	ES1214657	ES1214657	ES1214894	ES1214577	ES1214577	ES1214657	ES1214657	ES1214335	ES1214335	ES1214335

Chem_Group	ChemName	output unit	EQL	ANZECC 2000 Marine water 95%	ANZECC 2000 Irrigation LTV												
	Total Dissolved Solids @180°C	mg/L	10			**33,000**	**32,000**	-	**4460**	**764**	**3200**	-	-	**28,800**	**1470**	**310**	**326**	**734**
Total Petroleum Hydrocarbons	C6-C9 fraction	µg/L	10			<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
	C10-C14 fraction	µg/L	50			<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	**100**	<50
	C15-C28 fraction	µg/L	100			<100	<100	<100	<100	<100	**300**	<100	<100	<100	<100	<100	**700**	<100
	C29-C36 fraction	µg/L	50			<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	**170**	<50
	C10-C36 fraction (sum)	µg/L	50			<50	<50	<50	<50	<50	**300**	<50	<50	<50	<50	<50	**970**	<50
Total Recoverable Hydrocarbons	C6-C10 fraction (F1 minus BTEX)	µg/L	20			<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
	C6-C10 fraction	µg/L	20			<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
	>C10-C16 fraction	µg/L	100			<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	**190**	<100
	>C16-C34 fraction	µg/L	100			<100	<100	<100	<100	<100	**250**	<100	<100	<100	<100	<100	**860**	<100
	>C34-C40 fraction	µg/L	100			<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100
	>C10-C40 fraction (sum)	µg/L	100			<100	<100	<100	<100	<100	**250**	<100	<100	<100	<100	<100	**1050**	<100
Monocyclic Aromatic Hydrocarbons	Benzene	µg/L	1	**700**		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
	Toluene	µg/L	1			<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
	Ethylbenzene	µg/L	1			<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
	m&p-Xylene	µg/L	2			<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
	o-Xylene	µg/L	1			<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
	Total Xylenes	µg/L	2			<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
	1,2,4-trimethylbenzene	µg/L	5			-	<5	-	-	-	-	-	-	-	-	-	<5	-
	Isopropylbenzene	µg/L	5			-	<5	-	-	-	-	-	-	-	-	-	<5	-
	Styrene	µg/L	5			-	<5	-	-	-	-	-	-	-	-	-	<5	-
	sec-butylbenzene	µg/L	5			-	<5	-	-	-	-	-	-	-	-	-	<5	-
	Sum of BTEX	µg/L	1			<1	<1	-	<1	<1	<1	-	-	<1	<1	<1	<1	<1
	1,3,5-trimethylbenzene	µg/L	5			-	<5	-	-	-	-	-	-	-	-	-	<5	-
	Total BTEX	µg/L	1			<9	<9	<1	<9	<9	<9	<1	<1	<9	<9	<9	<9	<9
Naphthalene	Naphthalene	µg/L	1	**70**		-	<1	-	-	-	-	-	-	-	-	-	<1	-
	Naphthalene (VOC)	µg/L	5			<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Polynuclear Aromatic Hydrocarbons	Acenaphthylene	µg/L	1			-	<1	-	-	-	-	-	-	-	-	-	<1	-
	Acenaphthene	µg/L	1			-	<1	-	-	-	-	-	-	-	-	-	<1	-
	Anthracene	µg/L	1			-	<1	-	-	-	-	-	-	-	-	-	<1	-
	Fluorene	µg/L	1			-	<1	-	-	-	-	-	-	-	-	-	<1	-
	Phenanthrene	µg/L	1			-	<1	-	-	-	-	-	-	-	-	-	<1	-
	Fluoranthene	µg/L	1			-	<1	-	-	-	-	-	-	-	-	-	<1	-
	Benz(a)anthracene	µg/L	1			-	<1	-	-	-	-	-	-	-	-	-	<1	-
	Benzo(b)fluoranthene	µg/L	1			-	<1	-	-	-	-	-	-	-	-	-	<1	-
	Benzo(k)fluoranthene	µg/L	1			-	<1	-	-	-	-	-	-	-	-	-	<1	-
	Benzo(a)pyrene	µg/L	0.5			-	<0.5	-	-	-	-	-	-	-	-	-	<0.5	-
	Benzo(a)pyrene TEQ	µg/L	0.5			-	-	-	-	-	-	-	-	-	-	-	-	-
	Chrysene	µg/L	1			-	<1	-	-	-	-	-	-	-	-	-	<1	-
	Pyrene	µg/L	1			-	<1	-	-	-	-	-	-	-	-	-	<1	-
	Benzo(g,h,i)perylene	µg/L	1			-	<1	-	-	-	-	-	-	-	-	-	<1	-
	Dibenz(a,h)anthracene	µg/L	1			-	<1	-	-	-	-	-	-	-	-	-	<1	-
	Indeno(1,2,3-cd)pyrene	µg/L	1			-	<1	-	-	-	-	-	-	-	-	-	<1	-
	Sum of PAHs	µg/L	0.5			-	<0.5	-	-	-	-	-	-	-	-	-	<0.5	-
Metals	Arsenic	mg/L	0.001		**0.1**	<0.01	<0.01	<0.001	<0.001	<0.001	<0.001	<0.01	**0.001**	<0.01	<0.001	<0.001	**0.001**	<0.001
	Arsenic (Dissolved)	mg/L	0.001		**0.1**	<0.01	<0.01	<0.001	<0.001	<0.001	<0.001	<0.01	**0.001**	<0.01	<0.001	<0.001	**0.001**	<0.001
	Cadmium																	
	Cadmium (Dissolved)	mg/L	0.0001	**0.0055**	**0.01**	<0.001	<0.001	**0.0004**	**0.0106**	**0.002**	<0.0001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001
	Chromium																	
	Chromium (Dissolved)	mg/L	0.001		**0.1**	<0.01	<0.01	<0.001	<0.001	<0.001	<0.001	<0.01	<0.001	<0.01	<0.001	<0.001	<0.001	<0.001
	Copper																	
	Copper (Dissolved)	mg/L	0.001	**0.0013**	**0.2**	<0.01*	<0.01*	<0.001	**0.005**	**0.014**	**0.001**	<0.02*	<0.001	<0.01*	<0.001	<0.001	<0.001	<0.001
	Lead																	
	Lead (Dissolved)	mg/L	0.001	**0.0044**	**2**	<0.01*	<0.01*	<0.001	<0.001	<0.001	<0.001	<0.01*	<0.001	<0.01*	<0.001	<0.001	<0.001	<0.001
	Manganese																	
	Manganese (Dissolved)	mg/L	0.001		**0.2**	<0.01	**0.936**	**0.019**	**0.154**	**0.215**	**0.249**	**2.64**	**15.1**	**0.795**	**14.2**	**0.478**	**2.51**	**0.091**
	Mercury																	
	Mercury (Dissolved)	mg/L	0.00005	**0.0004**	**0.002**	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
	Nickel																	
	Nickel (Dissolved)	mg/L	0.001	**0.07**	**0.2**	<0.01	<0.01	<0.001	**0.014**	**0.004**	<0.001	<0.01	**0.008**	<0.01	**0.005**	**0.006**	<0.001	<0.001
	Zinc																	
	Zinc (Dissolved)	mg/L	0.001	**0.015**	**2**	<0.05*	<0.05*	**0.018**	**0.663**	**0.071**	**0.006**	<0.05*	**0.008**	<0.05*	**0.035**	**0.005**	**0.005**	<0.005
	Vanadium																	
	Vanadium (Dissolved)	mg/L	0.001	**0.1**	**0.1**	<0.1	<0.1	<0.01	<0.01	<0.01	<0.01	<0.1	<0.01	<0.1	<0.01	<0.01	<0.01	<0.01
Halogenated Aromatic Compounds	Chlorobenzene	µg/L	5			-	<5	-	-	-	-	-	-	-	-	-	<5	-
	n-butylbenzene	µg/L	5			-	<5	-	-	-	-	-	-	-	-	-	<5	-
	n-propylbenzene	µg/L	5			-	<5	-	-	-	-	-	-	-	-	-	<5	-
	p-isopropyltoluene	µg/L	5			-	<5	-	-	-	-	-	-	-	-	-	<5	-
	tert-butylbenzene	µg/L	5			-	<5	-	-	-	-	-	-	-	-	-	<5	-
	1,2,3-Trichlorobenzene	µg/L	5			-	<5	-	-	-	-	-	-	-	-	-	<5	-
	1,2,4-Trichlorobenzene	µg/L	5	**80**		-	<5	-	-	-	-	-	-	-	-	-	<5	-
	1,2-Dichlorobenzene	µg/L	5			-	<5	-	-	-	-	-	-	-	-	-	<5	-
	1,3-Dichlorobenzene	µg/L	5			-	<5	-	-	-	-	-	-	-	-	-	<5	-
	1,4-Dichlorobenzene	µg/L	5			-	<5	-	-	-	-	-	-	-	-	-	<5	-
	2-Chlorotoluene	µg/L	5			-	<5	-	-	-	-	-	-	-	-	-	<5	-
	4-Chlorotoluene	µg/L	5			-	<5	-	-	-	-	-	-	-	-	-	<5	-
	Bromobenzene	µg/L	5			-	<5	-	-	-	-	-	-	-	-	-	<5	-

Table 1
Analytical Results - June 2012 GME
Darwin Waterfront Corporation

						Location Code	MW09	MW10	MW101	MW102	MW103	MW108	MW113	MW114	MW115	MW116	MW117	MW118	MW119
						Field ID	MW09	MW10	MW101	MW102	MW103	MW108	MW113	MW114	MW115	MW116	MW117	MW118	MW119
						Sampled_Date_Time	7/06/2012	7/06/2012	12/06/2012	13/06/2012	13/06/2012	14/06/2012	12/06/2012	12/06/2012	13/06/2012	13/06/2012	7/06/2012	7/06/2012	7/06/2012
						Sample Type	Primary sample	Primary sample	Primary sample	Primary sample	Primary sample	Primary sample	Primary sample	Primary sample	Primary sample	Primary sample	Primary sample	Primary sample	Primary Sample
						Batch ID	ES1214335	ES1214335	ES1214577	ES1214657	ES1214657	ES1214894	ES1214577	ES1214577	ES1214657	ES1214657	ES1214335	ES1214335	ES1214335
Halogenated Aliphatic Compounds	1,1,1-Trichloroethane	µg/L	5			-	<5	-	-	-	-	-	-	-	-	-	<5	-
	1,1-Dichloroethane	µg/L	5			-	<5	-	-	-	-	-	-	-	-	-	<5	-
	1,1-Dichloroethene	µg/L	5			-	<5	-	-	-	-	-	-	-	-	-	<5	-
	1,2-Dichloroethane	µg/L	5			-	<5	-	-	-	-	-	-	-	-	-	<5	-
	Carbon Tetrachloride	µg/L	5			-	<5	-	-	-	-	-	-	-	-	-	<5	-
	Chloroethane	µg/L	50			-	<50	-	-	-	-	-	-	-	-	-	<50	-
	cis-1,2-Dichloroethene	µg/L	5			-	<5	-	-	-	-	-	-	-	-	-	<5	-
	Dichlorodifluoromethane	µg/L	50			-	<50	-	-	-	-	-	-	-	-	-	<50	-
	Hexachlorobutadiene	µg/L	5			-	<5	-	-	-	-	-	-	-	-	-	<5	-
	Tetrachloroethene	µg/L	5			-	<5	-	-	-	-	-	-	-	-	-	<5	-
	trans-1,2-Dichloroethene	µg/L	5			-	<5	-	-	-	-	-	-	-	-	-	<5	-
	Trichloroethene	µg/L	5			-	<5	-	-	-	-	-	-	-	-	-	<5	-
	Trichlorofluoromethane	µg/L	50			-	<50	-	-	-	-	-	-	-	-	-	<50	-
	Vinyl chloride	µg/L	50			-	<50	-	-	-	-	-	-	-	-	-	<50	-
	1,1,1,2-Tetrachloroethane	µg/L	5			-	<5	-	-	-	-	-	-	-	-	-	<5	-
	1,1,2,2-Tetrachloroethane	µg/L	5			-	<5	-	-	-	-	-	-	-	-	-	<5	-
	1,1,2-Trichloroethane	µg/L	5	**1900**		-	<5	-	-	-	-	-	-	-	-	-	<5	-
	1,1-Dichloropropene	µg/L	5			-	<5	-	-	-	-	-	-	-	-	-	<5	-
	1,2,3-Trichloropropane	µg/L	5			-	<5	-	-	-	-	-	-	-	-	-	<5	-
	1,2-Dibromo-3-chloropropane	µg/L	5			-	<5	-	-	-	-	-	-	-	-	-	<5	-
	1,3-Dichloropropane	µg/L	5			-	<5	-	-	-	-	-	-	-	-	-	<5	-
	Chloromethane	µg/L	50			-	<50	-	-	-	-	-	-	-	-	-	<50	-
	cis-1,4-Dichloro-2-butene	µg/L	5			-	<5	-	-	-	-	-	-	-	-	-	<5	-
	Dibromomethane	µg/L	5			-	<5	-	-	-	-	-	-	-	-	-	<5	-
	Iodomethane	µg/L	5			-	<5	-	-	-	-	-	-	-	-	-	<5	-
	Pentachloroethane	µg/L	5			-	<5	-	-	-	-	-	-	-	-	-	<5	-
	trans-1,4-Dichlorp-2-butene	µg/L	5			-	<5	-	-	-	-	-	-	-	-	-	<5	-
Fumigants	Bromomethane	µg/L	50			-	<50	-	-	-	-	-	-	-	-	-	<50	-
	1,2-Dibromoethane (EDB)	µg/L	5			-	<5	-	-	-	-	-	-	-	-	-	<5	-
	1,2-Dichloropropane	µg/L	5			-	<5	-	-	-	-	-	-	-	-	-	<5	-
	2,2-Dichloropropane	µg/L	5			-	<5	-	-	-	-	-	-	-	-	-	<5	-
	cis-1,3-Dichloropropene	µg/L	5			-	<5	-	-	-	-	-	-	-	-	-	<5	-
	trans-1,3-Dichloropropene	µg/L	5			-	<5	-	-	-	-	-	-	-	-	-	<5	-
Trihalomethanes	Bromodichloromethane	µg/L	5			-	<5	-	-	-	-	-	-	-	-	-	<5	-
	Bromoform	µg/L	5			-	<5	-	-	-	-	-	-	-	-	-	<5	-
	Chloroform	µg/L	5			-	<5	-	-	-	-	-	-	-	-	-	<5	-
	Dibromochloromethane	µg/L	5			-	<5	-	-	-	-	-	-	-	-	-	<5	-
Total Organic Carbon	Total Organic Carbon	mg/L	1			-	-	-	**3**	**2**	-	-	-	**3**	**4**	-	-	-
Total Dissolved Solids	Total Dissolved Solids	mg/L	5			-	-	**782**	-	-	-	**20,100**	**8330**	-	-	-	-	-
C1 - C4 Hydrocabon Gases	Methane	mg/L	0.005			<0.01	**0.064**	<0.01	<0.01	**0.069**	**9.88**	**0.095**	**0.04**	**0.631**	**0.034**	**0.147**	**1.22**	<0.01
Alkalinity	Bicarbonate as HCO3	mg/L	1			**119**	**254**	**59.78**	**167**	**173**	**407**	**351.36**	**117.12**	**801**	**114**	**31**	**250**	**235**
	Carbonate as CO3	mg/L	1			<1	<1	**0.6**	<1	<1	<1	**0.6**	**0.6**	<1	<1	<1	<1	**13**
	Total Alkalinity	mg/L	5			-	-	-	-	-	-	-	-	-	-	-	-	-
	Bicarbonate Alkalinity as CaCO3	mg/L	1			-	-	**49**	-	-	-	**288**	**96**	-	-	-	-	-
	Carbonate Alkalinity as CaCO3	mg/L	1			-	-	<1	-	-	-	<1	<1	-	-	-	-	-
	Hydroxide Alkalinity as CaCO3	mg/L	1			<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
	Total Alkalinity as CaCO3	mg/L	1			**119**	**254**	**49**	**167**	**173**	**407**	**288**	**96**	**801**	**114**	**31**	**250**	**248**
Nutrients	Nitrate	mg/L	0.01			**0.11**	<0.01	**-**	**0.92**	**0.22**	**0.03**	-	**-**	<0.01	<0.1	**0.19**	<0.01	<0.01
	Nitrate (as N)	mg/L	0.002258967			**0.02**	<0	**0.19**	**0.21**	**0.05**	**0.01**	<0.01	<0.01	<0	<0.02	**0.04**	<0	<0
	Nitrite (as N)	mg/L	0.005			<0.01	<0.01	<0.01	<0.01	**0.11**	<0.01	<0.01	<0.01	<0.01	<0.1	<0.01	<0.01	<0.01
	Nitrate & Nitrite (as N)	mg/L	0.01			**0.11**	<0.01	**0.19**	**0.92**	**0.33**	**0.03**	<0.01	<0.01	<0.01	<0.1	**0.19**	<0.01	<0.01
Major Ions	Chloride	mg/L	1			**19,100**	**18,500**	**392**	**1900**	**357**	**1680**	**11,100**	**5000**	**17,900**	**622**	**129**	**30**	**231**
	Calcium (Dissolved)	mg/L	0.5			**408**	**400**	**29**	**312**	**54**	**53**	**292**	**228**	**186**	**78**	**5**	**52**	**8**
	Magnesium (Dissolved)	mg/L	0.5			**1350**	**1180**	**28**	**164**	**19**	**94**	**769**	**393**	**1090**	**37**	**10**	**20**	**11**
	Potassium (Dissolved)	mg/L	0.5			**477**	**465**	**9**	**43**	**21**	**51**	**233**	**78**	**422**	**16**	**14**	**11**	**24**
	Sodium (Dissolved)	mg/L	0.5			**11,200**	**10,900**	**241**	**992**	**203**	**1110**	**6400**	**2490**	**10,500**	**425**	**80**	**34**	**289**
	Sulphide (as S2-)	mg/L	0.1			<0.1	<0.1	<0.1	<0.1	<0.1	**0.5**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
	Sulphite (as SO3-)	mg/L	2			<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
	Sulphur (as S)	mg/L	0.5			-	-	-	-	-	-	-	-	-	-	-	-	-
	Sulphur (as S) (Dissolved)	mg/L	1			**885**	**761**	**30**	**220**	**23**	<1	**458**	**187**	**258**	**99**	**10**	**2**	**30**
	Sulphate (as SO4-)	mg/L	1			**2780**	**2440**	**-**	**697**	**72**	**-**	**-**	**-**	**698**	**334**	**37**	**6**	**114**
	Sulphate (as SO4-) (Dissolved)	mg/L	1			-	-	**94**	-	-	**2**	**1310**	**558**	-	-	-	-	-
	Total Anions	meq/L	0.01			**599**	**578**	**14**	**71.4**	**15**	**55.6**	**346**	**154**	**535**	**26.8**	**5.03**	**5.97**	**13.8**
	Total Cations	meq/L	0.01			**631**	**603**	**14.5**	**73.3**	**13.6**	**60**	**362**	**154**	**566**	**25.8**	**4.91**	**6**	**14.5**
	Ionic Balance	%	0.01			**2.57**	**2.13**	**1.64**	**1.29**	**4.89**	**3.79**	**2.25**	**0.19**	**2.8**	**1.81**	**1.2**	**0.29**	**2.24**
Ferrous/Ferric Iron	Ferrous Iron	mg/L	0.05			<0.05	**7.39**	<0.05	<0.05	<0.05	**0.34**	<0.05	**9.37**	**2.34**	**22.4**	**0.24**	**12.4**	<0.05
	Ferric Iron																	
	Ferric Iron (Dissolved)	mg/L	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	**11.2**	**0.93**	**0.25**	**2**	<0.05	**0.3**	**0.13**
Oxygenated Compounds	Vinyl acetate	µg/L	50			-	<50	-	-	-	-	-	-	-	-	-	<50	-
	2-Butanone (MEK)	µg/L	50			-	<50	-	-	-	-	-	-	-	-	-	<50	-
	2-hexanone (MBK)	µg/L	50			-	<50	-	-	-	-	-	-	-	-	-	<50	-
	4-Methyl-2-pentanone (MIBK)	µg/L	50			-	<50	-	-	-	-	-	-	-	-	-	<50	-
Sulfonated Compounds	Carbon disulfide	µg/L	5			-	<5	-	-	-	-	-	-	-	-	-	<5	-
Chlorinated Hydrocarbons	1,2-Dichloroethene	µg/L				-	<10	-	-	-	-	-	-	-	-	-	<10	-

*LOR exceeds Adopted Guidelines

Table 1
Analytical Results - June 2012 GME
Darwin Waterfront Corporation

Location Code	MW119	MW119	MW120	MW121	MW122	MW125	MW127	MW128	MW129	MW134	MW134	MW134
Field ID	QAQC01	QAQC02	MW120	MW121	MW122	MW125	MW127	MW128	MW129	MW134	QAQC03	QAQC04
Sampled_Date_Time	7/06/2012	7/06/2012	7/06/2012	14/06/2012	7/06/2012	13/06/2012	12/06/2012	12/06/2012	14/06/2012	12/06/2012	12/06/2012	12/06/2012
Sample Type	Duplicate Sample	Triplicate Sample	Primary sample	Primary sample	Primary sample	Primary sample	Primary sample	Primary sample	Primary sample	Primary Sample	Duplicate Sample	Triplicate Sample
Batch ID	ES1214335		ES1214335	ES1214894	ES1214335	ES1214657	ES1214577	ES1214577	ES1214894	ES1214577	ES1214577	ES1214577

Chem_Group	ChemName	output unit	EQL	ANZECC 2000 Marine water 95%	ANZECC 2000 Irrigation LTV											
	Total Dissolved Solids @180°C	mg/L	10			**832**	-	**23,600**	**1850**	**39,600**	**744**	-	-	**430**	-	-	-
Total Petroleum Hydrocarbons	C6-C9 fraction	µg/L	10			<20	<10	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
	C10-C14 fraction	µg/L	50			<50	<50	<50	<50	<50	<50	<50	<50	**680**	<50	<50	<50
	C15-C28 fraction	µg/L	100			<100	<100	<100	<100	<100	<100	**270**	**500**	**1780**	**240**	**320**	**260**
	C29-C36 fraction	µg/L	50			<50	<100	<50	<50	<50	<50	<50	**220**	<50	<50	<50	<50
	C10-C36 fraction (sum)	µg/L	50			<50	<250	<50	<50	<50	<50	**270**	**720**	**2460**	**240**	**320**	**260**
Total Recoverable Hydrocarbons	C6-C10 fraction (F1 minus BTEX)	µg/L	20			<20	-	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
	C6-C10 fraction	µg/L	20			<20	-	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
	>C10-C16 fraction	µg/L	100			<100	-	<100	<100	<100	<100	**120**	**110**	**1160**	<100	**110**	**110**
	>C16-C34 fraction	µg/L	100			<100	-	<100	<100	<100	<100	**230**	**680**	**1230**	**220**	**220**	**230**
	>C34-C40 fraction	µg/L	100			<100	-	<100	<100	<100	<100	<100	**170**	<100	<100	<100	<100
	>C10-C40 fraction (sum)	µg/L	100			<100	-	<100	<100	<100	<100	**350**	**960**	**2390**	**220**	**330**	**340**
Monocyclic Aromatic Hydrocarbons	Benzene	µg/L	1	**700**		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
	Toluene	µg/L	1			<2	<1	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
	Ethylbenzene	µg/L	1			<2	<1	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
	m&p-Xylene	µg/L	2			<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
	o-Xylene	µg/L	1			<2	<1	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
	Total Xylenes	µg/L	2			<2	<3	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
	1,2,4-trimethylbenzene	µg/L	5			-	-	-	<5	-	-	<5	-	-	<5	<5	<5
	Isopropylbenzene	µg/L	5			-	-	-	<5	-	-	<5	-	-	<5	<5	<5
	Styrene	µg/L	5			-	-	-	<5	-	-	<5	-	-	<5	<5	<5
	sec-butylbenzene	µg/L	5			-	-	-	<5	-	-	<5	-	-	<5	<5	<5
	Sum of BTEX	µg/L	1			<1	-	<1	<1	<1	<1	-	-	<1	-	-	-
	1,3,5-trimethylbenzene	µg/L	5			-	-	-	<5	-	-	<5	-	-	<5	<5	<5
	Total BTEX	µg/L	1			<9	<6	<9	<9	<9	<9	<1	<1	<9	<1	<1	<1
Naphthalene	Naphthalene	µg/L	1	**70**		-	-	-	<1	-	-	<1	-	-	<1	<1	<1
	Naphthalene (VOC)	µg/L	5			<5	-	<5	<5	<5	<5	-	<5	<5	-	-	-
Polynuclear Aromatic Hydrocarbons	Acenaphthylene	µg/L	1			-	-	-	<1	-	-	<1	-	-	<1	<1	<1
	Acenaphthene	µg/L	1			-	-	-	<1	-	-	<1	-	-	<1	<1	<1
	Anthracene	µg/L	1			-	-	-	<1	-	-	<1	-	-	<1	<1	<1
	Fluorene	µg/L	1			-	-	-	<1	-	-	<1	-	-	<1	<1	<1
	Phenanthrene	µg/L	1			-	-	-	<1	-	-	<1	-	-	<1	<1	<1
	Fluoranthene	µg/L	1			-	-	-	<1	-	-	<1	-	-	<1	<1	<1
	Benz(a)anthracene	µg/L	1			-	-	-	<1	-	-	<1	-	-	<1	<1	<1
	Benzo(b)fluoranthene	µg/L	1			-	-	-	<1	-	-	<1	-	-	<1	<1	<1
	Benzo(k)fluoranthene	µg/L	1			-	-	-	<1	-	-	<1	-	-	<1	<1	<1
	Benzo(a)pyrene	µg/L	0.5			-	-	-	<0.5	-	-	<0.5	-	-	<0.5	<0.5	<0.5
	Benzo(a)pyrene TEQ	µg/L	0.5			-	-	-	-	-	-	-	-	-	-	-	-
	Chrysene	µg/L	1			-	-	-	<1	-	-	<1	-	-	<1	<1	<1
	Pyrene	µg/L	1			-	-	-	<1	-	-	<1	-	-	<1	<1	<1
	Benzo(g,h,i)perylene	µg/L	1			-	-	-	<1	-	-	<1	-	-	<1	<1	<1
	Dibenz(a,h)anthracene	µg/L	1			-	-	-	<1	-	-	<1	-	-	<1	<1	<1
	Indeno(1,2,3-cd)pyrene	µg/L	1			-	-	-	<1	-	-	<1	-	-	<1	<1	<1
	Sum of PAHs	µg/L	0.5			-	-	-	<0.5	-	-	<0.5	-	-	<0.5	<0.5	<0.5
Metals	Arsenic	mg/L	0.001		**0.1**	<0.001	**0.002**	<0.01	<0.001	<0.01	<0.001	**0.002**	<0.001	**0.014**	**0.002**	**0.002**	**0.001**
	Arsenic (Dissolved)	mg/L	0.001		**0.1**	<0.001	**0.002**	<0.01	<0.001	<0.01	<0.001	**0.002**	<0.001	**0.014**	**0.002**	**0.002**	**0.001**
	Cadmium																
	Cadmium (Dissolved)	mg/L	0.0001	**0.0055**	**0.01**	<0.0001	<0.0001	<0.001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
	Chromium																
	Chromium (Dissolved)	mg/L	0.001		**0.1**	<0.001	<0.001	<0.01	<0.001	<0.01	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
	Copper																
	Copper (Dissolved)	mg/L	0.001	**0.0013**	**0.2**	<0.001	<0.001	<0.01*	<0.001	<0.01*	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
	Lead																
	Lead (Dissolved)	mg/L	0.001	**0.0044**	**2**	<0.001	<0.001	<0.01*	<0.001	<0.01*	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
	Manganese																
	Manganese (Dissolved)	mg/L	0.001		**0.2**	**0.085**	<0.005	**0.504**	**1.79**	<0.01	**0.443**	**0.289**	**0.178**	**0.076**	**0.134**	**0.129**	**0.109**
	Mercury																
	Mercury (Dissolved)	mg/L	0.00005	**0.0004**	**0.002**	<0.0001	<0.00005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
	Nickel																
	Nickel (Dissolved)	mg/L	0.001	**0.07**	**0.2**	<0.001	<0.001	<0.01	**0.008**	<0.01	<0.001	**0.003**	**0.037**	<0.001	**0.002**	**0.001**	**0.002**
	Zinc																
	Zinc (Dissolved)	mg/L	0.001	**0.015**	**2**	<0.005	**0.002**	**5.94**	**0.008**	<0.05*	<0.005	**0.006**	**0.011**	**0.041**	**0.012**	**0.009**	**0.012**
	Vanadium																
	Vanadium (Dissolved)	mg/L	0.001	**0.1**	**0.1**	<0.01	<0.001	<0.1	<0.01	<0.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Halogenated Aromatic Compounds	Chlorobenzene	µg/L	5			-	-	-	<5	-	-	<5	-	-	<5	<5	<5
	n-butylbenzene	µg/L	5			-	-	-	<5	-	-	<5	-	-	<5	<5	<5
	n-propylbenzene	µg/L	5			-	-	-	<5	-	-	<5	-	-	<5	<5	<5
	p-isopropyltoluene	µg/L	5			-	-	-	<5	-	-	<5	-	-	<5	<5	<5
	tert-butylbenzene	µg/L	5			-	-	-	<5	-	-	<5	-	-	<5	<5	<5
	1,2,3-Trichlorobenzene	µg/L	5			-	-	-	<5	-	-	<5	-	-	<5	<5	<5
	1,2,4-Trichlorobenzene	µg/L	5	**80**		-	-	-	<5	-	-	<5	-	-	<5	<5	<5
	1,2-Dichlorobenzene	µg/L	5			-	-	-	<5	-	-	<5	-	-	<5	<5	<5
	1,3-Dichlorobenzene	µg/L	5			-	-	-	<5	-	-	<5	-	-	<5	<5	<5
	1,4-Dichlorobenzene	µg/L	5			-	-	-	<5	-	-	<5	-	-	<5	<5	<5
	2-Chlorotoluene	µg/L	5			-	-	-	<5	-	-	<5	-	-	<5	<5	<5
	4-Chlorotoluene	µg/L	5			-	-	-	<5	-	-	<5	-	-	<5	<5	<5
	Bromobenzene	µg/L	5			-	-	-	<5	-	-	<5	-	-	<5	<5	<5

Table 1
Analytical Results - June 2012 GME
Darwin Waterfront Corporation

						Location Code	MW119	MW119	MW120	MW121	MW122	MW125	MW127	MW128	MW129	MW134	MW134	MW134
						Field ID	QAQC01	QAQC02	MW120	MW121	MW122	MW125	MW127	MW128	MW129	MW134	QAQC03	QAQC04
						Sampled_Date_Time	7/06/2012	7/06/2012	7/06/2012	14/06/2012	7/06/2012	13/06/2012	12/06/2012	12/06/2012	14/06/2012	12/06/2012	12/06/2012	12/06/2012
						Sample Type	Duplicate Sample	Triplicate Sample	Primary sample	Primary sample	Primary sample	Primary sample	Primary sample	Primary sample	Primary sample	Primary Sample	Duplicate Sample	Triplicate Sample
						Batch ID	ES1214335		ES1214335	ES1214894	ES1214335	ES1214657	ES1214577	ES1214577	ES1214894	ES1214577	ES1214577	ES1214577
Halogenated Aliphatic Compounds	1,1,1-Trichloroethane	µg/L	5			-	-	-	<5	-	-	<5	-	-	<5	<5	<5
	1,1-Dichloroethane	µg/L	5			-	-	-	<5	-	-	<5	-	-	<5	<5	<5
	1,1-Dichloroethene	µg/L	5			-	-	-	<5	-	-	<5	-	-	<5	<5	<5
	1,2-Dichloroethane	µg/L	5			-	-	-	<5	-	-	<5	-	-	<5	<5	<5
	Carbon Tetrachloride	µg/L	5			-	-	-	<5	-	-	<5	-	-	<5	<5	<5
	Chloroethane	µg/L	50			-	-	-	<50	-	-	<50	-	-	<50	<50	<50
	cis-1,2-Dichloroethene	µg/L	5			-	-	-	<5	-	-	<5	-	-	<5	<5	<5
	Dichlorodifluoromethane	µg/L	50			-	-	-	<50	-	-	<50	-	-	<50	<50	<50
	Hexachlorobutadiene	µg/L	5			-	-	-	<5	-	-	<5	-	-	<5	<5	<5
	Tetrachloroethene	µg/L	5			-	-	-	<5	-	-	<5	-	-	<5	<5	<5
	trans-1,2-Dichloroethene	µg/L	5			-	-	-	<5	-	-	<5	-	-	<5	<5	<5
	Trichloroethene	µg/L	5			-	-	-	<5	-	-	<5	-	-	<5	<5	<5
	Trichlorofluoromethane	µg/L	50			-	-	-	<50	-	-	<50	-	-	<50	<50	<50
	Vinyl chloride	µg/L	50			-	-	-	<50	-	-	<50	-	-	<50	<50	<50
	1,1,1,2-Tetrachloroethane	µg/L	5			-	-	-	<5	-	-	<5	-	-	<5	<5	<5
	1,1,2,2-Tetrachloroethane	µg/L	5			-	-	-	<5	-	-	<5	-	-	<5	<5	<5
	1,1,2-Trichloroethane	µg/L	5	**1900**		-	-	-	<5	-	-	<5	-	-	<5	<5	<5
	1,1-Dichloropropene	µg/L	5			-	-	-	<5	-	-	<5	-	-	<5	<5	<5
	1,2,3-Trichloropropane	µg/L	5			-	-	-	<5	-	-	<5	-	-	<5	<5	<5
	1,2-Dibromo-3-chloropropane	µg/L	5			-	-	-	<5	-	-	<5	-	-	<5	<5	<5
	1,3-Dichloropropane	µg/L	5			-	-	-	<5	-	-	<5	-	-	<5	<5	<5
	Chloromethane	µg/L	50			-	-	-	<50	-	-	<50	-	-	<50	<50	<50
	cis-1,4-Dichloro-2-butene	µg/L	5			-	-	-	<5	-	-	<5	-	-	<5	<5	<5
	Dibromomethane	µg/L	5			-	-	-	<5	-	-	<5	-	-	<5	<5	<5
	Iodomethane	µg/L	5			-	-	-	<5	-	-	<5	-	-	<5	<5	<5
	Pentachloroethane	µg/L	5			-	-	-	<5	-	-	<5	-	-	<5	<5	<5
	trans-1,4-Dichlorp-2-butene	µg/L	5			-	-	-	<5	-	-	<5	-	-	<5	<5	<5
Fumigants	Bromomethane	µg/L	50			-	-	-	<50	-	-	<50	-	-	<50	<50	<50
	1,2-Dibromoethane (EDB)	µg/L	5			-	-	-	<5	-	-	<5	-	-	<5	<5	<5
	1,2-Dichloropropane	µg/L	5			-	-	-	<5	-	-	<5	-	-	<5	<5	<5
	2,2-Dichloropropane	µg/L	5			-	-	-	<5	-	-	<5	-	-	<5	<5	<5
	cis-1,3-Dichloropropene	µg/L	5			-	-	-	<5	-	-	<5	-	-	<5	<5	<5
	trans-1,3-Dichloropropene	µg/L	5			-	-	-	<5	-	-	<5	-	-	<5	<5	<5
Trihalomethanes	Bromodichloromethane	µg/L	5			-	-	-	<5	-	-	<5	-	-	<5	<5	<5
	Bromoform	µg/L	5			-	-	-	<5	-	-	<5	-	-	<5	<5	<5
	Chloroform	µg/L	5			-	-	-	<5	-	-	<5	-	-	<5	<5	<5
	Dibromochloromethane	µg/L	5			-	-	-	<5	-	-	<5	-	-	<5	<5	<5
Total Organic Carbon	Total Organic Carbon	mg/L	1			-	-	-	-	-	-	-	-	-	-	-	-
Total Dissolved Solids	Total Dissolved Solids	mg/L	5			-	**720**	-	-	-	-	-	**502**	**198**	-	**1480**	**1580**	**1650**
C1 - C4 Hydrocabon Gases	Methane	mg/L	0.005			<0.01	<0.005	**0.056**	**2.13**	<0.01	**0.101**	**0.37**	**3.26**	**3.22**	**0.173**	**0.172**	**0.161**
Alkalinity	Bicarbonate as HCO3	mg/L	1			**255**	**329.4**	**185**	**273**	**103**	**534**	**395.28**	**118.34**	**425**	**370.88**	**368.44**	**363.56**
	Carbonate as CO3	mg/L	1			**6**	**3**	<1	<1	<1	<1	**0.6**	**0.6**	<1	**0.6**	**0.6**	**0.6**
	Total Alkalinity	mg/L	5			-	**270**	-	-	-	-	-	-	-	-	-	-
	Bicarbonate Alkalinity as CaCO3	mg/L	1			-	**270**	-	-	-	-	**324**	**97**	-	**304**	**302**	**298**
	Carbonate Alkalinity as CaCO3	mg/L	1			-	<5	-	-	-	-	<1	<1	-	<1	<1	<1
	Hydroxide Alkalinity as CaCO3	mg/L	1			<1	<5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
	Total Alkalinity as CaCO3	mg/L	1			**262**	-	**185**	**273**	**103**	**534**	**324**	**97**	**425**	**304**	**302**	**298**
Nutrients	Nitrate	mg/L	0.01			**0.01**	-	**0.11**	<0.01	**0.06**	**0.04**	-	-	<0.01	-	-	-
	Nitrate (as N)	mg/L	0.002258967			**0**	<0.005	**0.02**	<0	**0.01**	**0.01**	**0.02**	**0.02**	<0	<0.01	**0.02**	<0.01
	Nitrite (as N)	mg/L	0.005			<0.01	<0.005	**0.03**	<0.01	**0.02**	<0.01	<0.01	**0.01**	<0.01	<0.01	<0.01	<0.01
	Nitrate & Nitrite (as N)	mg/L	0.01			**0.01**	-	**0.14**	<0.01	**0.08**	**0.04**	**0.02**	**0.03**	<0.01	<0.01	**0.02**	<0.01
Major Ions	Chloride	mg/L	1			**230**	**210**	**13,300**	**959**	**19,400**	**111**	**113**	**39**	**6**	**663**	**713**	**757**
	Calcium (Dissolved)	mg/L	0.5			**8**	**8.2**	**356**	**69**	**408**	**3**	**4**	**26**	**102**	**16**	**16**	**17**
	Magnesium (Dissolved)	mg/L	0.5			**11**	**12**	**916**	**90**	**1360**	**3**	**4**	**4**	**24**	**15**	**16**	**19**
	Potassium (Dissolved)	mg/L	0.5			**24**	**21**	**325**	**38**	**523**	**17**	**16**	**6**	**28**	**32**	**34**	**40**
	Sodium (Dissolved)	mg/L	0.5			**297**	**250**	**7910**	**530**	**12,000**	**310**	**213**	**36**	**16**	**532**	**561**	**658**
	Sulphide (as S2-)	mg/L	0.1			<0.1	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	**0.2**	<0.1	<0.1	<0.1
	Sulphite (as SO3-)	mg/L	2			<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
	Sulphur (as S)	mg/L	0.5			-	**32**	-	-	-	-	-	-	-	-	-	-
	Sulphur (as S) (Dissolved)	mg/L	1			**30**	-	**589**	**19**	**889**	**18**	**3**	**5**	<1	**30**	**32**	**38**
	Sulphate (as SO4-)	mg/L	1			**108**	**81**	**1910**	-	**2920**	**54**	-	-	-	-	-	-
	Sulphate (as SO4-) (Dissolved)	mg/L	1			-	-	-	**57**	-	-	**8**	**18**	**1**	**89**	**93**	**99**
	Total Anions	meq/L	0.01			**14**	-	**419**	**33.7**	**610**	**14.9**	**9.83**	**3.41**	**8.68**	**26.6**	**28.1**	**29.4**
	Total Cations	meq/L	0.01			**14.8**	-	**446**	**34.9**	**668**	**14.3**	**10.2**	**3.35**	**8.48**	**26**	**27.4**	**32.1**
	Ionic Balance	%	0.01			**2.97**	**-0.62**	**3.1**	**1.71**	**4.49**	**2.14**	**1.83**	**0.99**	**1.17**	**1.24**	**1.28**	**4.35**
Ferrous/Ferric Iron	Ferrous Iron	mg/L	0.05			<0.05	<0.05	**21.8**	**3.65**	<0.05	**0.19**	**0.08**	**1.09**	**9.78**	**0.05**	<0.05	<0.05
	Ferric Iron						**0.07**										
	Ferric Iron (Dissolved)	mg/L	0.05			**0.15**	-	<0.05	**0.27**	<0.05	<0.05	**2.37**	**2.8**	**1.02**	**1.28**	**1.37**	**1.47**
Oxygenated Compounds	Vinyl acetate	µg/L	50			-	-	-	<50	-	-	<50	-	-	<50	<50	<50
	2-Butanone (MEK)	µg/L	50			-	-	-	<50	-	-	<50	-	-	<50	<50	<50
	2-hexanone (MBK)	µg/L	50			-	-	-	<50	-	-	<50	-	-	<50	<50	<50
	4-Methyl-2-pentanone (MIBK)	µg/L	50			-	-	-	<50	-	-	<50	-	-	<50	<50	<50
Sulfonated Compounds	Carbon disulfide	µg/L	5			-	-	-	<5	-	-	<5	-	-	<5	<5	<5
Chlorinated Hydrocarbons	1,2-Dichloroethene	µg/L				-	-	-	<10	-	-	<10	-	-	<10	<10	<10

*LOR exceeds Adopted Guidelines

Table 1
Analytical Results - June 2012 GME
Darwin Waterfront Corporation

Location Code	MW135	MW136										
Field ID	MW135	MW136	QCA01	QCA01	QCA01	QCA02	QCB01	QCB01	QCB02	QCC01	QCC01	QCC02
Sampled_Date_Time	13/06/2012	13/06/2012	7/06/2012	12/06/2012	14/06/2012	13/06/2012	7/06/2012	12/06/2012	13/06/2012	7/06/2012	12/06/2012	13/06/2012
Sample Type	Primary sample	Primary sample	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Field Blank	Field Blank	Field Blank	Rinsate Blank	Rinsate Blank	Rinsate Blank
Batch ID	ES1214657	ES1214657	ES1214335	ES1214577	ES1214894	ES1214657	ES1214335	ES1214577	ES1214657	ES1214335	ES1214577	ES1214657

Chem_Group	ChemName	output unit	EQL	ANZECC 2000 Marine water 95%	ANZECC 2000 Irrigation LTV											
	Total Dissolved Solids @180°C	mg/L	10			**838**	**740**	-	-	-	-	-	-	-	-	-
Total Petroleum Hydrocarbons	C6-C9 fraction	µg/L	10			<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
	C10-C14 fraction	µg/L	50			<50	<50	-	-	-	-	<50	<50	<50	<50	<50
	C15-C28 fraction	µg/L	100			<100	<100	-	-	-	-	<100	<100	<100	<100	<100
	C29-C36 fraction	µg/L	50			<50	<50	-	-	-	-	<50	<50	<50	<50	<50
	C10-C36 fraction (sum)	µg/L	50			<50	<50	-	-	-	-	<50	<50	<50	<50	<50
Total Recoverable Hydrocarbons	C6-C10 fraction (F1 minus BTEX)	µg/L	20			<20	<20	<20	-	-	-	<20	<20	<20	<20	<20
	C6-C10 fraction	µg/L	20			<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
	>C10-C16 fraction	µg/L	100			<100	<100	-	-	-	-	<100	<100	<100	<100	<100
	>C16-C34 fraction	µg/L	100			<100	<100	-	-	-	-	<100	<100	<100	<100	<100
	>C34-C40 fraction	µg/L	100			<100	<100	-	-	-	-	<100	<100	<100	<100	<100
	>C10-C40 fraction (sum)	µg/L	100			<100	<100	-	-	-	-	<100	<100	<100	<100	<100
Monocyclic Aromatic Hydrocarbons	Benzene	µg/L	1	**700**		<1	<1	<1	-	-	-	<1	<1	<1	<1	<1
	Toluene	µg/L	1			<2	<2	<2	-	-	-	<2	<2	<2	<2	<2
	Ethylbenzene	µg/L	1			<2	<2	<2	-	-	-	<2	<2	<2	<2	<2
	m&p-Xylene	µg/L	2			<2	<2	<2	-	-	-	<2	<2	<2	<2	<2
	o-Xylene	µg/L	1			<2	<2	<2	-	-	-	<2	<2	<2	<2	<2
	Total Xylenes	µg/L	2			<2	<2	<2	-	-	-	<2	<2	<2	<2	<2
	1,2,4-trimethylbenzene	µg/L	5			<5	<5	-	-	-	-	-	-	-	-	-
	Isopropylbenzene	µg/L	5			<5	<5	-	-	-	-	-	-	-	-	-
	Styrene	µg/L	5			<5	<5	-	-	-	-	-	-	-	-	-
	sec-butylbenzene	µg/L	5			<5	<5	-	-	-	-	-	-	-	-	-
	Sum of BTEX	µg/L	1			<1	<1	<1	-	-	-	<1	-	<1	<1	-
	1,3,5-trimethylbenzene	µg/L	5			<5	<5	-	-	-	-	-	-	-	-	-
	Total BTEX	µg/L	1			<9	<9	-	-	-	-	-	<1	-	-	<1
Naphthalene	Naphthalene	µg/L	1	**70**		<1	<1	-	-	-	-	-	<1	<1	-	<1
	Naphthalene (VOC)	µg/L	5			<5	<5	<5	-	-	-	<5	<5	<5	<5	<5
Polynuclear Aromatic Hydrocarbons	Acenaphthylene	µg/L	1			<1	<1	-	-	-	-	-	<1	<1	-	<1
	Acenaphthene	µg/L	1			<1	<1	-	-	-	-	-	<1	<1	-	<1
	Anthracene	µg/L	1			<1	<1	-	-	-	-	-	<1	<1	-	<1
	Fluorene	µg/L	1			<1	<1	-	-	-	-	-	<1	<1	-	<1
	Phenanthrene	µg/L	1			<1	<1	-	-	-	-	-	<1	<1	-	<1
	Fluoranthene	µg/L	1			<1	<1	-	-	-	-	-	<1	<1	-	<1
	Benz(a)anthracene	µg/L	1			<1	<1	-	-	-	-	-	<1	<1	-	<1
	Benzo(b)fluoranthene	µg/L	1			<1	<1	-	-	-	-	-	<1	<1	-	<1
	Benzo(k)fluoranthene	µg/L	1			<1	<1	-	-	-	-	-	<1	<1	-	<1
	Benzo(a)pyrene	µg/L	0.5			<0.5	<0.5	-	-	-	-	-	<0.5	<0.5	-	<0.7
	Benzo(a)pyrene TEQ	µg/L	0.5			<0.5	<0.5	-	-	-	-	-	-	<0.5	-	-
	Chrysene	µg/L	1			<1	<1	-	-	-	-	-	<1	<1	-	<1
	Pyrene	µg/L	1			<1	<1	-	-	-	-	-	<1	<1	-	<1
	Benzo(g,h,i)perylene	µg/L	1			<1	<1	-	-	-	-	-	<1	<1	-	<1
	Dibenz(a,h)anthracene	µg/L	1			<1	<1	-	-	-	-	-	<1	<1	-	<1
	Indeno(1,2,3-cd)pyrene	µg/L	1			<1	<1	-	-	-	-	-	<1	<1	-	<1
	Sum of PAHs	µg/L	0.5			<0.5	<0.5	-	-	-	-	-	<0.5	<0.5	-	<0.7
Metals	Arsenic	mg/L	0.001		**0.1**	<0.001	**0.003**	-	-	-	-	<0.001	<0.001	<0.001	<0.001	<0.001
	Arsenic (Dissolved)	mg/L	0.001		**0.1**	<0.001	**0.003**	-	-	-	-	<0.001	<0.001	-	<0.001	<0.001
	Cadmium													<0.0001		<0.0001
	Cadmium (Dissolved)	mg/L	0.0001	**0.0055**	**0.01**	**0.011**	<0.0001	-	-	-	-	<0.0001	<0.0001	-	<0.0001	<0.0001
	Chromium													<0.001		<0.001
	Chromium (Dissolved)	mg/L	0.001		**0.1**	<0.001	<0.001	-	-	-	-	<0.001	<0.001	-	<0.001	**0.001**
	Copper													<0.001		<0.001
	Copper (Dissolved)	mg/L	0.001	**0.0013**	**0.2**	<0.001	<0.001	-	-	-	-	<0.001	<0.001	-	<0.001	<0.001
	Lead													<0.001		<0.001
	Lead (Dissolved)	mg/L	0.001	**0.0044**	**2**	<0.001	<0.001	-	-	-	-	<0.001	<0.001	-	<0.001	**0.002**
	Manganese													0.007		<0.001
	Manganese (Dissolved)	mg/L	0.001		**0.2**	**1.49**	**0.572**	-	-	-	-	<0.001	<0.001	-	<0.001	**0.007**
	Mercury													<0.0001		<0.0001
	Mercury (Dissolved)	mg/L	0.00005	**0.0004**	**0.002**	<0.0001	<0.0001	-	-	-	-	<0.0001	<0.0001	-	<0.0001	<0.0001
	Nickel													<0.001		<0.001
	Nickel (Dissolved)	mg/L	0.001	**0.07**	**0.2**	<0.001	<0.001	-	-	-	-	<0.001	<0.001	-	<0.001	**0.004**
	Zinc													<0.005		<0.005
	Zinc (Dissolved)	mg/L	0.001	**0.015**	**2**	**1.13**	<0.005	-	-	-	-	<0.005	<0.005	-	<0.005	<0.005
	Vanadium													<0.01		<0.01
	Vanadium (Dissolved)	mg/L	0.001	**0.1**	**0.1**	<0.01	<0.01	-	-	-	-	<0.01	<0.01	-	<0.01	<0.01
Halogenated Aromatic Compounds	Chlorobenzene	µg/L	5			<5	<5	-	-	-	-	-	-	-	-	-
	n-butylbenzene	µg/L	5			<5	<5	-	-	-	-	-	-	-	-	-
	n-propylbenzene	µg/L	5			<5	<5	-	-	-	-	-	-	-	-	-
	p-isopropyltoluene	µg/L	5			<5	<5	-	-	-	-	-	-	-	-	-
	tert-butylbenzene	µg/L	5			<5	<5	-	-	-	-	-	-	-	-	-
	1,2,3-Trichlorobenzene	µg/L	5			<5	<5	-	-	-	-	-	-	-	-	-
	1,2,4-Trichlorobenzene	µg/L	5	**80**		<5	<5	-	-	-	-	-	-	-	-	-
	1,2-Dichlorobenzene	µg/L	5			<5	<5	-	-	-	-	-	-	-	-	-
	1,3-Dichlorobenzene	µg/L	5			<5	<5	-	-	-	-	-	-	-	-	-
	1,4-Dichlorobenzene	µg/L	5			<5	<5	-	-	-	-	-	-	-	-	-
	2-Chlorotoluene	µg/L	5			<5	<5	-	-	-	-	-	-	-	-	-
	4-Chlorotoluene	µg/L	5			<5	<5	-	-	-	-	-	-	-	-	-
	Bromobenzene	µg/L	5			<5	<5	-	-	-	-	-	-	-	-	-

Table 1
Analytical Results - June 2012 GME
Darwin Waterfront Corporation

						Location Code	MW135	MW136											
						Field ID	MW135	MW136	QCA01	QCA01	QCA01	QCA02	QCB01	QCB01	QCB02	QCC01	QCC01	QCC02
						Sampled_Date_Time	13/06/2012	13/06/2012	7/06/2012	12/06/2012	14/06/2012	13/06/2012	7/06/2012	12/06/2012	13/06/2012	7/06/2012	12/06/2012	13/06/2012
						Sample Type	Primary sample	Primary sample	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Field Blank	Field Blank	Field Blank	Rinsate Blank	Rinsate Blank	Rinsate Blank
						Batch ID	ES1214657	ES1214657	ES1214335	ES1214577	ES1214894	ES1214657	ES1214335	ES1214577	ES1214657	ES1214335	ES1214577	ES1214657
Halogenated Aliphatic Compounds	1,1,1-Trichloroethane	µg/L	5			<5	<5	-	-	-	-	-	-	-	-	-	-	-
	1,1-Dichloroethane	µg/L	5			<5	<5	-	-	-	-	-	-	-	-	-	-	-
	1,1-Dichloroethene	µg/L	5			<5	<5	-	-	-	-	-	-	-	-	-	-	-
	1,2-Dichloroethane	µg/L	5			<5	<5	-	-	-	-	-	-	-	-	-	-	-
	Carbon Tetrachloride	µg/L	5			<5	<5	-	-	-	-	-	-	-	-	-	-	-
	Chloroethane	µg/L	50			<50	<50	-	-	-	-	-	-	-	-	-	-	-
	cis-1,2-Dichloroethene	µg/L	5			<5	<5	-	-	-	-	-	-	-	-	-	-	-
	Dichlorodifluoromethane	µg/L	50			<50	<50	-	-	-	-	-	-	-	-	-	-	-
	Hexachlorobutadiene	µg/L	5			<5	<5	-	-	-	-	-	-	-	-	-	-	-
	Tetrachloroethene	µg/L	5			<5	<5	-	-	-	-	-	-	-	-	-	-	-
	trans-1,2-Dichloroethene	µg/L	5			<5	<5	-	-	-	-	-	-	-	-	-	-	-
	Trichloroethene	µg/L	5			<5	<5	-	-	-	-	-	-	-	-	-	-	-
	Trichlorofluoromethane	µg/L	50			<50	<50	-	-	-	-	-	-	-	-	-	-	-
	Vinyl chloride	µg/L	50			<50	<50	-	-	-	-	-	-	-	-	-	-	-
	1,1,1,2-Tetrachloroethane	µg/L	5			<5	<5	-	-	-	-	-	-	-	-	-	-	-
	1,1,2,2-Tetrachloroethane	µg/L	5			<5	<5	-	-	-	-	-	-	-	-	-	-	-
	1,1,2-Trichloroethane	µg/L	5	**1900**		<5	<5	-	-	-	-	-	-	-	-	-	-	-
	1,1-Dichloropropene	µg/L	5			<5	<5	-	-	-	-	-	-	-	-	-	-	-
	1,2,3-Trichloropropane	µg/L	5			<5	<5	-	-	-	-	-	-	-	-	-	-	-
	1,2-Dibromo-3-chloropropane	µg/L	5			<5	<5	-	-	-	-	-	-	-	-	-	-	-
	1,3-Dichloropropane	µg/L	5			<5	<5	-	-	-	-	-	-	-	-	-	-	-
	Chloromethane	µg/L	50			<50	<50	-	-	-	-	-	-	-	-	-	-	-
	cis-1,4-Dichloro-2-butene	µg/L	5			<5	<5	-	-	-	-	-	-	-	-	-	-	-
	Dibromomethane	µg/L	5			<5	<5	-	-	-	-	-	-	-	-	-	-	-
	Iodomethane	µg/L	5			<5	<5	-	-	-	-	-	-	-	-	-	-	-
	Pentachloroethane	µg/L	5			<5	<5	-	-	-	-	-	-	-	-	-	-	-
	trans-1,4-Dichlorp-2-butene	µg/L	5			<5	<5	-	-	-	-	-	-	-	-	-	-	-
Fumigants	Bromomethane	µg/L	50			<50	<50	-	-	-	-	-	-	-	-	-	-	-
	1,2-Dibromoethane (EDB)	µg/L	5			<5	<5	-	-	-	-	-	-	-	-	-	-	-
	1,2-Dichloropropane	µg/L	5			<5	<5	-	-	-	-	-	-	-	-	-	-	-
	2,2-Dichloropropane	µg/L	5			<5	<5	-	-	-	-	-	-	-	-	-	-	-
	cis-1,3-Dichloropropene	µg/L	5			<5	<5	-	-	-	-	-	-	-	-	-	-	-
	trans-1,3-Dichloropropene	µg/L	5			<5	<5	-	-	-	-	-	-	-	-	-	-	-
Trihalomethanes	Bromodichloromethane	µg/L	5			<5	<5	-	-	-	-	-	-	-	-	-	-	-
	Bromoform	µg/L	5			<5	<5	-	-	-	-	-	-	-	-	-	-	-
	Chloroform	µg/L	5			<5	<5	-	-	-	-	-	-	-	-	-	-	-
	Dibromochloromethane	µg/L	5			<5	<5	-	-	-	-	-	-	-	-	-	-	-
Total Organic Carbon	Total Organic Carbon	mg/L	1			**4**	**19**	-	-	-	-	-	-	-	-	-	-	-
Total Dissolved Solids	Total Dissolved Solids	mg/L	5			-	-	-	-	-	-	-	-	-	-	-	-	-
C1 - C4 Hydrocabon Gases	Methane	mg/L	0.005			**0.023**	**0.384**	-	-	-	-	-	-	-	-	-	-	-
Alkalinity	Bicarbonate as HCO3	mg/L	1			**431**	**279**	-	-	-	-	-	-	-	-	-	-	-
	Carbonate as CO3	mg/L	1			<1	<1	-	-	-	-	-	-	-	-	-	-	-
	Total Alkalinity	mg/L	5			-	-	-	-	-	-	-	-	-	-	-	-	-
	Bicarbonate Alkalinity as CaCO3	mg/L	1			-	-	-	-	-	-	-	-	-	-	-	-	-
	Carbonate Alkalinity as CaCO3	mg/L	1			-	-	-	-	-	-	-	-	-	-	-	-	-
	Hydroxide Alkalinity as CaCO3	mg/L	1			<1	<1	-	-	-	-	-	-	-	-	-	-	-
	Total Alkalinity as CaCO3	mg/L	1			**431**	**279**	-	-	-	-	-	-	-	-	-	-	-
Nutrients	Nitrate	mg/L	0.01			**0.02**	**0.21**	-	-	-	-	-	-	-	-	-	-	-
	Nitrate (as N)	mg/L	0.002258967			**0**	**0.05**	-	-	-	-	-	-	-	-	-	-	-
	Nitrite (as N)	mg/L	0.005			<0.01	<0.01	-	-	-	-	-	-	-	-	-	-	-
	Nitrate & Nitrite (as N)	mg/L	0.01			**0.02**	**0.21**	-	-	-	-	-	-	-	-	-	-	-
Major Ions	Chloride	mg/L	1			**98**	**301**	-	-	-	-	-	-	-	-	-	-	-
	Calcium (Dissolved)	mg/L	0.5			**148**	**45**	-	-	-	-	-	-	-	-	-	-	-
	Magnesium (Dissolved)	mg/L	0.5			**33**	**15**	-	-	-	-	-	-	-	-	-	-	-
	Potassium (Dissolved)	mg/L	0.5			**22**	**17**	-	-	-	-	-	-	-	-	-	-	-
	Sodium (Dissolved)	mg/L	0.5			**84**	**238**	-	-	-	-	-	-	-	-	-	-	-
	Sulphide (as S2-)	mg/L	0.1			<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-
	Sulphite (as SO3-)	mg/L	2			<2	<2	-	-	-	-	-	-	-	-	-	-	-
	Sulphur (as S)	mg/L	0.5			-	-	-	-	-	-	-	-	-	-	-	-	-
	Sulphur (as S) (Dissolved)	mg/L	1			**61**	**6**	-	-	-	-	-	-	-	-	-	-	-
	Sulphate (as SO4-)	mg/L	1			**201**	**16**	-	-	-	-	-	-	-	-	-	-	-
	Sulphate (as SO4-) (Dissolved)	mg/L	1			-	-	-	-	-	-	-	-	-	-	-	-	-
	Total Anions	meq/L	0.01			**15.6**	**14.4**	-	-	-	-	-	-	-	-	-	-	-
	Total Cations	meq/L	0.01			**14.3**	**14.3**	-	-	-	-	-	-	-	-	-	-	-
	Ionic Balance	%	0.01			**4.14**	**0.47**	-	-	-	-	-	-	-	-	-	-	-
Ferrous/Ferric Iron	Ferrous Iron	mg/L	0.05			**0.2**	**1.22**	-	-	-	-	-	-	-	-	-	-	-
	Ferric Iron																	
	Ferric Iron (Dissolved)	mg/L	0.05			<0.05	**0.16**	-	-	-	-	-	-	-	-	-	-	-
Oxygenated Compounds	Vinyl acetate	µg/L	50			<50	<50	-	-	-	-	-	-	-	-	-	-	-
	2-Butanone (MEK)	µg/L	50			<50	<50	-	-	-	-	-	-	-	-	-	-	-
	2-hexanone (MBK)	µg/L	50			<50	<50	-	-	-	-	-	-	-	-	-	-	-
	4-Methyl-2-pentanone (MIBK)	µg/L	50			<50	<50	-	-	-	-	-	-	-	-	-	-	-
Sulfonated Compounds	Carbon disulfide	µg/L	5			<5	<5	-	-	-	-	-	-	-	-	-	-	-
Chlorinated Hydrocarbons	1,2-Dichloroethene	µg/L				<10	<10	-	-	-	-	-	-	-	-	-	-	-

*LOR exceeds Adopted Guidelines

DATA VALIDATION REPORT_September 2012

URS Project number:	42213719	**Data verified by:**	Bek Aagaard	Date: 26/3/2013
Client:	Darwin Waterfront Corporation			
Site:	Waterfront Precinct	Signed:	Bbeke Aagaard	
URS Project Manager:	Tim Smith			
		Validation by:	Mitch Bacon	Date: 3/4/2013
Matrix type:	Groundwater			
No Primary samples:	23			
Laboratory:	ALS; Envirolab	Signed:		
Lab reference:	ES1221357, ES1221483, ES1221566, 78400, 78502			
		Project Manager:	Tim Smith	Date:
		Signed:		

Data quality objectives

Field data comparison

No apparent anomalies were observed between laboratory results and field observations (Batches ES1221483 and ES1221566). However, slight hydrocarbon odours were noted for MW125_4092012 and MW128_4092012, but no Total Petroleum Hydrocarbons (TPHs) or benzene, toluene, ethylbenzene and xylenes (BTEX) were reported for MW125_4092012 and MW128_4092012 in Batch ES1214357.

Frequency of field QC

Field QC samples were collected to project specifications.

		Discrepancy	Frequency	Requested Frequency
Intra-laboratory Duplicates Taken	2	None noted	2	2
Inter-laboratory Duplicates Taken	2	None noted	2	2
Intra-laboratory Duplicates Analysed	2	None noted	2	2
Inter-laboratory Duplicates Analysed	2	None noted	2	2
		Total Frequency	**4**	**4**

Batch ES1221357

Inter-laboratory duplicates were not analysed at the required frequency for carbon disulfide and total anions and cations analytes. However, the presence of laboratory duplicates for these analytes is considered sufficient for interpretation of the precision of the results.

Batch ES1221483

Intra- and inter-laboratory duplicates were not analysed at the required frequency for PAHs, trihalomethanes, oxygenated compounds, monocyclic aromatic hydrocarbons, aliphatic and aromatic halogenated compounds, carbon disulfide and total anions and cations analytes. However, the presence of laboratory duplicates for these analytes, which reported RPDs within acceptable levels and acceptable accuracy data, the reported data is considered sufficient for interpretation of the precision of the results except for PAHs. No laboratory duplicate was performed for PAHs; however, as PAHs were reported below LOR, both for the current GME and historically (except for field sample MW120_29102007), the precision and accuracy of the results for PAH is considered acceptable.

Frequency of laboratory QC

Batch ES1221357

No laboratory duplicates were reported for PAHs and total anions and cations. The precision of the data has been considered acceptable based on the presence of intra- and inter-laboratory duplicates were available and acceptable for PAHs. However, no inter- or intra-laboratory duplicates were reported for total anions and cations. The precision of the data has been considered acceptable based on the presence of other laboratory quality control samples, such as LCS and method blank for total anions and cations, and surrogate recoveries (where applicable), LCS recoveries and method blank for PAHs, and as the reported results were consistent with historical results and field observations.

Batches ES1221483 and ES1221566

No laboratory duplicates were reported for PAHs, TPH >C10-C40 and ferric iron. The precision of the data has been considered acceptable based on the presence of intra- and inter-laboratory duplicates

	were available and acceptable for TPH >C10-C40 and ferric iron. However, no inter-laboratory duplicates were reported for PAHs. The precision of the data has been considered acceptable based on the presence of other laboratory quality control samples, such as method blanks, LCS and surrogate recoveries for PAHs, and as the reported results were consistent with historical results and field observations.
Tests requested/reported	Samples were analysed and reported as requested on the COC forbatches ES1221483 and ES1221566. **Batch ES1221357** No amber bottle was received for MW121_04092012, therefore TPH C10-C39 and PAHs analysis could not conducted.
Limits of reporting	LORs were sufficiently low to enable assessment against adopted guideline criteria with the following limitations: • Protocol LOR for anthracene (1 µg/L) above the adopted ILs (0.4 µg/L) • Protocol LOR for benzo(a)pyrene (0.5 µg/L) above the adopted ILs (0.2 µg/L) The limits of reporting were above the adopted investigation levels for anthracene and benzo(a)pyrene. As a result, potential exists for samples to contain concentrations of these analytes above the adopted investigation levels, but below detection limits. This lack of definitive data should be taken into consideration when interpreting analytical results below LOR for these PAHs. • Protocol LOR exceeds the guideline trigger value for arsenic (0.1 mg/L) • Protocol LOR exceeds the guideline trigger value for cadmium (0.0055 mg/L) • Protocol LOR exceeds the guideline trigger value for chromium (0.0044 mg/L) • Protocol LOR exceeds the guideline trigger value for copper (0.0013 mg/L) • Protocol LOR exceeds the guideline trigger value for iron (0.2 mg/L) • Protocol LOR exceeds the guideline trigger value for lead (0.0044 mg/L) • Protocol LOR exceeds the guideline trigger value for nickel (0.07 mg/L) • Protocol LOR exceeds the guideline trigger value for zinc (0.015 mg/L) The limits of reporting exceeded the guideline trigger levels for several metals. As a result, potential exists for samples to contain concentrations of these analytes above the adopted investigation levels, but below detection limits. **Batch ES1221357** EG020: Some samples were diluted and rerun due to matrix interference and LOR's have been raised accordingly. (High sample salinity). **Batch ES1221483** EG020A: LOR 's have been raised for some samples due to matrix interference (High sample salinity) It has been noted that Nitrite is greater than NoX for MW114; however, this difference is within the limits of experimental variation. **Batch ES1221566** EG020: Some samples were diluted and rerun due to matrix interference and LOR's have been raised accordingly. (High sample salinity).
Data transcription	A random 10% check of the laboratory results identified no anomalies within the electronic data, the laboratory reports, and tables generated by URS.
Sample management	
Chain of Custody	Chain of custody documents completed. The sampling date on the COC for batch ES1221357 (dated 4/8/12) does not correspond to labelling in field notes (dated 4/9/12). The reported samples were labelled according to field notes (4/9/12).
Handling and preservation	Samples were correctly preserved, chilled with ice and received at the laboratory at 3.9-12.8°C (ice present). While the recorded temperature for batch ES1221566 was slightly above the recommended temperature, potentially resulting in some loss of volatiles and changes in natural attenuation parameters, and therefore possible under-reporting of associated analytes. This is not considered to affect the reported results, as concentrations of volatile analytes for the current and historical investigation have reported below the LOR and analytes were below the LOR in the trip blank (QCA_6092012), and the majority of the samples were received within the suggested range, and samples were cooled on packaging and on arrival at the laboratory.
Holding time compliance	**Batch ES1221566** The holding time for nitrite as N was exceeded by one day and ferrous iron by two days for field samples MW134_5/9/2012. Care should be taken with interpreting results for ferrous iron for these field samples, as reported concentrations may be biased low.

Data precision

Field duplicate RPDs

RPDs exceeded control limits for the following sample analysis. (Samples with higher reported concentrations are in bold).

- MW127_4/9/2012 and **QAQC01_4/9/2012** for ferrous iron in batch ES1221357 (185%); and
- **MW127_4/9/2012** and QAQC01_4/9/2012 for ferric iron batch ES1221357 (196%).

The reported result for ferric iron in the primary sample MW127_4/9/2012 is considered unlikely in a filtered sample. It is likely this individual sample was not field filtered, or the sample has been reduced in transit, therefore it is not considered to affect the interpretation of other ferric iron results.
EG051G: Ferrous Iron results have been confirmed for sample ID's 'MW127' and 'QAQC01' from the HCl preserved bottle.
Although ferrous iron and ferric iron are not considered parameters of potential concern and no ILs have been adopted, care should be taken when using the data for these analytes for any quantitative purposes, particularly in relation to ferric iron concentrations reported in MW127_4/9/2012, as concentrations were orders of magnitude higher than those reported in field duplicates.

Inter-laboratory Replicate (Field triplicate) RPDs

RPDs exceeded control limits for the following sample analysis (Sample with higher reported concentrations are in bold):

- MW127_4/9/2012 and **QAQC02_4/9/2012** for ferrous iron in batch ES1221357 (172%).

Although ferrous iron is not considered a parameter of potential concern and no ILs has been adopted, care should be taken when using the data for this analyte for any quantitative purposes, as the concentrations was orders of magnitude higher than the concentration reported in the primary sample.

Laboratory duplicate RPDs

RPDs were within control limits.

Data accuracy

Laboratory control spike recovery

The following recoveries were outside control limits and may affect data interpretation:

Batch	Analyte	Recovery (%)	LCL (%)	UCL (%)	Comment
ES1221357	Dibromochlorome thane	64.7	65	115	Recovery less than lower control limit
ES1221566	TPH C6-C10 fraction	128	75	127	Recovery greater than upper control limit

For LCS recoveries reported lower than the lower control limit, the potential exists for reported concentrations to be biased low for dibromochloromethane (35%). As no IL has been adopted for dibromochloromethane, this potential for under-reporting is not considered to affect the interpretation of the results, and dibromochloromethane was not reported above LOR.

For LCS recoveries reported greater than the upper control limit, the potential exists for reported concentrations to be biased high by up to 27% for TPH C6-C10 fraction. As no IL has been adopted for TPH C6-C10 fraction, this potential for over-reporting is not considered to affect the interpretation of the results.

Matrix spike recovery

The following recoveries were outside control limits and may affect data interpretation:

Sample	Analyte	Recovery (%)	LCL (%)	UCL (%)	Comment
Anonymous (ES1221357)	Sulfate as SO4 - Turbidimetric	ND	-	-	MS recovery not determined, background level greater than or equal to 4x spike level.
MW125_04092012	Cadmium	23.4	70	130	Recovery less than lower data quality objective
MW125_04092012	Copper	35	70	130	Recovery less than lower data quality objective
MW125_04092012	Lead	68.7	70	130	Recovery less than lower data quality objective
MW125_04092012	Zinc	39.6	70	130	Recovery less than lower data quality objective
MW128_04092012	Methane	ND	-	-	MS recovery not determined, background level greater than or equal to 4x spike level.
Anonymous (ES1221483)	Sulfate as SO4 - Turbidimetric	ND	-	-	MS recovery not determined, background level greater than or equal to 4x spike level.
MW129_05092012	Methane	ND	-	-	MS recovery not determined, background level greater than or equal to 4x spike level.
Anonymous (ES1221566)	Methane	ND	-	-	MS recovery not determined, background level greater than

					or equal to 4x spike level.
Anonymous (ES1221566)	Methane	ND	-	-	MS recovery not determined, background level greater than or equal to 4x spike level.
ND – Not determined					

Batches ES1221357, ES1221483 and ES1221566
For the anonymous samples, as the lack of matrix spike for these analytes was due to elevated sample concentrations was in anonymous samples, and due to the presence of other quality control data, such as method blanks and LCS, this is not considered to affect the interpretation of the results.

Matrix spike recoveries were reported less than the lower data quality objective for cadmium, copper, lead and zinc; hence, there is potential for reported concentrations of these analytes to be biased low by up to 77%, 65%, 31% and 60%, respectively. As ILs have been adopted for cadmium, copper, lead and zinc, care should be taken with interpreting results close to the adopted guidelines.

Batch ES1221357
Matrix spike recoveries were not reported for PAHs, calcium, magnesium, potassium, sodium, halogenated methanes, oxygenated compounds, monocyclic aromatic hydrocarbons, carbon disulphide, chlorinated aliphatics, ionic balance, TDS and alkalinity. The accuracy of the data for these compound groups is considered acceptable based on the presence of other quality control data, such as method blanks, LCS recoveries and surrogate recoveries (where applicable).

Batch ES1221483
Matrix spike recoveries were not reported for PAHs, TPH >C10-C40, calcium, magnesium, potassium, sodium, ferric iron, halogenated methanes, oxygenated compounds, monocyclic aromatic hydrocarbons, carbon disulphide, chlorinated aliphatics, ionic balance, TDS and alkalinity. The accuracy of the data for these compound groups is considered acceptable based on the presence of other quality control data, such as method blanks, LCS recoveries and surrogate recoveries (where applicable).

Batch ES1221566
Matrix spike recoveries were not reported for ferric iron and alkalinity. The accuracy of the data for these compound groups is considered acceptable based on the presence of other quality control data, such as method blanks, LCS recoveries and surrogate recoveries (where applicable).

Surrogate spike recovery

The following recoveries were outside control limits and may affect data interpretation:

Sample	Analyte	Recovery (%)	LCL (%)	UCL (%)	Comment
QC01_04092012	4-Bromofluorobenzene	124	80.8	123.7	Recovery greater than upper data quality objective
MW135_04092012	4-Bromofluorobenzene	126	80.8	123.7	Recovery greater than upper data quality objective
MW136_04092012	4-Bromofluorobenzene	126	80.8	123.7	Recovery greater than upper data quality objective
MW121_04092012	Toluene-D8	133	79	131	Recovery greater than upper data quality objective
QC01_04092012	4-Bromofluorobenzene	136	70	128	Recovery greater than upper data quality objective
MW136_04092012	4-Bromofluorobenzene	132	70	128	Recovery greater than upper data quality objective

Surrogate recoveries were reported greater than the upper data quality objective for 4-Bromofluorobenzene in field samples QC01_04092012 (VOC surrogate and TPH/BTEX surrogate);, MW135_04092012, MW136_04092012 (VOC surrogate and TPH/BTEX surrogate); hence, there is the potential for the volatile TPH C6-C10 and benzene, toluene, ethylbenzene and xylenes (BTEX) results to be biased high. This is not considered to affect the interpretation of the results, as volatiles were not reported above the laboratory LOR in this sample.

Surrogate recoveries were reported greater than the upper data quality objective for Toluene_D8; hence, there is the potential for the volatile analytes results to be biased high. This is not considered to affect the interpretation of the results, as volatile analytes were not reported above the laboratory LOR in these samples.

Blank monitoring

Equipment rinsate blank

Batches ES1221357 and ES1221566
Concentrations of all analytes were reported below the LOR.

Batch ES1221483

	The rinsate blank reported concentrations for manganese (0.003 mg/L) above LOR in QCC01_5/09/2012. As the manganese concentration in the rinsate blank is reported well below those reported in primary samples, the potential for cross contamination by inadequate decontamination is not considered to affect the results.
Field blank	Concentrations of all analytes were reported below the LOR.
Trip blank	Concentrations of all analytes were reported below the LOR.
Method blank	Concentrations of all analytes were reported below the LOR.
Other observations	**Batch ES1221357** EG020: Poor matrix spike recovery was obtained for some elements on sample ES1221357 #004 due to matrix interference. Confirmed by reanalysis. **Batch ES1221483** EG020: Positive Manganese results have been confirmed by reanalysis for sample ES1221483 #011.

Site Name	Waterfront Precinct
Project No.	42213719
Project Manager	Tim Smith
Matrix	Water
Laboratory	ALS / EnviroLab
Batch File Number	ES1221357

Analytical Method	Analytical Parameter	Number of Tests Requested	Number of Tests Reported	Number of Primary Samples	Holding Times (a)	Limits of Reporting (b)	Field Blank (1 per day)		Rinsate Blank (1 per day)		Trip Blank (1 per esky with VOCs)		Method Blank (1 per batch)		Intra-Laboratory Duplicate Sample (1 in 20)		Inter-Laboratory Duplicate Sample (1 in 20)		Lab Duplicate (1 in 10)		Matrix Spike (1 in 20)		LCS (1 per batch)		Surrogates (GC-MS organics)	
							Number Required	Number Reported	Number Required	Number Reported	Number Required	Number Reported	Number Required	Number Reported	Number Required	Number Reported	Number Required	Number Reported	Number Required	Number Reported	Number Required	Number Reported	Number Required	Number Reported	Reported	OK
METALS ANALYSIS/ALS/EG020F	Arsenic		12	8	✓	×	1	1	1	1	0	0	1	3	1	1	1	1	2	6	1	3	1	3	-	-
	Cadmium		12	8	✓	×	1	1	1	1	0	0	1	3	1	1	1	1	2	6	1	3	1	3	-	-
	Chromium		12	8	✓	×	1	1	1	1	0	0	1	3	1	1	1	1	2	6	1	3	1	3	-	-
	Copper		12	8	✓	×	1	1	1	1	0	0	1	3	1	1	1	1	2	6	1	3	1	3	-	-
	Lead		12	8	✓	×	1	1	1	1	0	0	1	3	1	1	1	1	2	6	1	3	1	3	-	-
	Manganese		12	8	✓	✓	1	1	1	1	0	0	1	3	1	1	1	1	2	6	1	3	1	3	-	-
	Nickel		12	8	✓	×	1	1	1	1	0	0	1	3	1	1	1	1	2	6	1	3	1	3	-	-
	Vanadium		12	8	✓	×	1	1	1	1	0	0	1	3	1	1	1	1	2	6	1	3	1	3	-	-
	Zinc		12	8	✓	×	1	1	1	1	0	0	1	3	1	1	1	1	2	6	1	3	1	3	-	-
METALS ANALYSIS/ALS/EG035F	Mercury		12	8	✓	✓	1	1	1	1	0	0	1	2	1	1	1	1	2	3	1	2	1	2	-	-
VOLATILES ANALYSIS/ALS/EP080	Benzene		13	8	✓	✓	1	1	1	1	1	1	1	1	1	1	1	1	2	2	1	1	1	1	✓	✓
	Ethylbenzene		13	8	✓	✓	1	1	1	1	1	1	1	1	1	1	1	1	2	2	1	1	1	1	✓	✓
	meta- & para-Xylene		13	8	✓	✓	1	1	1	1	1	1	1	1	1	1	1	1	2	2	1	1	1	1	✓	✓
	Naphthalene		7	3	✓	✓	2	2	2	2	1	1	1	1	1	1	1	1	2	2	1	1	1	1	✓	✓
	ortho-Xylene		13	8	✓	✓	1	1	1	1	1	1	1	1	1	1	1	1	2	2	1	1	1	1	✓	✓
	Toluene		13	8	✓	✓	1	1	1	1	1	1	1	1	1	1	1	1	2	2	1	1	1	1	✓	✓
SEMIVOLATILES ANALYSIS/ALS/EP075(SIM)B	Acenaphthene		10	6	✓	✓	1	1	1	1	0	0	1	2	1	1	1	1	1	0	1	0	1	2	✓	✓
	Acenaphthylene		10	6	✓	✓	1	1	1	1	0	0	1	2	1	1	1	1	1	0	1	0	1	2	✓	✓
	Anthracene		10	6	✓	×	1	1	1	1	0	0	1	2	1	1	1	1	1	0	1	0	1	2	✓	✓
	Benz(a)anthracene		10	6	✓	✓	1	1	1	1	0	0	1	2	1	1	1	1	1	0	1	0	1	2	✓	✓
	Benzo(a)pyrene		10	6	✓	×	1	1	1	1	0	0	1	2	1	1	1	1	1	0	1	0	1	2	✓	✓
	Benzo(b)fluoranthene		10	6	✓	✓	1	1	1	1	0	0	1	2	1	1	1	1	1	0	1	0	1	2	✓	✓
	Benzo(g,h,i)perylene		10	6	✓	✓	1	1	1	1	0	0	1	2	1	1	1	1	1	0	1	0	1	2	✓	✓
	Benzo(k)fluoranthene		10	6	✓	✓	1	1	1	1	0	0	1	2	1	1	1	1	1	0	1	0	1	2	✓	✓
	Chrysene		10	6	✓	✓	1	1	1	1	0	0	1	2	1	1	1	1	1	0	1	0	1	2	✓	✓
	Dibenz(a,h)anthracene		10	6	✓	✓	1	1	1	1	0	0	1	2	1	1	1	1	1	0	1	0	1	2	✓	✓
	Fluoranthene		10	6	✓	✓	1	1	1	1	0	0	1	2	1	1	1	1	1	0	1	0	1	2	✓	✓
	Fluorene		10	6	✓	✓	1	1	1	1	0	0	1	2	1	1	1	1	1	0	1	0	1	2	✓	✓
	Indeno(1,2,3-cd)pyrene		10	6	✓	✓	1	1	1	1	0	0	1	2	1	1	1	1	1	0	1	0	1	2	✓	✓
	Naphthalene		10	9	✓	✓	2	2	2	2	1	1	1	2	1	1	1	1	1	0	1	0	1	2	✓	✓
	Phenanthrene		10	6	✓	✓	1	1	1	1	0	0	1	2	1	1	1	1	1	0	1	0	1	2	✓	✓
	Pyrene		10	6	✓	✓	1	1	1	1	0	0	1	2	1	1	1	1	1	0	1	0	1	2	✓	✓
VOLATILES ANALYSIS/ALS/EP080/071	C6 - C10 Fraction		13	8	✓	✓	1	1	1	1	1	1	1	1	1	1	1	1	2	2	1	1	1	1	✓	✓
	C6 - C10 Fraction minus BTEX (F1)		13	8	✓	✓	1	1	1	1	1	1	1	1	1	1	1	1	2	2	1	1	1	1	✓	✓
	C6 - C9 Fraction		13	8	✓	✓	1	1	1	1	1	1	1	1	1	1	1	1	2	2	1	1	1	1	✓	✓
SEMIVOLATILES ANALYSIS/ALS/EP080/071	>C10 - C16 Fraction		12	8	✓	✓	1	1	1	1	0	0	1	2	1	1	1	1	2	2	1	1	1	2	-	-
	>C16 - C34 Fraction		12	8	✓	✓	1	1	1	1	0	0	1	2	1	1	1	1	2	2	1	1	1	2	-	-
	>C34 - C40 Fraction		12	8	✓	✓	1	1	1	1	0	0	1	2	1	1	1	1	2	2	1	1	1	2	-	-
	C10 - C14 Fraction		12	8	✓	✓	1	1	1	1	0	0	1	2	1	1	1	1	2	2	1	1	1	2	-	-
	C15 - C28 Fraction		12	8	✓	✓	1	1	1	1	0	0	1	2	1	1	1	1	2	2	1	1	1	2	-	-
	C29 - C36 Fraction		12	8	✓	✓	1	1	1	1	0	0	1	2	1	1	1	1	2	2	1	1	1	2	-	-
VOLATILES ANALYSIS/ALS/EP033	Methane		10	8	✓	✓	0	0	0	0	0	0	1	1	1	1	1	1	1	2	1	1	1	1	-	-
METALS ANALYSIS/ALS/ED093F	Calcium		10	8	✓	✓	0	0	0	0	0	0	1	1	1	1	1	1	1	2	1	0	1	1	-	-
	Magnesium		10	8	✓	✓	0	0	0	0	0	0	1	1	1	1	1	1	1	2	1	0	1	1	-	-
	Potassium		10	8	✓	✓	0	0	0	0	0	0	1	1	1	1	1	1	1	2	1	0	1	1	-	-
	Sodium		10	8	✓	✓	0	0	0	0	0	0	1	1	1	1	1	1	1	2	1	0	1	1	-	-
INSTRUMENT LABORATORY (NON-METALL	Nitrite as N		10	8	✓	✓	0	0	0	0	0	0	1	1	1	1	1	1	1	2	1	1	1	1	-	-
INSTRUMENT LABORATORY (NON-METALL	Nitrite + Nitrate as N		10	8	✓	✓	0	0	0	0	0	0	1	1	1	1	1	1	1	2	1	1	1	1	-	-
INSTRUMENT LABORATORY (NON-METALL	Sulfate as SO4 - Turbidimetric		10	8	✓	✓	0	0	0	0	0	0	1	1	1	1	1	1	1	2	1	1	1	1	-	-
WET CHEMISTRY AND PREPARATION/ALS/E	Sulfide as S2-		10	8	✓	✓	0	0	0	0	0	0	1	1	1	1	1	1	1	2	1	1	1	1	-	-
WET CHEMISTRY AND PREPARATION/ALS/E	Sulfite as SO3 2-		10	8	✓	✓	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	0	1	1	-	-
METALS ANALYSIS/ALS/ED040F	Sulfur as S		10	8	✓	✓	0	0	0	0	0	0	1	1	1	1	1	1	1	2	1	0	1	1	-	-
INSTRUMENT LABORATORY (NON-METALL	Chloride		10	8	✓	✓	0	0	0	0	0	0	1	1	1	1	1	1	1	2	1	1	1	2	-	-
METALS ANALYSIS/ALS/EG052FG-MS	Ferric Iron		10	8	✓	✓	0	0	0	0	0	0	1	0	1	1	1	1	1	2	1	1	1	0	-	-
INSTRUMENT LABORATORY (NON-METALL	Ferrous Iron		10	8	✓	✓	0	0	0	0	0	0	1	1	1	1	1	1	1	2	1	1	1	1	-	-
VOLATILES ANALYSIS/ALS/EP074G	Bromodichloromethane		9	6	✓	✓	1	1	1	1	0	0	1	1	1	1	0	[b]	1	2	1	0	1	1	✓	✓
	Bromoform		9	6	✓	✓	1	1	1	1	0	0	1	1	1	1	0	[b]	1	2	1	0	1	1	✓	✓
	Chloroform		9	6	✓	✓	1	1	1	1	0	0	1	1	1	1	0	[b]	1	2	1	0	1	1	✓	✓
	Dibromochloromethane		9	6	✓	✓	1	1	1	1	0	0	1	1	1	1	0	[b]	1	2	1	0	1	1	✓	✓
VOLATILES ANALYSIS/ALS/EP074B	2-Butanone (MEK)		9	6	✓	✓	1	1	1	1	0	0	1	1	1	1	0	[b]	1	2	1	0	1	1	✓	✓
	2-Hexanone (MBK)		9	6	✓	✓	1	1	1	1	0	0	1	1	1	1	0	[b]	1	2	1	0	1	1	✓	✓
	4-Methyl-2-pentanone (MIBK)		9	6	✓	✓	1	1	1	1	0	0	1	1	1	1	0	[b]	1	2	1	0	1	1	✓	✓
	Vinyl Acetate		9	6	✓	✓	1	1	1	1	0	0	1	1	1	1	0	[b]	1	2	1	0	1	1	✓	✓

Site Name	Waterfront Precinct
Project No.	42213719
Project Manager	Tim Smith
Matrix	Water
Laboratory	ALS / EnviroLab
Batch File Number	ES1221357

Analytical Method	Analytical Parameter	Number of Tests Requested	Number of Tests Reported	Number of Primary Samples	Holding Times (a)	Limits of Reporting (b)	Field Blank (1 per day)		Rinsate Blank (1 per day)		Trip Blank (1 per esky with VOCs)		Method Blank (1 per batch)		Intra-Laboratory Duplicate Sample (1 in 20)		Inter-Laboratory Duplicate Sample (1 in 20)		Lab Duplicate (1 in 10)		Matrix Spike (1 in 20)		LCS (1 per batch)		Surrogates (GC-MS organics)	
							Number Required	Number Reported	Number Required	Number Reported	Number Required	Number Reported	Number Required	Number Reported	Number Required	Number Reported	Number Required	Number Reported	Number Required	Number Reported	Number Required	Number Reported	Number Required	Number Reported	Reported	OK
VOLATILES ANALYSIS/ALS/EP074A	1,2,4-Trimethylbenzene		9	6	✓	✓	1	1	1	1	0	0	1	1	1	1	0	0	1	2	1	0	1	1	✓	✓
	1,3,5-Trimethylbenzene		9	6	✓	✓	1	1	1	1	0	0	1	1	1	1	0	0	1	2	1	0	1	1	✓	✓
	Isopropylbenzene		9	6	✓	✓	1	1	1	1	0	0	1	1	1	1	0	0	1	2	1	0	1	1	✓	✓
	n-Butylbenzene		9	6	✓	✓	1	1	1	1	0	0	1	1	1	1	0	0	1	2	1	0	1	1	✓	✓
	n-Propylbenzene		9	6	✓	✓	1	1	1	1	0	0	1	1	1	1	0	0	1	2	1	0	1	1	✓	✓
	p-Isopropyltoluene		9	6	✓	✓	1	1	1	1	0	0	1	1	1	1	0	0	1	2	1	0	1	1	✓	✓
	sec-Butylbenzene		9	6	✓	✓	1	1	1	1	0	0	1	1	1	1	0	0	1	2	1	0	1	1	✓	✓
	Styrene		9	6	✓	✓	1	1	1	1	0	0	1	1	1	1	0	0	1	2	1	0	1	1	✓	✓
	tert-Butylbenzene		9	6	✓	✓	1	1	1	1	0	0	1	1	1	1	0	0	1	2	1	0	1	1	✓	✓
VOLATILES ANALYSIS/ALS/EP074E	1,1,1,2-Tetrachloroethane		9	6	✓	✓	1	1	1	1	0	0	1	1	1	1	0	0	1	2	1	0	1	1	✓	✓
	1,1,1-Trichloroethane		9	6	✓	✓	1	1	1	1	0	0	1	1	1	1	0	0	1	2	1	0	1	1	✓	✓
	1,1,2,2-Tetrachloroethane		9	6	✓	✓	1	1	1	1	0	0	1	1	1	1	0	0	1	2	1	0	1	1	✓	✓
	1,1,2-Trichloroethane		9	6	✓	✓	1	1	1	1	0	0	1	1	1	1	0	0	1	2	1	0	1	1	✓	✓
	1,1-Dichloroethane		9	6	✓	✓	1	1	1	1	0	0	1	1	1	1	0	0	1	2	1	0	1	1	✓	✓
	1,1-Dichloroethene		9	6	✓	✓	1	1	1	1	0	0	1	1	1	1	0	0	1	2	1	1	1	1	✓	✓
	1,1-Dichloropropylene		9	6	✓	✓	1	1	1	1	0	0	1	1	1	1	0	0	1	2	1	0	1	1	✓	✓
	1,2,3-Trichloropropane		9	6	✓	✓	1	1	1	1	0	0	1	1	1	1	0	0	1	2	1	0	1	1	✓	✓
	1,2-Dibromo-3-chloropropane		9	6	✓	✓	1	1	1	1	0	0	1	1	1	1	0	0	1	2	1	0	1	1	✓	✓
	1,2-Dichloroethane		9	6	✓	✓	1	1	1	1	0	0	1	1	1	1	0	0	1	2	1	0	1	1	✓	✓
	1,3-Dichloropropane		9	6	✓	✓	1	1	1	1	0	0	1	1	1	1	0	0	1	2	1	0	1	1	✓	✓
	Bromomethane		9	6	✓	✓	1	1	1	1	0	0	1	1	1	1	0	0	1	2	1	0	1	1	✓	✓
	Carbon Tetrachloride		9	6	✓	✓	1	1	1	1	0	0	1	1	1	1	0	0	1	2	1	0	1	1	✓	✓
	Chloroethane		9	6	✓	✓	1	1	1	1	0	0	1	1	1	1	0	0	1	2	1	0	1	1	✓	✓
	Chloromethane		9	6	✓	✓	1	1	1	1	0	0	1	1	1	1	0	0	1	2	1	0	1	1	✓	✓
	cis-1,2-Dichloroethene		9	6	✓	✓	1	1	1	1	0	0	1	1	1	1	0	0	1	2	1	0	1	1	✓	✓
	cis-1,4-Dichloro-2-butene		9	6	✓	✓	1	1	1	1	0	0	1	1	1	1	0	0	1	2	1	0	1	1	✓	✓
	Dibromomethane		9	6	✓	✓	1	1	1	1	0	0	1	1	1	1	0	0	1	2	1	0	1	1	✓	✓
	Dichlorodifluoromethane		9	6	✓	✓	1	1	1	1	0	0	1	1	1	1	0	0	1	2	1	0	1	1	✓	✓
	Hexachlorobutadiene		9	6	✓	✓	1	1	1	1	0	0	1	1	1	1	0	0	1	2	1	0	1	1	✓	✓
	Iodomethane		9	6	✓	✓	1	1	1	1	0	0	1	1	1	1	0	0	1	2	1	0	1	1	✓	✓
	Pentachloroethane		9	6	✓	✓	1	1	1	1	0	0	1	1	1	1	0	0	1	2	1	0	1	1	✓	✓
	Tetrachloroethene		9	6	✓	✓	1	1	1	1	0	0	1	1	1	1	0	0	1	2	1	0	1	1	✓	✓
	trans-1,2-Dichloroethene		9	6	✓	✓	1	1	1	1	0	0	1	1	1	1	0	0	1	2	1	0	1	1	✓	✓
	trans-1,4-Dichloro-2-butene		9	6	✓	✓	1	1	1	1	0	0	1	1	1	1	0	0	1	2	1	0	1	1	✓	✓
	Trichloroethene		9	6	✓	✓	1	1	1	1	0	0	1	1	1	1	0	0	1	2	1	1	1	1	✓	✓
	Trichlorofluoromethane		9	6	✓	✓	1	1	1	1	0	0	1	1	1	1	0	0	1	2	1	0	1	1	✓	✓
	Vinyl chloride		9	6	✓	✓	1	1	1	1	0	0	1	1	1	1	0	0	1	2	1	0	1	1	✓	✓
VOLATILES ANALYSIS/ALS/EP074F	1,2,3-Trichlorobenzene		9	6	✓	✓	1	1	1	1	0	0	1	1	1	1	0	0	1	2	1	0	1	1	✓	✓
	1,2,4-Trichlorobenzene		9	6	✓	✓	1	1	1	1	0	0	1	1	1	1	0	0	1	2	1	0	1	1	✓	✓
	1,2-Dichlorobenzene		9	6	✓	✓	1	1	1	1	0	0	1	1	1	1	0	0	1	2	1	0	1	1	✓	✓
	1,3-Dichlorobenzene		9	6	✓	✓	1	1	1	1	0	0	1	1	1	1	0	0	1	2	1	0	1	1	✓	✓
	1,4-Dichlorobenzene		9	6	✓	✓	1	1	1	1	0	0	1	1	1	1	0	0	1	2	1	0	1	1	✓	✓
	2-Chlorotoluene		9	6	✓	✓	1	1	1	1	0	0	1	1	1	1	0	0	1	2	1	0	1	1	✓	✓
	4-Chlorotoluene		9	6	✓	✓	1	1	1	1	0	0	1	1	1	1	0	0	1	2	1	0	1	1	✓	✓
	Bromobenzene		9	6	✓	✓	1	1	1	1	0	0	1	1	1	1	0	0	1	2	1	0	1	1	✓	✓
	Chlorobenzene		9	6	✓	✓	1	1	1	1	0	0	1	1	1	1	0	0	1	2	1	1	1	1	✓	✓
VOLATILES ANALYSIS/ALS/EP074C	Carbon disulfide		9	6	✓	✓	1	1	1	1	0	0	1	1	1	1	1	0	1	2	1	0	1	1	-	-
VOLATILES ANALYSIS/ALS/EP074D	1,2-Dibromoethane (EDB)		9	6	✓	✓	1	1	1	1	0	0	1	1	1	1	0	0	1	2	1	0	1	1	✓	✓
	1,2-Dichloropropane		9	6	✓	✓	1	1	1	1	0	0	1	1	1	1	0	0	1	2	1	0	1	1	✓	✓
	2,2-Dichloropropane		9	6	✓	✓	1	1	1	1	0	0	1	1	1	1	0	0	1	2	1	0	1	1	✓	✓
	cis-1,3-Dichloropropene		9	6	✓	✓	1	1	1	1	0	0	1	1	1	1	0	0	1	2	1	0	1	1	✓	✓
	trans-1,3-Dichloropropylene		9	6	✓	✓	1	1	1	1	0	0	1	1	1	1	0	0	1	2	1	0	1	1	✓	✓
INSTRUMENT LABORATORY (NON-METALL	Ionic Balance		10	8	✓	✓	0	0	0	0	0	0	1	1	1	1	1	1	1	2	1	0	1	1	-	-
WET CHEMISTRY AND PREPARATION/ALS/E	Total Dissolved Solids @180°C		10	8	✓	✓	0	0	0	0	0	0	1	1	1	1	1	1	1	2	1	0	1	2	-	-
INSTRUMENT LABORATORY (NON-METALL	Bicarbonate Alkalinity as CaCO3		10	8	✓	✓	0	0	0	0	0	0	1	0	1	1	1	1	1	4	1	0	1	0	-	-
	Carbonate Alkalinity as CaCO3		10	8	✓	✓	0	0	0	0	0	0	1	0	1	1	1	1	1	4	1	0	1	0	-	-
	Hydroxide Alkalinity as CaCO3		10	8	✓	✓	0	0	0	0	0	0	1	0	1	1	1	1	1	4	1	0	1	0	-	-
	Total Alkalinity as CaCO3		10	8	✓	✓	0	0	0	0	0	0	1	0	1	1	1	1	1	4	1	0	1	2	-	-

Site Name	Waterfront Precinct
Project No.	42213719
Project Manager	Tim Smith
Matrix	Water
Laboratory	ALS / EnviroLab
Batch File Number	ES1221483

Analytical Method	Analytical Parameter	Number of Tests Requested	Number of Tests Reported	Number of Primary Samples	Holding Times (a)	Limits of Reporting (b)	Field Blank (1 per day)		Rinsate Blank (1 per day)		Trip Blank (1 per esky with VOCs)		Method Blank (1 per batch)		Intra-Laboratory Duplicate Sample (1 in 20)		Inter-Laboratory Duplicate Sample (1 in 20)		Lab Duplicate (1 in 10)		Matrix Spike (1 in 20)		LCS (1 per batch)		Surrogates (GC-MS organics)	
							Number Required	Number Reported	Number Required	Number Reported	Number Required	Number Reported	Number Required	Number Reported	Number Required	Number Reported	Number Required	Number Reported	Number Required	Number Reported	Number Required	Number Reported	Number Required	Number Reported	Reported	OK
METALS ANALYSIS/ALS/EG020F	Arsenic	11	11	7	✓	×	1	1	1	1	0	0	1	1	1	1	1	1	1	2	1	1	1	1	-	-
	Cadmium	11	11	7	✓	×	1	1	1	1	0	0	1	1	1	1	1	1	1	2	1	1	1	1	-	-
	Chromium	11	11	7	✓	×	1	1	1	1	0	0	1	1	1	1	1	1	1	2	1	1	1	1	-	-
	Copper	11	11	7	✓	×	1	1	1	1	0	0	1	1	1	1	1	1	1	2	1	1	1	1	-	-
	Lead	11	11	7	✓	×	1	1	1	1	0	0	1	1	1	1	1	1	1	2	1	1	1	1	-	-
	Manganese	11	11	7	✓	✓	1	1	1	1	0	0	1	1	1	1	1	1	1	2	1	1	1	1	-	-
	Nickel	11	11	7	✓	×	1	1	1	1	0	0	1	1	1	1	1	1	1	2	1	1	1	1	-	-
	Vanadium	11	11	7	✓	×	1	1	1	1	0	0	1	1	1	1	1	1	1	2	1	1	1	1	-	-
	Zinc	11	11	7	✓	×	1	1	1	1	0	0	1	1	1	1	1	1	1	2	1	1	1	1	-	-
METALS ANALYSIS/ALS/EG035F	Mercury	11	11	7	✓	✓	1	1	1	1	0	0	1	1	1	1	1	1	1	2	1	1	1	1	-	-
VOLATILES ANALYSIS/ALS/EP080	Benzene	12	12	7	✓	✓	1	1	1	1	1	1	1	2	1	1	1	1	2	3	1	2	1	2	✓	✓
	Ethylbenzene	12	12	7	✓	✓	1	1	1	1	1	1	1	2	1	1	1	1	2	3	1	2	1	2	✓	✓
	meta- & para-Xylene	12	12	7	✓	✓	1	1	1	1	1	1	1	2	1	1	1	1	2	3	1	2	1	2	✓	✓
	Naphthalene	12	12	7	✓	✓	1	1	1	1	1	1	1	2	1	1	1	1	2	3	1	2	1	2	✓	✓
	ortho-Xylene	12	12	7	✓	✓	1	1	1	1	1	1	1	2	1	1	1	1	2	3	1	2	1	2	✓	✓
	Toluene	12	12	7	✓	✓	1	1	1	1	1	1	1	2	1	1	1	1	2	3	1	2	1	2	✓	✓
SEMIVOLATILES ANALYSIS/ALS/EP075(SIM)B	Acenaphthene	3	3	1	✓	✓	1	1	1	1	0	0	1	1	1	0	1	0	1	0	1	0	1	1	✓	✓
	Acenaphthylene	3	3	1	✓	✓	1	1	1	1	0	0	1	1	1	0	1	0	1	0	1	0	1	1	✓	✓
	Anthracene	3	3	1	✓	×	1	1	1	1	0	0	1	1	1	0	1	0	1	0	1	0	1	1	✓	✓
	Benz(a)anthracene	3	3	1	✓	✓	1	1	1	1	0	0	1	1	1	0	1	0	1	0	1	0	1	1	✓	✓
	Benzo(a)pyrene	3	3	1	✓	×	1	1	1	1	0	0	1	1	1	0	1	0	1	0	1	0	1	1	✓	✓
	Benzo(b)fluoranthene	3	3	1	✓	✓	1	1	1	1	0	0	1	1	1	0	1	0	1	0	1	0	1	1	✓	✓
	Benzo(g,h,i)perylene	3	3	1	✓	✓	1	1	1	1	0	0	1	1	1	0	1	0	1	0	1	0	1	1	✓	✓
	Benzo(k)fluoranthene	3	3	1	✓	✓	1	1	1	1	0	0	1	1	1	0	1	0	1	0	1	0	1	1	✓	✓
	Chrysene	3	3	1	✓	✓	1	1	1	1	0	0	1	1	1	0	1	0	1	0	1	0	1	1	✓	✓
	Dibenz(a,h)anthracene	3	3	1	✓	✓	1	1	1	1	0	0	1	1	1	0	1	0	1	0	1	0	1	1	✓	✓
	Fluoranthene	3	3	1	✓	✓	1	1	1	1	0	0	1	1	1	0	1	0	1	0	1	0	1	1	✓	✓
	Fluorene	3	3	1	✓	✓	1	1	1	1	0	0	1	1	1	0	1	0	1	0	1	0	1	1	✓	✓
	Indeno(1,2,3-cd)pyrene	3	3	1	✓	✓	1	1	1	1	0	0	1	1	1	0	1	0	1	0	1	0	1	1	✓	✓
	Naphthalene	3	3	3	✓	✓	1	1	1	1	0	0	1	1	1	1	1	0	1	0	1	0	1	1	✓	✓
	Phenanthrene	3	3	1	✓	✓	1	1	1	1	0	0	1	1	1	0	1	0	1	0	1	0	1	1	✓	✓
	Pyrene	3	3	1	✓	✓	1	1	1	1	0	0	1	1	1	0	1	0	1	0	1	0	1	1	✓	✓
VOLATILES ANALYSIS/ALS/EP080/071	C6 - C10 Fraction	12	12	7	✓	✓	1	1	1	1	1	1	1	2	1	1	1	1	2	3	1	2	1	2	✓	✓
	C6 - C10 Fraction minus BTEX (F1)	12	12	7	✓	✓	1	1	1	1	1	1	1	2	1	1	1	1	2	3	1	2	1	2	✓	✓
	C6 - C9 Fraction	12	12	7	✓	✓	1	1	1	1	1	1	1	2	1	1	1	1	2	3	1	2	1	2	✓	✓
SEMIVOLATILES ANALYSIS/ALS/EP080/071	>C10 - C16 Fraction	11	11	7	✓	✓	1	1	1	1	0	0	1	1	1	1	1	1	1	0	1	0	1	1	-	-
	>C16 - C34 Fraction	11	11	7	✓	✓	1	1	1	1	0	0	1	1	1	1	1	1	1	0	1	0	1	1	-	-
	>C34 - C40 Fraction	11	11	7	✓	✓	1	1	1	1	0	0	1	1	1	1	1	1	1	0	1	0	1	1	-	-
	C10 - C14 Fraction	11	11	7	✓	✓	1	1	1	1	0	0	1	1	1	1	1	1	1	0	1	0	1	1	-	-
	C15 - C28 Fraction	11	11	7	✓	✓	1	1	1	1	0	0	1	1	1	1	1	1	1	0	1	0	1	1	-	-
	C29 - C36 Fraction	11	11	7	✓	✓	1	1	1	1	0	0	1	1	1	1	1	1	1	0	1	0	1	1	-	-
VOLATILES ANALYSIS/ALS/EP033	Methane	9	9	7	✓	✓	0	0	0	0	0	0	1	1	1	1	1	1	1	2	1	1	1	1	-	-
METALS ANALYSIS/ALS/ED093F	Calcium	9	9	7	✓	✓	0	0	0	0	0	0	1	1	1	1	1	1	1	2	1	0	1	1	-	-
	Magnesium	9	9	7	✓	✓	0	0	0	0	0	0	1	1	1	1	1	1	1	2	1	0	1	1	-	-
	Potassium	9	9	7	✓	✓	0	0	0	0	0	0	1	1	1	1	1	1	1	2	1	0	1	1	-	-
	Sodium	9	9	7	✓	✓	0	0	0	0	0	0	1	1	1	1	1	1	1	2	1	0	1	1	-	-
INSTRUMENT LABORATORY (NON-METALL	Nitrite as N	9	9	7	✓	✓	0	0	0	0	0	0	1	1	1	1	1	1	1	2	1	1	1	1	-	-
INSTRUMENT LABORATORY (NON-METALL	Nitrite + Nitrate as N	9	9	7	✓	✓	0	0	0	0	0	0	1	2	1	1	1	1	1	4	1	2	1	2	-	-
INSTRUMENT LABORATORY (NON-METALL	Sulfate as SO4 - Turbidimetric	9	9	7	✓	✓	0	0	0	0	0	0	1	1	1	1	1	1	1	2	1	1	1	1	-	-
WET CHEMISTRY AND PREPARATION/ALS/E	Sulfide as S2-	9	9	7	✓	✓	0	0	0	0	0	0	1	1	1	1	1	1	1	2	1	1	1	1	-	-
WET CHEMISTRY AND PREPARATION/ALS/E	Sulfite as SO3 2-	9	9	7	✓	✓	0	0	0	0	0	0	1	1	1	1	1	1	1	2	1	0	1	1	-	-
METALS ANALYSIS/ALS/ED040F	Sulfur as S	9	9	7	✓	✓	0	0	0	0	0	0	1	1	1	1	1	1	1	2	1	0	1	1	-	-
INSTRUMENT LABORATORY (NON-METALL	Chloride	9	9	7	✓	✓	0	0	0	0	0	0	1	1	1	1	1	1	1	2	1	1	1	2	-	-
METALS ANALYSIS/ALS/EG053FG-MS	Ferric Iron	9	9	7	✓	✓	0	0	0	0	0	0	1	0	1	1	1	1	1	0	1	0	1	0	-	-
INSTRUMENT LABORATORY (NON-METALL	Ferrous Iron	9	9	7	✓	✓	0	0	0	0	0	0	1	1	1	1	1	1	1	2	1	1	1	1	-	-
VOLATILES ANALYSIS/ALS/EP074G	Bromodichloromethane	3	3	1	✓	✓	1	1	1	1	0	0	1	1	1	0	1	0	1	1	1	0	1	1	✓	✓
	Bromoform	3	3	1	✓	✓	1	1	1	1	0	0	1	1	1	0	1	0	1	1	1	0	1	1	✓	✓
	Chloroform	3	3	1	✓	✓	1	1	1	1	0	0	1	1	1	0	1	0	1	1	1	0	1	1	✓	✓
	Dibromochloromethane	3	3	1	✓	✓	1	1	1	1	0	0	1	1	1	0	1	0	1	1	1	0	1	1	✓	✓
VOLATILES ANALYSIS/ALS/EP074B	2-Butanone (MEK)	3	3	1	✓	✓	1	1	1	1	0	0	1	1	1	0	1	0	1	1	1	0	1	1	✓	✓
	2-Hexanone (MBK)	3	3	1	✓	✓	1	1	1	1	0	0	1	1	1	0	1	0	1	1	1	0	1	1	✓	✓
	4-Methyl-2-pentanone (MIBK)	3	3	1	✓	✓	1	1	1	1	0	0	1	1	1	0	1	0	1	1	1	0	1	1	✓	✓
	Vinyl Acetate	3	3	1	✓	✓	1	1	1	1	0	0	1	1	1	0	1	0	1	1	1	0	1	1	✓	✓

Site Name	Waterfront Precinct
Project No.	42213719
Project Manager	Tim Smith
Matrix	Water
Laboratory	ALS / EnviroLab
Batch File Number	ES1221483

Analytical Method	Analytical Parameter	Number of Tests Requested	Number of Tests Reported	Number of Primary Samples	Holding Times (a)	Limits of Reporting (b)	Field Blank (1 per day)		Rinsate Blank (1 per day)		Trip Blank (1 per esky with VOCs)		Method Blank (1 per batch)		Intra-Laboratory Duplicate Sample (1 in 20)		Inter-Laboratory Duplicate Sample (1 in 20)		Lab Duplicate (1 in 10)		Matrix Spike (1 in 20)		LCS (1 per batch)		Surrogates (GC-MS organics)	
							Number Required	Number Reported	Number Required	Number Reported	Number Required	Number Reported	Number Required	Number Reported	Number Required	Number Reported	Number Required	Number Reported	Number Required	Number Reported	Number Required	Number Reported	Number Required	Number Reported	Reported	OK
VOLATILES ANALYSIS/ALS/EP074A	1,2,4-Trimethylbenzene	3	3	1	✓	✓	1	1	1	1	0	0	1	1	1	0	1	0	1	1	1	0	1	1	✓	✓
	1,3,5-Trimethylbenzene	3	3	1	✓	✓	1	1	1	1	0	0	1	1	1	0	1	0	1	1	1	0	1	1	✓	✓
	Isopropylbenzene	3	3	1	✓	✓	1	1	1	1	0	0	1	1	1	0	1	0	1	1	1	0	1	1	✓	✓
	n-Butylbenzene	3	3	1	✓	✓	1	1	1	1	0	0	1	1	1	0	1	0	1	1	1	0	1	1	✓	✓
	n-Propylbenzene	3	3	1	✓	✓	1	1	1	1	0	0	1	1	1	0	1	0	1	1	1	0	1	1	✓	✓
	p-Isopropyltoluene	3	3	1	✓	✓	1	1	1	1	0	0	1	1	1	0	1	0	1	1	1	0	1	1	✓	✓
	sec-Butylbenzene	3	3	1	✓	✓	1	1	1	1	0	0	1	1	1	0	1	0	1	1	1	0	1	1	✓	✓
	Styrene	3	3	1	✓	✓	1	1	1	1	0	0	1	1	1	0	1	0	1	1	1	0	1	1	✓	✓
	tert-Butylbenzene	3	3	1	✓	✓	1	1	1	1	0	0	1	1	1	0	1	0	1	1	1	0	1	1	✓	✓
VOLATILES ANALYSIS/ALS/EP074E	1,1,1,2-Tetrachloroethane	3	3	1	✓	✓	1	1	1	1	0	0	1	1	1	0	1	0	1	1	1	0	1	1	✓	✓
	1,1,1-Trichloroethane	3	3	1	✓	✓	1	1	1	1	0	0	1	1	1	0	1	0	1	1	1	0	1	1	✓	✓
	1,1,2,2-Tetrachloroethane	3	3	1	✓	✓	1	1	1	1	0	0	1	1	1	0	1	0	1	1	1	0	1	1	✓	✓
	1,1,2-Trichloroethane	3	3	1	✓	✓	1	1	1	1	0	0	1	1	1	0	1	0	1	1	1	0	1	1	✓	✓
	1,1-Dichloroethane	3	3	1	✓	✓	1	1	1	1	0	0	1	1	1	0	1	0	1	1	1	0	1	1	✓	✓
	1,1-Dichloroethene	3	3	1	✓	✓	1	1	1	1	0	0	1	1	1	0	1	0	1	1	1	1	1	1	✓	✓
	1,1-Dichloropropylene	3	3	1	✓	✓	1	1	1	1	0	0	1	1	1	0	1	0	1	1	1	0	1	1	✓	✓
	1,2,3-Trichloropropane	3	3	1	✓	✓	1	1	1	1	0	0	1	1	1	0	1	0	1	1	1	0	1	1	✓	✓
	1,2-Dibromo-3-chloropropane	3	3	1	✓	✓	1	1	1	1	0	0	1	1	1	0	1	0	1	1	1	0	1	1	✓	✓
	1,2-Dichloroethane	3	3	1	✓	✓	1	1	1	1	0	0	1	1	1	0	1	0	1	1	1	0	1	1	✓	✓
	1,3-Dichloropropane	3	3	1	✓	✓	1	1	1	1	0	0	1	1	1	0	1	0	1	1	1	0	1	1	✓	✓
	Bromomethane	3	3	1	✓	✓	1	1	1	1	0	0	1	1	1	0	1	0	1	1	1	0	1	1	✓	✓
	Carbon Tetrachloride	3	3	1	✓	✓	1	1	1	1	0	0	1	1	1	0	1	0	1	1	1	0	1	1	✓	✓
	Chloroethane	3	3	1	✓	✓	1	1	1	1	0	0	1	1	1	0	1	0	1	1	1	0	1	1	✓	✓
	Chloromethane	3	3	1	✓	✓	1	1	1	1	0	0	1	1	1	0	1	0	1	1	1	0	1	1	✓	✓
	cis-1,2-Dichloroethene	3	3	1	✓	✓	1	1	1	1	0	0	1	1	1	0	1	0	1	1	1	0	1	1	✓	✓
	cis-1,4-Dichloro-2-butene	3	3	1	✓	✓	1	1	1	1	0	0	1	1	1	0	1	0	1	1	1	0	1	1	✓	✓
	Dibromomethane	3	3	1	✓	✓	1	1	1	1	0	0	1	1	1	0	1	0	1	1	1	0	1	1	✓	✓
	Dichlorodifluoromethane	3	3	1	✓	✓	1	1	1	1	0	0	1	1	1	0	1	0	1	1	1	0	1	1	✓	✓
	Hexachlorobutadiene	3	3	1	✓	✓	1	1	1	1	0	0	1	1	1	0	1	0	1	1	1	0	1	1	✓	✓
	Iodomethane	3	3	1	✓	✓	1	1	1	1	0	0	1	1	1	0	1	0	1	1	1	0	1	1	✓	✓
	Pentachloroethane	3	3	1	✓	✓	1	1	1	1	0	0	1	1	1	0	1	0	1	1	1	0	1	1	✓	✓
	Tetrachloroethene	3	3	1	✓	✓	1	1	1	1	0	0	1	1	1	0	1	0	1	1	1	0	1	1	✓	✓
	trans-1,2-Dichloroethene	3	3	1	✓	✓	1	1	1	1	0	0	1	1	1	0	1	0	1	1	1	0	1	1	✓	✓
	trans-1,4-Dichloro-2-butene	3	3	1	✓	✓	1	1	1	1	0	0	1	1	1	0	1	0	1	1	1	0	1	1	✓	✓
	Trichloroethene	3	3	1	✓	✓	1	1	1	1	0	0	1	1	1	0	1	0	1	1	1	0	1	1	✓	✓
	Trichlorofluoromethane	3	3	1	✓	✓	1	1	1	1	0	0	1	1	1	0	1	0	1	1	1	0	1	1	✓	✓
	Vinyl chloride	3	3	1	✓	✓	1	1	1	1	0	0	1	1	1	0	1	0	1	1	1	0	1	1	✓	✓
VOLATILES ANALYSIS/ALS/EP074F	1,2,3-Trichlorobenzene	3	3	1	✓	✓	1	1	1	1	0	0	1	1	1	0	1	0	1	1	1	0	1	1	✓	✓
	1,2,4-Trichlorobenzene	3	3	1	✓	✓	1	1	1	1	0	0	1	1	1	0	1	0	1	1	1	0	1	1	✓	✓
	1,2-Dichlorobenzene	3	3	1	✓	✓	1	1	1	1	0	0	1	1	1	0	1	0	1	1	1	0	1	1	✓	✓
	1,3-Dichlorobenzene	3	3	1	✓	✓	1	1	1	1	0	0	1	1	1	0	1	0	1	1	1	0	1	1	✓	✓
	1,4-Dichlorobenzene	3	3	1	✓	✓	1	1	1	1	0	0	1	1	1	0	1	0	1	1	1	0	1	1	✓	✓
	2-Chlorotoluene	3	3	1	✓	✓	1	1	1	1	0	0	1	1	1	0	1	0	1	1	1	0	1	1	✓	✓
	4-Chlorotoluene	3	3	1	✓	✓	1	1	1	1	0	0	1	1	1	0	1	0	1	1	1	0	1	1	✓	✓
	Bromobenzene	3	3	1	✓	✓	1	1	1	1	0	0	1	1	1	0	1	0	1	1	1	0	1	1	✓	✓
	Chlorobenzene	3	3	1	✓	✓	1	1	1	1	0	0	1	1	1	0	1	0	1	1	1	1	1	1	✓	✓
VOLATILES ANALYSIS/ALS/EP074C	Carbon disulfide	3	3	1	✓	✓	1	1	1	1	0	0	1	1	1	0	1	0	1	1	1	0	1	1	-	-
VOLATILES ANALYSIS/ALS/EP074D	1,2-Dibromoethane (EDB)	3	3	1	✓	✓	1	1	1	1	0	0	1	1	1	0	1	0	1	1	1	0	1	1	✓	✓
	1,2-Dichloropropane	3	3	1	✓	✓	1	1	1	1	0	0	1	1	1	0	1	0	1	1	1	0	1	1	✓	✓
	2,2-Dichloropropane	3	3	1	✓	✓	1	1	1	1	0	0	1	1	1	0	1	0	1	1	1	0	1	1	✓	✓
	cis-1,3-Dichloropropylene	3	3	1	✓	✓	1	1	1	1	0	0	1	1	1	0	1	0	1	1	1	0	1	1	✓	✓
	trans-1,3-Dichloropropylene	3	3	1	✓	✓	1	1	1	1	0	0	1	1	1	0	1	0	1	1	1	0	1	1	✓	✓
INSTRUMENT LABORATORY (NON-METALL	Ionic Balance	9	9	7	✓	✓	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	0	1	1	-	-
WET CHEMISTRY AND PREPARATION/ALS/E	Total Dissolved Solids @180°C	9	9	7	✓	✓	0	0	0	0	0	0	1	1	1	1	1	1	1	2	1	0	1	2	-	-
INSTRUMENT LABORATORY (NON-METALL	Bicarbonate Alkalinity as CaCO3	9	9	7	✓	✓	0	0	0	0	0	0	1	0	1	1	1	1	1	2	1	0	1	0	-	-
	Carbonate Alkalinity as CaCO3	9	9	7	✓	✓	0	0	0	0	0	0	1	0	1	1	1	1	1	2	1	0	1	0	-	-
	Hydroxide Alkalinity as CaCO3	9	9	7	✓	✓	0	0	0	0	0	0	1	0	1	1	1	1	1	2	1	0	1	0	-	-
	Total Alkalinity as CaCO3	9	9	7	✓	✓	0	0	0	0	0	0	1	0	1	1	1	1	1	2	1	0	1	1	-	-

Site Name	Waterfront Precinct
Project No.	42213719
Project Manager	Tim Smith
Matrix	Water
Laboratory	ALS / EnviroLab
Batch File Number	ES1221566

Analytical Method	Analytical Parameter	Number of Tests Requested	Number of Tests Reported	Number of Primary Samples	Holding Times (a)	Limits of Reporting (b)	Field Blank (1 per day)		Rinsate Blank (1 per day)		Trip Blank (1 per esky with VOCs)		Method Blank (1 per batch)		Intra-Laboratory Duplicate Sample (1 in 20)		Inter-Laboratory Duplicate Sample (1 in 20)		Lab Duplicate (1 in 10)		Matrix Spike (1 in 20)		LCS (1 per batch)		Surrogates (GC-MS organics)	
							Number Required	Number Reported	Number Required	Number Reported	Number Required	Number Reported	Number Required	Number Reported	Number Required	Number Reported	Number Required	Number Reported	Number Required	Number Reported	Number Required	Number Reported	Number Required	Number Reported	Reported	OK
METALS ANALYSIS/ALS/EG020F	Arsenic	9	9	7	✓	×	1	1	1	1	0	0	1	2	0	0	0	0	1	4	2	2	1	2	-	-
	Cadmium	9	9	7	✓	×	1	1	1	1	0	0	1	2	0	0	0	0	1	4	2	2	1	2	-	-
	Chromium	9	9	7	✓	×	1	1	1	1	0	0	1	2	0	0	0	0	1	4	2	2	1	2	-	-
	Copper	9	9	7	✓	×	1	1	1	1	0	0	1	2	0	0	0	0	1	4	2	2	1	2	-	-
	Lead	9	9	7	✓	×	1	1	1	1	0	0	1	2	0	0	0	0	1	4	2	2	1	2	-	-
	Manganese	9	9	7	✓	✓	1	1	1	1	0	0	1	2	0	0	0	0	1	4	2	2	1	2	-	-
	Nickel	9	9	7	✓	×	1	1	1	1	0	0	1	2	0	0	0	0	1	4	2	2	1	2	-	-
	Vanadium	9	9	7	✓	×	1	1	1	1	0	0	1	2	0	0	0	0	1	4	2	2	1	2	-	-
	Zinc	9	9	7	✓	×	1	1	1	1	0	0	1	2	0	0	0	0	1	4	2	2	1	2	-	-
METALS ANALYSIS/ALS/EG035T	Mercury	9	9	7	✓	✓	1	1	1	1	0	0	1	2	0	0	0	0	1	4	2	2	1	2	-	-
VOLATILES ANALYSIS/ALS/EP080	Benzene	10	10	7	✓	✓	1	1	1	1	1	1	1	2	0	0	0	0	1	4	2	2	1	2	✓	✓
	Ethylbenzene	10	10	7	✓	✓	1	1	1	1	1	1	1	2	0	0	0	0	1	4	2	2	1	2	✓	✓
	meta- & para-Xylene	10	10	7	✓	✓	1	1	1	1	1	1	1	2	0	0	0	0	1	4	2	2	1	2	✓	✓
	Naphthalene	10	10	7	✓	✓	3	3	3	3	1	1	1	3	0	0	0	0	1	6	2	2	1	3	✓	✓
	ortho-Xylene	10	10	7	✓	✓	1	1	1	1	1	1	1	2	0	0	0	0	1	4	2	2	1	2	✓	✓
	Toluene	10	10	7	✓	✓	1	1	1	1	1	1	1	2	0	0	0	0	1	4	2	2	1	2	✓	✓
SEMIVOLATILES ANALYSIS/ALS/EP075(SIM)B	Acenaphthene	6	6	4	✓	✓	1	1	1	1	0	0	1	1	0	0	0	0	1	0	0	0	1	1	✓	✓
	Acenaphthylene	6	6	4	✓	✓	1	1	1	1	0	0	1	1	0	0	0	0	1	0	0	0	1	1	✓	✓
	Anthracene	6	6	4	✓	×	1	1	1	1	0	0	1	1	0	0	0	0	1	0	0	0	1	1	✓	✓
	Benz(a)anthracene	6	6	4	✓	✓	1	1	1	1	0	0	1	1	0	0	0	0	1	0	0	0	1	1	✓	✓
	Benzo(a)pyrene	6	6	4	✓	×	1	1	1	1	0	0	1	1	0	0	0	0	1	0	0	0	1	1	✓	✓
	Benzo(b)fluoranthene	6	6	4	✓	✓	1	1	1	1	0	0	1	1	0	0	0	0	1	0	0	0	1	1	✓	✓
	Benzo(g,h,i)perylene	6	6	4	✓	✓	1	1	1	1	0	0	1	1	0	0	0	0	1	0	0	0	1	1	✓	✓
	Benzo(k)fluoranthene	6	6	4	✓	✓	1	1	1	1	0	0	1	1	0	0	0	0	1	0	0	0	1	1	✓	✓
	Chrysene	6	6	4	✓	✓	1	1	1	1	0	0	1	1	0	0	0	0	1	0	0	0	1	1	✓	✓
	Dibenz(a,h)anthracene	6	6	4	✓	✓	1	1	1	1	0	0	1	1	0	0	0	0	1	0	0	0	1	1	✓	✓
	Fluoranthene	6	6	4	✓	✓	1	1	1	1	0	0	1	1	0	0	0	0	1	0	0	0	1	1	✓	✓
	Fluorene	6	6	4	✓	✓	1	1	1	1	0	0	1	1	0	0	0	0	1	0	0	0	1	1	✓	✓
	Indeno(1,2,3-cd)pyrene	6	6	4	✓	✓	1	1	1	1	0	0	1	1	0	0	0	0	1	0	0	0	1	1	✓	✓
	Naphthalene	9	9	7	✓	✓	3	3	3	3	1	1	1	1	0	0	0	0	1	0	0	0	1	1	✓	✓
	Phenanthrene	6	6	4	✓	✓	1	1	1	1	0	0	1	1	0	0	0	0	1	0	0	0	1	1	✓	✓
	Pyrene	6	6	4	✓	✓	1	1	1	1	0	0	1	1	0	0	0	0	1	0	0	0	1	1	✓	✓
VOLATILES ANALYSIS/ALS/EP080/071	C6 - C10 Fraction	10	10	7	✓	✓	1	1	1	1	1	1	1	2	0	0	0	0	1	4	2	2	1	2	✓	✓
	C6 - C10 Fraction minus BTEX (F1)	10	10	7	✓	✓	1	1	1	1	1	1	1	2	0	0	0	0	1	4	2	2	1	2	✓	✓
	C6 - C9 Fraction	10	10	7	✓	✓	1	1	1	1	1	1	1	2	0	0	0	0	1	4	2	2	1	2	✓	✓
SEMIVOLATILES ANALYSIS/ALS/EP080/071	>C10 - C16 Fraction	9	9	7	✓	✓	1	1	1	1	0	0	1	1	0	0	0	0	1	0	0	0	1	1	-	-
	>C16 - C34 Fraction	9	9	7	✓	✓	1	1	1	1	0	0	1	1	0	0	0	0	1	0	0	0	1	1	-	-
	>C34 - C40 Fraction	9	9	7	✓	✓	1	1	1	1	0	0	1	1	0	0	0	0	1	0	0	0	1	1	-	-
	C10 - C14 Fraction	9	9	7	✓	✓	1	1	1	1	0	0	1	1	0	0	0	0	1	0	0	0	1	1	-	-
	C15 - C28 Fraction	9	9	7	✓	✓	1	1	1	1	0	0	1	1	0	0	0	0	1	0	0	0	1	1	-	-
	C29 - C36 Fraction	9	9	7	✓	✓	1	1	1	1	0	0	1	1	0	0	0	0	1	0	0	0	1	1	-	-
VOLATILES ANALYSIS/ALS/EP033	Methane	7	7	7	✓	✓	0	0	0	0	0	0	1	2	0	0	0	0	1	4	2	2	1	2	-	-
METALS ANALYSIS/ALS/ED093F	Calcium	7	7	7	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	2	0	0	1	1	-	-
	Magnesium	7	7	7	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	2	0	0	1	1	-	-
	Potassium	7	7	7	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	2	0	0	1	1	-	-
	Sodium	7	7	7	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	2	0	0	1	1	-	-
INSTRUMENT LABORATORY (NON-METALS)	Nitrite as N	7	7	7	×	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	2	1	1	1	1	-	-
INSTRUMENT LABORATORY (NON-METALS)	Nitrite + Nitrate as N	7	7	7	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	2	1	1	1	1	-	-
METALS ANALYSIS/ALS/ED040F	Sulfate as SO4 2-	7	7	7	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	2	0	0	1	1	-	-
	Sulfur as S	7	7	7	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	2	0	0	1	1	-	-
WET CHEMISTRY AND PREPARATION/ALS/E	Sulfide as S2-	7	7	7	✓	✓	0	0	0	0	0	0	1	2	0	0	0	0	1	4	2	2	1	2	-	-
WET CHEMISTRY AND PREPARATION/ALS/E	Sulfite as SO3 2-	7	7	7	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	2	0	0	1	1	-	-
INSTRUMENT LABORATORY (NON-METALS)	Chloride	7	7	7	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	2	1	1	1	2	-	-
METALS ANALYSIS/ALS/EG053FG-MS	Ferric Iron	7	7	7	✓	✓	0	0	0	0	0	0	1	0	0	0	0	0	1	0	2	0	1	0	-	-
INSTRUMENT LABORATORY (NON-METALS)	Ferrous Iron	7	7	7	×	✓	0	0	0	0	0	0	1	3	0	0	0	0	1	5	3	3	1	3	-	-
VOLATILES ANALYSIS/ALS/EP074G	Bromodichloromethane	6	6	4	✓	✓	1	1	1	1	0	0	1	1	0	0	0	0	1	2	0	0	1	1	✓	✓
	Bromoform	6	6	4	✓	✓	1	1	1	1	0	0	1	1	0	0	0	0	1	2	0	0	1	1	✓	✓
	Chloroform	6	6	4	✓	✓	1	1	1	1	0	0	1	1	0	0	0	0	1	2	0	0	1	1	✓	✓
	Dibromochloromethane	6	6	4	✓	✓	1	1	1	1	0	0	1	1	0	0	0	0	1	2	0	0	1	1	✓	✓
VOLATILES ANALYSIS/ALS/EP074B	2-Butanone (MEK)	6	6	4	✓	✓	1	1	1	1	0	0	1	1	0	0	0	0	1	2	0	0	1	1	✓	✓
	2-Hexanone (MBK)	6	6	4	✓	✓	1	1	1	1	0	0	1	1	0	0	0	0	1	2	0	0	1	1	✓	✓
	4-Methyl-2-pentanone (MIBK)	6	6	4	✓	✓	1	1	1	1	0	0	1	1	0	0	0	0	1	2	0	0	1	1	✓	✓
	Vinyl Acetate	6	6	4	✓	✓	1	1	1	1	0	0	1	1	0	0	0	0	1	2	0	0	1	1	✓	✓

Site Name	Waterfront Precinct
Project No.	42213719
Project Manager	Tim Smith
Matrix	Water
Laboratory	ALS / EnviroLab
Batch File Number	ES1221566

Analytical Method	Analytical Parameter	Number of Tests Requested	Number of Tests Reported	Number of Primary Samples	Holding Times (a)	Limits of Reporting (b)	Field Blank (1 per day)		Rinsate Blank (1 per day)		Trip Blank (1 per esky with VOCs)		Method Blank (1 per batch)		Intra-Laboratory Duplicate Sample (1 in 20)		Inter-Laboratory Duplicate Sample (1 in 20)		Lab Duplicate (1 in 10)		Matrix Spike (1 in 20)		LCS (1 per batch)		Surrogates (GC-MS organics)	
							Number Required	Number Reported	Number Required	Number Reported	Number Required	Number Reported	Number Required	Number Reported	Number Required	Number Reported	Number Required	Number Reported	Number Required	Number Reported	Number Required	Number Reported	Number Required	Number Reported	Reported	OK
VOLATILES ANALYSIS/ALS/EP074A	1,2,4-Trimethylbenzene	6	6	4	✓	✓	1	1	1	1	0	0	1	1	0	0	0	0	1	2	0	0	1	1	✓	✓
	1,3,5-Trimethylbenzene	6	6	4	✓	✓	1	1	1	1	0	0	1	1	0	0	0	0	1	2	0	0	1	1	✓	✓
	Isopropylbenzene	6	6	4	✓	✓	1	1	1	1	0	0	1	1	0	0	0	0	1	2	0	0	1	1	✓	✓
	n-Butylbenzene	6	6	4	✓	✓	1	1	1	1	0	0	1	1	0	0	0	0	1	2	0	0	1	1	✓	✓
	n-Propylbenzene	6	6	4	✓	✓	1	1	1	1	0	0	1	1	0	0	0	0	1	2	0	0	1	1	✓	✓
	p-Isopropyltoluene	6	6	4	✓	✓	1	1	1	1	0	0	1	1	0	0	0	0	1	2	0	0	1	1	✓	✓
	sec-Butylbenzene	6	6	4	✓	✓	1	1	1	1	0	0	1	1	0	0	0	0	1	2	0	0	1	1	✓	✓
	Styrene	6	6	4	✓	✓	1	1	1	1	0	0	1	1	0	0	0	0	1	2	0	0	1	1	✓	✓
	tert-Butylbenzene	6	6	4	✓	✓	1	1	1	1	0	0	1	1	0	0	0	0	1	2	0	0	1	1	✓	✓
VOLATILES ANALYSIS/ALS/EP074E	1,1,1,2-Tetrachloroethane	6	6	4	✓	✓	1	1	1	1	0	0	1	1	0	0	0	0	1	2	0	0	1	1	✓	✓
	1,1,1-Trichloroethane	6	6	4	✓	✓	1	1	1	1	0	0	1	1	0	0	0	0	1	2	0	0	1	1	✓	✓
	1,1,2,2-Tetrachloroethane	6	6	4	✓	✓	1	1	1	1	0	0	1	1	0	0	0	0	1	2	0	0	1	1	✓	✓
	1,1,2-Trichloroethane	6	6	4	✓	✓	1	1	1	1	0	0	1	1	0	0	0	0	1	2	0	0	1	1	✓	✓
	1,1-Dichloroethane	6	6	4	✓	✓	1	1	1	1	0	0	1	1	0	0	0	0	1	2	0	0	1	1	✓	✓
	1,1-Dichloroethene	6	6	4	✓	✓	1	1	1	1	0	0	1	1	0	0	0	0	1	2	1	1	1	1	✓	✓
	1,1-Dichloropropylene	6	6	4	✓	✓	1	1	1	1	0	0	1	1	0	0	0	0	1	2	0	0	1	1	✓	✓
	1,2,3-Trichloropropane	6	6	4	✓	✓	1	1	1	1	0	0	1	1	0	0	0	0	1	2	0	0	1	1	✓	✓
	1,2-Dibromo-3-chloropropane	6	6	4	✓	✓	1	1	1	1	0	0	1	1	0	0	0	0	1	2	0	0	1	1	✓	✓
	1,2-Dichloroethane	6	6	4	✓	✓	1	1	1	1	0	0	1	1	0	0	0	0	1	2	0	0	1	1	✓	✓
	1,3-Dichloropropane	6	6	4	✓	✓	1	1	1	1	0	0	1	1	0	0	0	0	1	2	0	0	1	1	✓	✓
	Bromomethane	6	6	4	✓	✓	1	1	1	1	0	0	1	1	0	0	0	0	1	2	0	0	1	1	✓	✓
	Carbon Tetrachloride	6	6	4	✓	✓	1	1	1	1	0	0	1	1	0	0	0	0	1	2	0	0	1	1	✓	✓
	Chloroethane	6	6	4	✓	✓	1	1	1	1	0	0	1	1	0	0	0	0	1	2	0	0	1	1	✓	✓
	Chloromethane	6	6	4	✓	✓	1	1	1	1	0	0	1	1	0	0	0	0	1	2	0	0	1	1	✓	✓
	cis-1,2-Dichloroethene	6	6	4	✓	✓	1	1	1	1	0	0	1	1	0	0	0	0	1	2	0	0	1	1	✓	✓
	cis-1,4-Dichloro-2-butene	6	6	4	✓	✓	1	1	1	1	0	0	1	1	0	0	0	0	1	2	0	0	1	1	✓	✓
	Dibromomethane	6	6	4	✓	✓	1	1	1	1	0	0	1	1	0	0	0	0	1	2	0	0	1	1	✓	✓
	Dichlorodifluoromethane	6	6	4	✓	✓	1	1	1	1	0	0	1	1	0	0	0	0	1	2	0	0	1	1	✓	✓
	Hexachlorobutadiene	6	6	4	✓	✓	1	1	1	1	0	0	1	1	0	0	0	0	1	2	0	0	1	1	✓	✓
	Iodomethane	6	6	4	✓	✓	1	1	1	1	0	0	1	1	0	0	0	0	1	2	0	0	1	1	✓	✓
	Pentachloroethane	6	6	4	✓	✓	1	1	1	1	0	0	1	1	0	0	0	0	1	2	0	0	1	1	✓	✓
	Tetrachloroethene	6	6	4	✓	✓	1	1	1	1	0	0	1	1	0	0	0	0	1	2	0	0	1	1	✓	✓
	trans-1,2-Dichloroethene	6	6	4	✓	✓	1	1	1	1	0	0	1	1	0	0	0	0	1	2	0	0	1	1	✓	✓
	trans-1,4-Dichloro-2-butene	6	6	4	✓	✓	1	1	1	1	0	0	1	1	0	0	0	0	1	2	0	0	1	1	✓	✓
	Trichloroethene	6	6	4	✓	✓	1	1	1	1	0	0	1	1	0	0	0	0	1	2	1	1	1	1	✓	✓
	Trichlorofluoromethane	6	6	4	✓	✓	1	1	1	1	0	0	1	1	0	0	0	0	1	2	0	0	1	1	✓	✓
	Vinyl chloride	6	6	4	✓	✓	1	1	1	1	0	0	1	1	0	0	0	0	1	2	0	0	1	1	✓	✓
VOLATILES ANALYSIS/ALS/EP074F	1,2,3-Trichlorobenzene	6	6	4	✓	✓	1	1	1	1	0	0	1	1	0	0	0	0	1	2	0	0	1	1	✓	✓
	1,2,4-Trichlorobenzene	6	6	4	✓	✓	1	1	1	1	0	0	1	1	0	0	0	0	1	2	0	0	1	1	✓	✓
	1,2-Dichlorobenzene	6	6	4	✓	✓	1	1	1	1	0	0	1	1	0	0	0	0	1	2	0	0	1	1	✓	✓
	1,3-Dichlorobenzene	6	6	4	✓	✓	1	1	1	1	0	0	1	1	0	0	0	0	1	2	0	0	1	1	✓	✓
	1,4-Dichlorobenzene	6	6	4	✓	✓	1	1	1	1	0	0	1	1	0	0	0	0	1	2	0	0	1	1	✓	✓
	2-Chlorotoluene	6	6	4	✓	✓	1	1	1	1	0	0	1	1	0	0	0	0	1	2	0	0	1	1	✓	✓
	4-Chlorotoluene	6	6	4	✓	✓	1	1	1	1	0	0	1	1	0	0	0	0	1	2	0	0	1	1	✓	✓
	Bromobenzene	6	6	4	✓	✓	1	1	1	1	0	0	1	1	0	0	0	0	1	2	0	0	1	1	✓	✓
	Chlorobenzene	6	6	4	✓	✓	1	1	1	1	0	0	1	1	0	0	0	0	1	2	1	1	1	1	✓	✓
VOLATILES ANALYSIS/ALS/EP074C	Carbon disulfide	6	6	4	✓	✓	1	1	1	1	0	0	1	1	0	0	0	0	1	2	0	0	1	1	-	-
VOLATILES ANALYSIS/ALS/EP074D	1,2-Dibromoethane (EDB)	6	6	4	✓	✓	1	1	1	1	0	0	1	1	0	0	0	0	1	2	0	0	1	1	✓	✓
	1,2-Dichloropropane	6	6	4	✓	✓	1	1	1	1	0	0	1	1	0	0	0	0	1	2	0	0	1	1	✓	✓
	2,2-Dichloropropane	6	6	4	✓	✓	1	1	1	1	0	0	1	1	0	0	0	0	1	2	0	0	1	1	✓	✓
	cis-1,3-Dichloropropylene	6	6	4	✓	✓	1	1	1	1	0	0	1	1	0	0	0	0	1	2	0	0	1	1	✓	✓
	trans-1,3-Dichloropropylene	6	6	4	✓	✓	1	1	1	1	0	0	1	1	0	0	0	0	1	2	0	0	1	1	✓	✓
INSTRUMENT LABORATORY (NON-METALL	Bicarbonate Alkalinity as CaCO3	7	7	7	✓	✓	0	0	0	0	0	0	1	0	0	0	0	0	1	2	0	0	1	0	-	-
	Carbonate Alkalinity as CaCO3	7	7	7	✓	✓	0	0	0	0	0	0	1	0	0	0	0	0	1	2	0	0	1	0	-	-
	Hydroxide Alkalinity as CaCO3	7	7	7	✓	✓	0	0	0	0	0	0	1	0	0	0	0	0	1	2	0	0	1	0	-	-
INSTRUMENT LABORATORY (NON-METALL	Ionic Balance	7	7	7	✓	✓	0	0	0	0	0	0	1	1	0	0	0	0	1	2	0	0	1	1	-	-
WET CHEMISTRY AND PREPARATION/ALS/E	Total Dissolved Solids @ 180°C	7	7	7	✓	✓	0	0	0	0	0	0	1	3	0	0	0	0	1	5	0	0	1	6	-	-

Table 2
Analytical Results - September 2012 GME
Darwin Waterfront Corporation

Location Code	MW09	MW10	MW101	MW102	MW102	MW102	MW103	MW108	MW113	MW114	MW115
Field ID	MW09	MW10	MW101	MW102	QAQC03	QAQC04	MW103	MW108	MW113	MW114	MW115
Sampled_Date_Time	6/09/2012	6/09/2012	4/09/2012	4/09/2012	4/09/2012	5/09/2012	4/09/2012	5/09/2012	4/09/2012	4/09/2012	4/09/2012
Sample Type	Primary Sample	Primary Sample	Primary Sample	Primary Sample	Duplicate Sample	Triplicate Sample	Primary Sample	Primary Sample	Primary Sample	Primary Sample	Primary Sample
Lab Report Number	ES1221566	ES1221566	ES1221483	ES1221483	ES1221483		ES1221483	ES1221566	ES1221483	ES1221483	ES1221357

Chem_Group	ChemName	output unit	EQL	ANZECC 2000 Marine water 95%	ANZECC 2000 Irrigation LTV										
	Total Dissolved Solids @180°C	mg/L	10			-	-	**1770**	**15,200**	**14,300**	-	**3260**	-	**25,400**	**11,400**	**30,300**
Total Petroleum Hydrocarbons	C6-C9 fraction	µg/L	10			<20	<20	<20	<20	<20	<10	<20	<20	<20	<20	<20
	C10-C14 fraction	µg/L	50			<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
	C15-C28 fraction	µg/L	100			<100	<100	<100	**100**	**100**	<100	<100	**170**	<100	<100	<100
	C29-C36 fraction	µg/L	50			<50	<50	<50	<50	<50	<100	<50	<50	<50	<50	<50
	C10-C36 fraction (sum)	µg/L	50			<50	<50	<50	**100**	**100**	<250	<50	**170**	<50	<50	<50
Total Recoverable Hydrocarbons	C6-C10 fraction (F1 minus BTEX)	µg/L	20			<20	<20	<20	<20	<20	-	<20	<20	<20	<20	<20
	C6-C10 fraction	µg/L	20			<20	<20	<20	<20	<20	-	<20	<20	<20	<20	<20
	>C10-C16 fraction	µg/L	100			<100	<100	<100	<100	<100	-	<100	<100	<100	<100	<100
	>C16-C34 fraction	µg/L	100			<100	<100	<100	**100**	**110**	-	<100	**140**	<100	<100	<100
	>C34-C40 fraction	µg/L	100			<100	<100	<100	<100	<100	-	<100	<100	<100	<100	<100
	>C10-C40 fraction (sum)	µg/L	100			<100	<100	<100	**100**	**110**	-	<100	**140**	<100	<100	<100
Monocyclic Aromatic Hydrocarbons	Benzene	µg/L	1	**700**		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
	Toluene	µg/L	1			<2	<2	<2	<2	<2	<1	<2	<2	<2	<2	<2
	Ethylbenzene	µg/L	1			<2	<2	<2	<2	<2	<1	<2	<2	<2	<2	<2
	m&p-Xylene	µg/L	2			<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
	o-Xylene	µg/L	1			<2	<2	<2	<2	<2	<1	<2	<2	<2	<2	<2
	Total Xylenes	µg/L	2			<2	<2	<2	<2	<2	<3	<2	<2	<2	<2	<2
	1,2,4-trimethylbenzene	µg/L	1			<5	<5	-	-	-	-	<5	-	-	-	<5
	Isopropylbenzene	µg/L	1			<5	<5	-	-	-	-	<5	-	-	-	<5
	Styrene	µg/L	1			<5	<5	-	-	-	-	<5	-	-	-	<5
	sec-butylbenzene	µg/L	1			<5	<5	-	-	-	-	<5	-	-	-	<5
	Sum of BTEX	µg/L	1			-	-	<1	<1	<1	-	<1	-	<1	<1	<1
	1,3,5-trimethylbenzene	µg/L	1			<5	<5	-	-	-	-	<5	-	-	-	<5
	Total BTEX	µg/L	1			<1	<1	<9	<9	<9	<6	<9	<1	<9	<9	<9
Naphthalene	Naphthalene	µg/L	1	**70**		<1	<1	-	-	-	-	<1	-	-	-	<1
	Naphthalene (VOC)	µg/L	5			<5	<5	<5	<5	<5	-	<5	<5	<5	<5	-
Polynuclear Aromatic Hydrocarbons	Acenaphthylene	µg/L	1			<1	<1	-	-	-	-	<1	-	-	-	<1
	Acenaphthene	µg/L	1			<1	<1	-	-	-	-	<1	-	-	-	<1
	Anthracene	µg/L	1			<1	<1	-	-	-	-	<1	-	-	-	<1
	Fluorene	µg/L	1			<1	<1	-	-	-	-	<1	-	-	-	<1
	Phenanthrene	µg/L	1			<1	<1	-	-	-	-	<1	-	-	-	<1
	Fluoranthene	µg/L	1			<1	<1	-	-	-	-	<1	-	-	-	<1
	Benz(a)anthracene	µg/L	1			<1	<1	-	-	-	-	<1	-	-	-	<1
	Benzo(b)fluoranthene	µg/L	1			<1	<1	-	-	-	-	<1	-	-	-	<1
	Benzo(k)fluoranthene	µg/L	1			<1	<1	-	-	-	-	<1	-	-	-	<1
	Benzo(b&k)fluoranthene	µg/L	2			-	-	-	-	-	-	-	-	-	-	-
	Benzo(a)pyrene	µg/L	0.5			<0.5	<0.5	-	-	-	-	<0.5	-	-	-	<0.5
	Benzo(a)pyrene TEQ	µg/L	0.5			<0.5	<0.5	-	-	-	-	-	-	-	-	-
	Chrysene	µg/L	1			<1	<1	-	-	-	-	<1	-	-	-	<1
	Pyrene	µg/L	1			<1	<1	-	-	-	-	<1	-	-	-	<1
	Benzo(g,h,i)perylene	µg/L	1			<1	<1	-	-	-	-	<1	-	-	-	<1
	Dibenz(a,h)anthracene	µg/L	1			<1	<1	-	-	-	-	<1	-	-	-	<1
	Indeno(1,2,3-cd)pyrene	µg/L	1			<1	<1	-	-	-	-	<1	-	-	-	<1
	Sum of PAHs	µg/L	0.5			<0.5	<0.5	-	-	-	-	<0.5	-	-	-	<0.5
Metals	Arsenic	mg/L	0.001		**0.1**	-	-	-	-	-	-	-	-	-	-	-
	Arsenic (Dissolved)	mg/L	0.001		**0.1**	<0.01	<0.01	<0.001	<0.001	<0.001	<0.001	**0.001**	<0.001	<0.01	**0.001**	<0.01
	Cadmium	mg/L	0.0001	**0.0055**	**0.01**	-	-	-	-	-	-	-	-	-	-	-
	Cadmium (Dissolved)	mg/L	0.0001	**0.0055**	**0.01**	<0.001	<0.001	**0.002**	**0.0272**	**0.0259**	**0.026**	**0.0004**	<0.0001	<0.001	<0.0001	<0.001
	Chromium	mg/L	0.001		**0.1**	-	-	-	-	-	-	-	-	-	-	-
	Chromium (Dissolved)	mg/L	0.001		**0.1**	<0.01	<0.01	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01	<0.001	<0.01
	Copper	mg/L	0.001	**0.0013**	**0.2**	-	-	-	-	-	-	-	-	-	-	-
	Copper (Dissolved)	mg/L	0.001	**0.0013**	**0.2**	<0.01*	<0.01*	<0.001	**0.012**	**0.012**	**0.01**	**0.002**	<0.001	<0.01*	<0.001	<0.01*
	Lead	mg/L	0.001	**0.0044**	**2**	-	-	-	-	-	-	-	-	-	-	-
	Lead (Dissolved)	mg/L	0.001	**0.0044**	**2**	<0.01*	<0.01*	<0.001	**0.006**	**0.006**	**0.004**	<0.001	<0.001	<0.01*	<0.001	<0.01*
	Iron (Dissolved)	mg/L	0.01		**0.2**	-	-	-	-	-	<0.01	-	-	-	-	-
	Manganese	mg/L	0.001		**0.2**	-	-	-	-	-	-	-	-	-	-	-
	Manganese (Dissolved)	mg/L	0.001		**0.2**	<0.01	**1.12**	**0.415**	**0.132**	**0.133**	**0.15**	**0.903**	**0.386**	**3.3**	**12**	**0.072**
	Mercury	mg/L	0.0001	**0.0004**	**0.002**	-	-	-	-	-	-	-	-	-	-	-
	Mercury (Dissolved)	mg/L	0.00005	**0.0004**	**0.002**	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
	Nickel	mg/L	0.001	**0.07**	**0.2**	-	-	-	-	-	-	-	-	-	-	-
	Nickel (Dissolved)	mg/L	0.001	**0.07**	**0.2**	<0.01	<0.01	**0.008**	**0.013**	**0.014**	**0.015**	**0.006**	<0.001	<0.01	**0.005**	<0.01
	Zinc	mg/L	0.005	**0.015**	**2**	-	-	-	-	-	-	-	-	-	-	-
	Zinc (Dissolved)	mg/L	0.001	**0.015**	**2**	<0.05*	<0.05*	**0.035**	**0.887**	**0.908**	**0.78**	**0.025**	<0.005	<0.05*	**0.011**	<0.05*
	Vanadium	mg/L	0.01	**0.1**	**0.1**	-	-	-	-	-	-	-	-	-	-	-
	Vanadium(Dissolved)	mg/L	0.001	**0.1**	**0.1**	<0.1	<0.1	<0.01	<0.01	<0.01	<0.001	<0.01	<0.01	<0.1	<0.01	<0.1
Halogenated Aromatic Compounds	Chlorobenzene	µg/L	1			<5	<5	-	-	-	-	<5	-	-	-	<5
	n-butylbenzene	µg/L	1			<5	<5	-	-	-	-	<5	-	-	-	<5
	n-propylbenzene	µg/L	1			<5	<5	-	-	-	-	<5	-	-	-	<5
	p-isopropyltoluene	µg/L	1			<5	<5	-	-	-	-	<5	-	-	-	<5
	tert-butylbenzene	µg/L	1			<5	<5	-	-	-	-	<5	-	-	-	<5
	1,2,3-Trichlorobenzene	µg/L	1			<5	<5	-	-	-	-	<5	-	-	-	<5
	1,2,4-Trichlorobenzene	µg/L	1	**80**		<5	<5	-	-	-	-	<5	-	-	-	<5
	1,2-Dichlorobenzene	µg/L	1			<5	<5	-	-	-	-	<5	-	-	-	<5
	1,3-Dichlorobenzene	µg/L	1			<5	<5	-	-	-	-	<5	-	-	-	<5
	1,4-Dichlorobenzene	µg/L	1			<5	<5	-	-	-	-	<5	-	-	-	<5
	2-Chlorotoluene	µg/L	1			<5	<5	-	-	-	-	<5	-	-	-	<5
	4-Chlorotoluene	µg/L	1			<5	<5	-	-	-	-	<5	-	-	-	<5
	Bromobenzene	µg/L	1			<5	<5	-	-	-	-	<5	-	-	-	<5

Table 2
Analytical Results - September 2012 GME
Darwin Waterfront Corporation

						Location Code	MW09	MW10	MW101	MW102	MW102	MW102	MW103	MW108	MW113	MW114	MW115
						Field ID	MW09	MW10	MW101	MW102	QAQC03	QAQC04	MW103	MW108	MW113	MW114	MW115
						Sampled_Date_Time	6/09/2012	6/09/2012	4/09/2012	4/09/2012	4/09/2012	5/09/2012	4/09/2012	5/09/2012	4/09/2012	4/09/2012	4/09/2012
						Sample Type	Primary Sample	Primary Sample	Primary Sample	Primary Sample	Duplicate Sample	Triplicate Sample	Primary Sample	Primary Sample	Primary Sample	Primary Sample	Primary Sample
						Lab Report Number	ES1221566	ES1221566	ES1221483	ES1221483	ES1221483		ES1221483	ES1221566	ES1221483	ES1221483	ES1221357
Halogenated Aliphatic Compounds	1,1,1-Trichloroethane	µg/L	1			<5	<5	-	-	-	-	<5	-	-	-	<5
	1,1-Dichloroethane	µg/L	1			<5	<5	-	-	-	-	<5	-	-	-	<5
	1,1-Dichloroethene	µg/L	1			<5	<5	-	-	-	-	<5	-	-	-	<5
	1,2-Dichloroethane	µg/L	1			<5	<5	-	-	-	-	<5	-	-	-	<5
	Carbon Tetrachloride	µg/L	1			<5	<5	-	-	-	-	<5	-	-	-	<5
	Chloroethane	µg/L	10			<50	<50	-	-	-	-	<50	-	-	-	<50
	cis-1,2-Dichloroethene	µg/L	1			<5	<5	-	-	-	-	<5	-	-	-	<5
	Dichlorodifluoromethane	µg/L	10			<50	<50	-	-	-	-	<50	-	-	-	<50
	Hexachlorobutadiene	µg/L	1			<5	<5	-	-	-	-	<5	-	-	-	<5
	Tetrachloroethene	µg/L	1			<5	<5	-	-	-	-	<5	-	-	-	<5
	trans-1,2-Dichloroethene	µg/L	1			<5	<5	-	-	-	-	<5	-	-	-	<5
	Trichloroethene	µg/L	1			<5	<5	-	-	-	-	<5	-	-	-	<5
	Trichlorofluoromethane	µg/L	10			<50	<50	-	-	-	-	<50	-	-	-	<50
	Vinyl chloride	µg/L	10			<50	<50	-	-	-	-	<50	-	-	-	<50
	1,1,1,2-Tetrachloroethane	µg/L	1			<5	<5	-	-	-	-	<5	-	-	-	<5
	1,1,2,2-Tetrachloroethane	µg/L	1			<5	<5	-	-	-	-	<5	-	-	-	<5
	1,1,2-Trichloroethane	µg/L	1	**1900**		<5	<5	-	-	-	-	<5	-	-	-	<5
	1,1-Dichloropropene	µg/L	1			<5	<5	-	-	-	-	<5	-	-	-	<5
	1,2,3-Trichloropropane	µg/L	1			<5	<5	-	-	-	-	<5	-	-	-	<5
	1,2-Dibromo-3-chloropropane	µg/L	1			<5	<5	-	-	-	-	<5	-	-	-	<5
	1,3-Dichloropropane	µg/L	1			<5	<5	-	-	-	-	<5	-	-	-	<5
	Chloromethane	µg/L	10			<50	<50	-	-	-	-	<50	-	-	-	<50
	cis-1,4-Dichloro-2-butene	µg/L	5			<5	<5	-	-	-	-	<5	-	-	-	<5
	Dibromomethane	µg/L	1			<5	<5	-	-	-	-	<5	-	-	-	<5
	Iodomethane	µg/L	5			<5	<5	-	-	-	-	<5	-	-	-	<5
	Pentachloroethane	µg/L	5			<5	<5	-	-	-	-	<5	-	-	-	<5
	trans-1,4-Dichloro-2-butene	µg/L	5			<5	<5	-	-	-	-	<5	-	-	-	<5
Fumigants	Bromomethane	µg/L	10			<50	<50	-	-	-	-	<50	-	-	-	<50
	1,2-Dibromoethane (EDB)	µg/L	1			<5	<5	-	-	-	-	<5	-	-	-	<5
	1,2-Dichloropropane	µg/L	1			<5	<5	-	-	-	-	<5	-	-	-	<5
	2,2-Dichloropropane	µg/L	1			<5	<5	-	-	-	-	<5	-	-	-	<5
	cis-1,3-Dichloropropene	µg/L	1			<5	<5	-	-	-	-	<5	-	-	-	<5
	trans-1,3-Dichloropropene	µg/L	1			<5	<5	-	-	-	-	<5	-	-	-	<5
Trihalomethanes	Bromochloromethane	µg/L	1			-	-	-	-	-	-	-	-	-	-	-
	Bromodichloromethane	µg/L	1			<5	<5	-	-	-	-	<5	-	-	-	<5
	Bromoform	µg/L	1			<5	<5	-	-	-	-	<5	-	-	-	<5
	Chloroform	µg/L	1			<5	<5	-	-	-	-	<5	-	-	-	<5
	Dibromochloromethane	µg/L	1			<5	<5	-	-	-	-	<5	-	-	-	<5
Total Dissolved Solids	Total Dissolved Solids	mg/L	5			**36,700**	**33,500**	-	-	-	**16,000**	-	**2270**	-	-	-
C1 - C4 Hydrocabon Gases	Methane	mg/L	0.005			<0.01	**0.048**	<0.01	<0.01	<0.01	<0.005	**0.057**	**8.03**	**0.096**	**0.043**	**12.8**
Alkalinity	Bicarbonate as HCO3	mg/L	1			**156.16**	**353.8**	**44**	**139**	**140**	**170.8**	**169**	**461.16**	**253**	**85**	**904**
	Carbonate as CO3	mg/L	1			**0.6**	**0.6**	<1	<1	<1	**3**	<1	**0.6**	<1	<1	<1
	Total Alkalinity	mg/L	5			-	-	-	-	-	**140**	-	-	-	-	-
	Bicarbonate Alkalinity as CaCO3	mg/L	1			**128**	**290**	-	-	-	**140**	-	**378**	-	-	-
	Carbonate Alkalinity as CaCO3	mg/L	1			<1	<1	-	-	-	<5	-	<1	-	-	-
	Hydroxide Alkalinity as CaCO3	mg/L	1			<1	<1	<1	<1	<1	<5	<1	<1	<1	<1	<1
	Total Alkalinity as CaCO3	mg/L	1			**128**	**290**	**44**	**139**	**140**	-	**169**	**378**	**253**	**85**	**904**
Nutrients	Nitrate	mg/L	0.01			-	-	**0.52**	**0.28**	**0.28**	-	**0.56**	-	<0.01	<0.01	<0.01
	Nitrate (as N)	mg/L	0.002258967			**0.06**	<0.01	**0.12**	**0.06**	**0.06**	**0.16**	**0.13**	<0.01	<0	<0	<0
	Nitrite (as N)	mg/L	0.005			<0.01	<0.01	<0.01	<0.01	<0.01	<0.005	**0.02**	<0.01	<0.01	**0.02**	<0.01
	Nitrate & Nitrite (as N)	mg/L	0.01			**0.06**	<0.01	**0.52**	**0.28**	**0.28**	-	**0.58**	<0.01	<0.01	<0.01	<0.01
Major Ions	Chloride	mg/L	1			**17,600**	**15,400**	**902**	**7670**	**7630**	**6800**	**1640**	**1070**	**14,400**	**6500**	**16,400**
	Calcium (Dissolved)	mg/L	0.5			**379**	**389**	**53**	**508**	**542**	**550**	**121**	**51**	**324**	**242**	**79**
	Magnesium (Dissolved)	mg/L	0.5			**1210**	**1040**	**59**	**505**	**512**	**480**	**82**	**68**	**903**	**508**	**1000**
	Potassium (Dissolved)	mg/L	0.5			**467**	**393**	**14**	**113**	**133**	**130**	**55**	**36**	**290**	**93**	**390**
	Sodium (Dissolved)	mg/L	0.5			**11,000**	**9470**	**522**	**4070**	**4640**	**4500**	**993**	**718**	**8750**	**3600**	**10,000**
	Sulphide (as S2-)	mg/L	0.1			<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	**0.3**	<0.1	<0.1	<0.1	**0.4**
	Sulphite (as SO3-)	mg/L	2			<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
	Sulphur (as S)	mg/L	0.5			-	-	-	-	-	**560**	-	-	-	-	-
	Sulphur (as S) (Dissolved)	mg/L	1			**962**	**754**	**61**	**451**	**467**	-	**88**	<1	**579**	**265**	**2**
	Sulphate (as SO4-)	mg/L	1			-	-	**196**	**1530**	**1460**	**1500**	**333**	-	**1850**	**853**	**9**
	Sulphate (as SO4-) (Dissolved)	mg/L	1			**2880**	**2260**	-	-	-	-	-	<1	-	-	-
	Total Anions	meq/L	0.01			**559**	**487**	**30.4**	**251**	**248**	-	**56.6**	**37.7**	**450**	**203**	**481**
	Total Cations	meq/L	0.01			**609**	**527**	**30.6**	**247**	**274**	-	**57.4**	**40.3**	**478**	**213**	**531**
	Ionic Balance	%	0.01			**4.26**	**3.9**	**0.25**	**0.84**	**4.96**	**8.8**	**0.7**	**3.26**	**3.08**	**2.4**	**4.96**
Ferrous/Ferric Iron	Ferrous Iron	mg/L	0.05			<0.05	**8.61**	<0.05	<0.05	<0.05	<0.05	**0.2**	**3.82**	**10**	**18.7**	**1.7**
	Ferric Iron	mg/L	0.05			-	-	-	-	-	<0.05	-	-	-	-	-
	Ferric Iron (Dissolved)	mg/L	0.05			<0.05	<0.05	<0.05	<0.05	**0.11**	-	<0.05	<0.05	<0.05	<0.05	**0.13**
Oxygenated Compounds	Vinyl acetate	µg/L	50			<50	<50	-	-	-	-	<50	-	-	-	<50
	2-Butanone (MEK)	µg/L	50			<50	<50	-	-	-	-	<50	-	-	-	<50
	2-hexanone (MBK)	µg/L	50			<50	<50	-	-	-	-	<50	-	-	-	<50
	4-Methyl-2-pentanone (MIBK)	µg/L	50			<50	<50	-	-	-	-	<50	-	-	-	<50
Sulfonated Compounds	Carbon disulfide	µg/L	5			<5	<5	-	-	-	-	<5	-	-	-	<5
Chlorinated Hydrocarbons	1,2-Dichloroethene	µg/L				<10	<10	-	-	-	-	<10	-	-	-	<10
Solvents	Cyclohexane	µg/L	1			-	-	-	-	-	-	-	-	-	-	-

*LOR exceeds Adopted Guidelines

Location Code	MW116	MW117	MW118	MW119	MW121	MW121	MW122	MW125	MW127	MW127	MW127
Field ID	MW116	MW117	MW118	MW119	MW121	MW121	MW122	MW125	MW127	QAQC01	QAQC02
Sampled_Date_Time	4/09/2012	6/09/2012	6/09/2012	6/09/2012	4/09/2012	6/09/2012	4/09/2012	4/09/2012	4/09/2012	4/09/2012	4/09/2012
Sample Type	Primary Sample	Primary Sample	Primary Sample	Primary Sample	Primary Sample	Primary Sample	Primary Sample	Primary Sample	Primary Sample	Duplicate Sample	Triplicate Sample
Lab Report Number	ES1221357	ES1221566	ES1221566	ES1221566	ES1221357	ES1221357	ES1221483	ES1221357	ES1221357	ES1221357	

Chem_Group	ChemName	output unit	EQL	ANZECC 2000 Marine water 95%	ANZECC 2000 Irrigation LTV										
	Total Dissolved Solids @180°C	mg/L	10			**1770**	-	-	-	**1910**	-	**37,800**	**678**	**476**	**500**	-
Total Petroleum Hydrocarbons	C6-C9 fraction	µg/L	10			<20	<20	<20	<20	<20	-	<20	<20	<20	<20	<10
	C10-C14 fraction	µg/L	50			<50	<50	**70**	<50	-	<50	<50	<50	<50	<50	<50
	C15-C28 fraction	µg/L	100			<100	<100	**850**	<100	-	<100	<100	<100	**220**	**220**	<100
	C29-C36 fraction	µg/L	50			<50	<50	**170**	<50	-	<50	<50	<50	<50	<50	<100
	C10-C36 fraction (sum)	µg/L	50			<50	<50	**1090**	<50	-	<50	<50	<50	**220**	**220**	<250
Total Recoverable Hydrocarbons	C6-C10 fraction (F1 minus BTEX)	µg/L	20			<20	<20	<20	<20	<20	-	<20	<20	<20	<20	-
	C6-C10 fraction	µg/L	20			<20	<20	<20	<20	<20	-	<20	<20	<20	<20	-
	>C10-C16 fraction	µg/L	100			<100	<100	**180**	<100	-	<100	<100	<100	<100	<100	-
	>C16-C34 fraction	µg/L	100			<100	<100	**830**	<100	-	<100	<100	<100	**160**	**180**	-
	>C34-C40 fraction	µg/L	100			<100	<100	<100	<100	-	<100	<100	<100	<100	<100	-
	>C10-C40 fraction (sum)	µg/L	100			<100	<100	**1010**	<100	-	<100	<100	<100	**160**	**180**	-
Monocyclic Aromatic Hydrocarbons	Benzene	µg/L	1	**700**		<1	<1	<1	<1	<1	-	<1	<1	<1	<1	<1
	Toluene	µg/L	1			<2	<2	<2	<2	<2	-	<2	<2	<2	<2	<1
	Ethylbenzene	µg/L	1			<2	<2	<2	<2	<2	-	<2	<2	<2	<2	<1
	m&p-Xylene	µg/L	2			<2	<2	<2	<2	<2	-	<2	<2	<2	<2	<2
	o-Xylene	µg/L	1			<2	<2	<2	<2	<2	-	<2	<2	<2	<2	<1
	Total Xylenes	µg/L	2			<2	<2	<2	<2	<2	-	<2	<2	<2	<2	<3
	1,2,4-trimethylbenzene	µg/L	1			<5	-	<5	-	<5	-	-	-	<5	<5	<1
	Isopropylbenzene	µg/L	1			<5	-	<5	-	<5	-	-	-	<5	<5	<1
	Styrene	µg/L	1			<5	-	<5	-	<5	-	-	-	<5	<5	<1
	sec-butylbenzene	µg/L	1			<5	-	<5	-	<5	-	-	-	<5	<5	<1
	Sum of BTEX	µg/L	1			<1	-	-	-	<1	-	<1	<1	<1	<1	-
	1,3,5-trimethylbenzene	µg/L	1			<5	-	<5	-	<5	-	-	-	<5	<5	<1
	Total BTEX	µg/L	1			<9	<1	<1	<1	<9	-	<9	<9	<9	<9	<6
Naphthalene	Naphthalene	µg/L	1	**70**		<1	-	<1	-	-	<1	-	-	<1	<1	<1
	Naphthalene (VOC)	µg/L	5			-	<5	<5	<5	<5	-	<5	<5	-	-	-
Polynuclear Aromatic Hydrocarbons	Acenaphthylene	µg/L	1			<1	-	<1	-	-	<1	-	-	<1	<1	<1
	Acenaphthene	µg/L	1			<1	-	<1	-	-	<1	-	-	<1	<1	<1
	Anthracene	µg/L	1			<1	-	<1	-	-	<1	-	-	<1	<1	<1
	Fluorene	µg/L	1			<1	-	<1	-	-	<1	-	-	<1	<1	<1
	Phenanthrene	µg/L	1			<1	-	<1	-	-	<1	-	-	<1	<1	<1
	Fluoranthene	µg/L	1			<1	-	<1	-	-	<1	-	-	<1	<1	<1
	Benz(a)anthracene	µg/L	1			<1	-	<1	-	-	<1	-	-	<1	<1	<1
	Benzo(b)fluoranthene	µg/L	1			<1	-	<1	-	-	<1	-	-	<1	<1	-
	Benzo(k)fluoranthene	µg/L	1			<1	-	<1	-	-	<1	-	-	<1	<1	-
	Benzo(b&k)fluoranthene	µg/L	2			-	-	-	-	-	-	-	-	-	-	<2
	Benzo(a)pyrene	µg/L	0.5			<0.5	-	<0.5	-	-	<0.5	-	-	<0.5	<0.5	<1
	Benzo(a)pyrene TEQ	µg/L	0.5			-	-	<0.5	-	-	<0.5	-	-	-	-	-
	Chrysene	µg/L	1			<1	-	<1	-	-	<1	-	-	<1	<1	<1
	Pyrene	µg/L	1			<1	-	<1	-	-	<1	-	-	<1	<1	<1
	Benzo(g,h,i)perylene	µg/L	1			<1	-	<1	-	-	<1	-	-	<1	<1	<1
	Dibenz(a,h)anthracene	µg/L	1			<1	-	<1	-	-	<1	-	-	<1	<1	<1
	Indeno(1,2,3-cd)pyrene	µg/L	1			<1	-	<1	-	-	<1	-	-	<1	<1	<1
	Sum of PAHs	µg/L	0.5			<0.5	-	<0.5	-	-	<0.5	-	-	<0.5	<0.5	-
Metals	Arsenic	mg/L	0.001		**0.1**	-	-	-	-	-	-	-	-	-	-	-
	Arsenic (Dissolved)	mg/L	0.001		**0.1**	<0.001	**0.001**	<0.001	<0.001	**0.004**	-	<0.01	**0.002**	**0.003**	**0.004**	**0.002**
	Cadmium	mg/L	0.0001	**0.0055**	**0.01**	-	-	-	-	-	-	-	-	-	-	-
	Cadmium (Dissolved)	mg/L	0.0001	**0.0055**	**0.01**	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	-	<0.001	<0.0001	<0.0001	<0.0001	<0.0001
	Chromium	mg/L	0.001		**0.1**	-	-	-	-	-	-	-	-	-	-	-
	Chromium (Dissolved)	mg/L	0.001		**0.1**	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.01	<0.001	<0.001	<0.001	<0.001
	Copper	mg/L	0.001	**0.0013**	**0.2**	-	-	-	-	-	-	-	-	-	-	-
	Copper (Dissolved)	mg/L	0.001	**0.0013**	**0.2**	<0.001	<0.001	**0.001**	**0.002**	<0.001	-	<0.01*	<0.001	<0.001	<0.001	<0.001
	Lead	mg/L	0.001	**0.0044**	**2**	-	-	-	-	-	-	-	-	-	-	-
	Lead (Dissolved)	mg/L	0.001	**0.0044**	**2**	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.01*	<0.001	<0.001	<0.001	<0.001
	Iron (Dissolved)	mg/L	0.01		**0.2**	-	-	-	-	-	-	-	-	-	-	-
	Manganese	mg/L	0.001		**0.2**	-	-	-	-	-	-	-	-	-	-	-
	Manganese (Dissolved)	mg/L	0.001		**0.2**	**10.5**	**0.711**	**3.2**	**0.052**	**2.06**	-	<0.01	**0.421**	**0.236**	**0.215**	**0.23**
	Mercury	mg/L	0.0001	**0.0004**	**0.002**	-	-	-	-	-	-	-	-	-	-	-
	Mercury (Dissolved)	mg/L	0.00005	**0.0004**	**0.002**	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	-	<0.0001	<0.0001	<0.0001	<0.0001	<0.00005
	Nickel	mg/L	0.001	**0.07**	**0.2**	-	-	-	-	-	-	-	-	-	-	-
	Nickel (Dissolved)	mg/L	0.001	**0.07**	**0.2**	**0.005**	**0.01**	**0.001**	<0.001	**0.008**	-	<0.01	**0.003**	**0.003**	**0.002**	**0.002**
	Zinc	mg/L	0.005	**0.015**	**2**	-	-	-	-	-	-	-	-	-	-	-
	Zinc (Dissolved)	mg/L	0.001	**0.015**	**2**	**0.026**	**0.008**	<0.005	<0.005	**0.007**	-	<0.05*	<0.005	<0.005	<0.005	**0.002**
	Vanadium	mg/L	0.01	**0.1**	**0.1**	-	-	-	-	-	-	-	-	-	-	-
	Vanadium(Dissolved)	mg/L	0.001	**0.1**	**0.1**	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.1	<0.01	<0.01	<0.01	<0.001
Halogenated Aromatic Compounds	Chlorobenzene	µg/L	1			<5	-	<5	-	<5	-	-	-	<5	<5	<1
	n-butylbenzene	µg/L	1			<5	-	<5	-	<5	-	-	-	<5	<5	<1
	n-propylbenzene	µg/L	1			<5	-	<5	-	<5	-	-	-	<5	<5	<1
	p-isopropyltoluene	µg/L	1			<5	-	<5	-	<5	-	-	-	<5	<5	<1
	tert-butylbenzene	µg/L	1			<5	-	<5	-	<5	-	-	-	<5	<5	<1
	1,2,3-Trichlorobenzene	µg/L	1			<5	-	<5	-	<5	-	-	-	<5	<5	<1
	1,2,4-Trichlorobenzene	µg/L	1	**80**		<5	-	<5	-	<5	-	-	-	<5	<5	<1
	1,2-Dichlorobenzene	µg/L	1			<5	-	<5	-	<5	-	-	-	<5	<5	<1
	1,3-Dichlorobenzene	µg/L	1			<5	-	<5	-	<5	-	-	-	<5	<5	<1
	1,4-Dichlorobenzene	µg/L	1			<5	-	<5	-	<5	-	-	-	<5	<5	<1
	2-Chlorotoluene	µg/L	1			<5	-	<5	-	<5	-	-	-	<5	<5	<1
	4-Chlorotoluene	µg/L	1			<5	-	<5	-	<5	-	-	-	<5	<5	<1
	Bromobenzene	µg/L	1			<5	-	<5	-	<5	-	-	-	<5	<5	<1

Table 2
Analytical Results - September 2012 GME
Darwin Waterfront Corporation

						Location Code	MW116	MW117	MW118	MW119	MW121	MW121	MW122	MW125	MW127	MW127	MW127
						Field ID	MW116	MW117	MW118	MW119	MW121	MW121	MW122	MW125	MW127	QAQC01	QAQC02
						Sampled_Date_Time	4/09/2012	6/09/2012	6/09/2012	6/09/2012	4/09/2012	6/09/2012	4/09/2012	4/09/2012	4/09/2012	4/09/2012	4/09/2012
						Sample Type	Primary Sample	Primary Sample	Primary Sample	Primary Sample	Primary Sample	Primary Sample	Primary Sample	Primary Sample	Primary Sample	Duplicate Sample	Triplicate Sample
						Lab Report Number	ES1221357	ES1221566	ES1221566	ES1221566	ES1221357	ES1221357	ES1221483	ES1221357	ES1221357	ES1221357	
Halogenated Aliphatic Compounds	1,1,1-Trichloroethane	µg/L	1			<5	-	<5	-	<5	-	-	-	<5	<5	<1
	1,1-Dichloroethane	µg/L	1			<5	-	<5	-	<5	-	-	-	<5	<5	<1
	1,1-Dichloroethene	µg/L	1			<5	-	<5	-	<5	-	-	-	<5	<5	<1
	1,2-Dichloroethane	µg/L	1			<5	-	<5	-	<5	-	-	-	<5	<5	<1
	Carbon Tetrachloride	µg/L	1			<5	-	<5	-	<5	-	-	-	<5	<5	<1
	Chloroethane	µg/L	10			<50	-	<50	-	<50	-	-	-	<50	<50	<10
	cis-1,2-Dichloroethene	µg/L	1			<5	-	<5	-	<5	-	-	-	<5	<5	<1
	Dichlorodifluoromethane	µg/L	10			<50	-	<50	-	<50	-	-	-	<50	<50	<10
	Hexachlorobutadiene	µg/L	1			<5	-	<5	-	<5	-	-	-	<5	<5	<1
	Tetrachloroethene	µg/L	1			<5	-	<5	-	<5	-	-	-	<5	<5	<1
	trans-1,2-Dichloroethene	µg/L	1			<5	-	<5	-	<5	-	-	-	<5	<5	<1
	Trichloroethene	µg/L	1			<5	-	<5	-	<5	-	-	-	<5	<5	<1
	Trichlorofluoromethane	µg/L	10			<50	-	<50	-	<50	-	-	-	<50	<50	<10
	Vinyl chloride	µg/L	10			<50	-	<50	-	<50	-	-	-	<50	<50	<10
	1,1,1,2-Tetrachloroethane	µg/L	1			<5	-	<5	-	<5	-	-	-	<5	<5	<1
	1,1,2,2-Tetrachloroethane	µg/L	1			<5	-	<5	-	<5	-	-	-	<5	<5	<1
	1,1,2-Trichloroethane	µg/L	1	**1900**		<5	-	<5	-	<5	-	-	-	<5	<5	<1
	1,1-Dichloropropene	µg/L	1			<5	-	<5	-	<5	-	-	-	<5	<5	<1
	1,2,3-Trichloropropane	µg/L	1			<5	-	<5	-	<5	-	-	-	<5	<5	<1
	1,2-Dibromo-3-chloropropane	µg/L	1			<5	-	<5	-	<5	-	-	-	<5	<5	<1
	1,3-Dichloropropane	µg/L	1			<5	-	<5	-	<5	-	-	-	<5	<5	<1
	Chloromethane	µg/L	10			<50	-	<50	-	<50	-	-	-	<50	<50	<10
	cis-1,4-Dichloro-2-butene	µg/L	5			<5	-	<5	-	<5	-	-	-	<5	<5	-
	Dibromomethane	µg/L	1			<5	-	<5	-	<5	-	-	-	<5	<5	<1
	Iodomethane	µg/L	5			<5	-	<5	-	<5	-	-	-	<5	<5	-
	Pentachloroethane	µg/L	5			<5	-	<5	-	<5	-	-	-	<5	<5	-
	trans-1,4-Dichloro-2-butene	µg/L	5			<5	-	<5	-	<5	-	-	-	<5	<5	-
Fumigants	Bromomethane	µg/L	10			<50	-	<50	-	<50	-	-	-	<50	<50	<10
	1,2-Dibromoethane (EDB)	µg/L	1			<5	-	<5	-	<5	-	-	-	<5	<5	<1
	1,2-Dichloropropane	µg/L	1			<5	-	<5	-	<5	-	-	-	<5	<5	<1
	2,2-Dichloropropane	µg/L	1			<5	-	<5	-	<5	-	-	-	<5	<5	<1
	cis-1,3-Dichloropropene	µg/L	1			<5	-	<5	-	<5	-	-	-	<5	<5	<1
	trans-1,3-Dichloropropene	µg/L	1			<5	-	<5	-	<5	-	-	-	<5	<5	<1
Trihalomethanes	Bromochloromethane	µg/L	1			-	-	-	-	-	-	-	-	-	-	<1
	Bromodichloromethane	µg/L	1			<5	-	<5	-	<5	-	-	-	<5	<5	<1
	Bromoform	µg/L	1			<5	-	<5	-	<5	-	-	-	<5	<5	<1
	Chloroform	µg/L	1			<5	-	<5	-	<5	-	-	-	<5	<5	<1
	Dibromochloromethane	µg/L	1			<5	-	<5	-	<5	-	-	-	<5	<5	<1
Total Dissolved Solids	Total Dissolved Solids	mg/L	5			-	**338**	**428**	**760**	-	-	-	-	-	-	**450**
C1 - C4 Hydrocabon Gases	Methane	mg/L	0.005			**0.061**	**0.042**	**0.992**	<0.01	**1.1**	-	<0.01	**0.054**	**0.796**	**0.782**	**0.62**
Alkalinity	Bicarbonate as HCO3	mg/L	1			**132**	**57.34**	**352.58**	**336.72**	**224**	-	**114**	**420**	**293**	**310**	**366**
	Carbonate as CO3	mg/L	1			<1	**0.6**	**0.6**	**0.6**	<1	-	<1	<1	<1	<1	**3**
	Total Alkalinity	mg/L	5			-	-	-	-	-	-	-	-	-	-	**300**
	Bicarbonate Alkalinity as CaCO3	mg/L	1			-	**47**	**289**	**276**	-	-	-	-	-	-	**300**
	Carbonate Alkalinity as CaCO3	mg/L	1			-	<1	<1	<1	-	-	-	-	-	-	<5
	Hydroxide Alkalinity as CaCO3	mg/L	1			<1	<1	<1	<1	<1	-	<1	<1	<1	<1	<5
	Total Alkalinity as CaCO3	mg/L	1			**132**	**47**	**289**	**276**	**224**	-	**114**	**420**	**293**	**310**	-
Nutrients	Nitrate	mg/L	0.01			<0.01	-	-	-	<0.01	-	**0.06**	**0.18**	<0.01	<0.01	-
	Nitrate (as N)	mg/L	0.002258967			<0	<0.01	<0.01	<0.01	<0	-	**0.01**	**0.04**	<0	<0	<0.005
	Nitrite (as N)	mg/L	0.005			<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	<0.01	<0.01	<0.01	<0.005
	Nitrate & Nitrite (as N)	mg/L	0.01			<0.01	<0.01	<0.01	<0.01	<0.01	-	**0.06**	**0.18**	<0.01	<0.01	-
Major Ions	Chloride	mg/L	1			**742**	**134**	**35**	**236**	**892**	-	**18,500**	**108**	**89**	**85**	**69**
	Calcium (Dissolved)	mg/L	0.5			**83**	**7**	**68**	**8**	**96**	-	**370**	**5**	**6**	**4**	**5.3**
	Magnesium (Dissolved)	mg/L	0.5			**44**	**10**	**19**	**11**	**54**	-	**1200**	**8**	**6**	**4**	**4.8**
	Potassium (Dissolved)	mg/L	0.5			**18**	**16**	**9**	**22**	**28**	-	**418**	**22**	**13**	**14**	**14**
	Sodium (Dissolved)	mg/L	0.5			**468**	**89**	**38**	**276**	**505**	-	**11,400**	**251**	**169**	**178**	**210**
	Sulphide (as S2-)	mg/L	0.1			<0.1	<0.1	<0.1	<0.1	**0.2**	-	<0.1	<0.1	<0.1	<0.1	<0.5
	Sulphite (as SO3-)	mg/L	2			<2	<2	<2	<2	<2	-	<2	<2	<2	<2	<2
	Sulphur (as S)	mg/L	0.5			-	-	-	-	-	-	-	-	-	-	**3.8**
	Sulphur (as S) (Dissolved)	mg/L	1			**102**	**11**	**5**	**28**	**25**	-	**862**	**14**	**4**	**4**	-
	Sulphate (as SO4-)	mg/L	1			**323**	-	-	-	**75**	-	**2890**	**44**	**11**	**13**	**9**
	Sulphate (as SO4-) (Dissolved)	mg/L	1			-	**34**	**16**	**85**	-	-	-	-	-	-	-
	Total Anions	meq/L	0.01			**30.3**	**5.43**	**7.09**	**13.9**	**31.2**	-	**584**	**12.4**	**8.59**	**8.86**	-
	Total Cations	meq/L	0.01			**28.6**	**5.45**	**6.84**	**13.9**	**31.9**	-	**624**	**12.4**	**8.48**	**8.63**	-
	Ionic Balance	%	0.01			**2.92**	**0.22**	**1.82**	**0.28**	**1.13**	-	**3.25**	**0.09**	**0.73**	**1.38**	**11**
Ferrous/Ferric Iron	Ferrous Iron	mg/L	0.05			**28.6**	**3.24**	**19.6**	**0.16**	**35.8**	-	<0.05	**0.14**	**0.23**	**6.05**	**3.1**
	Ferric Iron	mg/L	0.05			-	-	-	-	-	-	-	-	-	-	**2.7**
	Ferric Iron (Dissolved)	mg/L	0.05			<0.05	**0.11**	**3.7**	**0.13**	<0.05	-	<0.05	<0.05	**4.86**	<0.05	-
Oxygenated Compounds	Vinyl acetate	µg/L	50			<50	-	<50	-	<50	-	-	-	<50	<50	-
	2-Butanone (MEK)	µg/L	50			<50	-	<50	-	<50	-	-	-	<50	<50	-
	2-hexanone (MBK)	µg/L	50			<50	-	<50	-	<50	-	-	-	<50	<50	-
	4-Methyl-2-pentanone (MIBK)	µg/L	50			<50	-	<50	-	<50	-	-	-	<50	<50	-
Sulfonated Compounds	Carbon disulfide	µg/L	5			<5	-	<5	-	<5	-	-	-	<5	<5	-
Chlorinated Hydrocarbons	1,2-Dichloroethene	µg/L				<10	-	<10	-	<10	-	-	-	<10	<10	<2
Solvents	Cyclohexane	µg/L	1			-	-	-	-	-	-	-	-	-	-	<1

*LOR exceeds Adopted Guidelines

Table 2
Analytical Results - September 2012 GME
Darwin Waterfront Corporation

Location Code	MW128	MW129	MW134	MW135	MW136									
Field ID	MW128	MW129	MW134	MW135	MW136	QCA01	QCA01	QCA03	QCB01	QCB01	QCB03	QCC01	QCC01	QCC03
Sampled_Date_Time	4/09/2012	4/09/2012	5/09/2012	4/09/2012	4/09/2012	5/09/2012	5/09/2012	6/09/2012	4/09/2012	5/09/2012	6/09/2012	4/09/2012	5/09/2012	6/09/2012
Sample Type	Primary Sample	Primary Sample	Primary Sample	Primary Sample	Primary Sample	Trip Blank	Trip Blank	Trip Blank	Field Blank	Field Blank	Field Blank	Rinsate Blank	Rinsate Blank	Rinsate Blank
Lab Report Number	ES1221357	ES1221483	ES1221566	ES1221357	ES1221357	ES1221357	ES1221483	ES1221566	ES1221357	ES1221483	ES1221566	ES1221357	ES1221483	ES1221566

Chem_Group	ChemName	output unit	EQL	ANZECC 2000 Marine water 95%	ANZECC 2000 Irrigation LTV														
	Total Dissolved Solids @180°C	mg/L	10			**182**	**508**	-	**1180**	**2130**	-	-	-	-	-	-	-	-	
Total Petroleum Hydrocarbons	C6-C9 fraction	µg/L	10			<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
	C10-C14 fraction	µg/L	50			<50	**660**	<50	<50	<50	-	-	-	<50	<50	<50	<50	<50	<50
	C15-C28 fraction	µg/L	100			<100	**1540**	**210**	<100	**170**	-	-	-	<100	<100	<100	<100	<100	<100
	C29-C36 fraction	µg/L	50			<50	<50	<50	<50	<50	-	-	-	<50	<50	<50	<50	<50	<50
	C10-C36 fraction (sum)	µg/L	50			<50	**2200**	**210**	<50	**170**	-	-	-	<50	<50	<50	<50	<50	<50
Total Recoverable Hydrocarbons	C6-C10 fraction (F1 minus BTEX)	µg/L	20			<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
	C6-C10 fraction	µg/L	20			<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
	>C10-C16 fraction	µg/L	100			<100	**1000**	<100	<100	<100	-	-	-	<100	<100	<100	<100	<100	<100
	>C16-C34 fraction	µg/L	100			<100	**1060**	**150**	<100	**140**	-	-	-	<100	<100	<100	<100	<100	<100
	>C34-C40 fraction	µg/L	100			<100	<100	<100	<100	<100	-	-	-	<100	<100	<100	<100	<100	<100
	>C10-C40 fraction (sum)	µg/L	100			<100	**2060**	**150**	<100	**140**	-	-	-	<100	<100	<100	<100	<100	<100
Monocyclic Aromatic Hydrocarbons	Benzene	µg/L	1	**700**		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
	Toluene	µg/L	1			<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
	Ethylbenzene	µg/L	1			<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
	m&p-Xylene	µg/L	2			<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
	o-Xylene	µg/L	1			<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
	Total Xylenes	µg/L	2			<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
	1,2,4-trimethylbenzene	µg/L	1			-	-	<5	<5	<5	-	-	-	<5	<5	<5	<5	<5	<5
	Isopropylbenzene	µg/L	1			-	-	<5	<5	<5	-	-	-	<5	<5	<5	<5	<5	<5
	Styrene	µg/L	1			-	-	<5	<5	<5	-	-	-	<5	<5	<5	<5	<5	<5
	sec-butylbenzene	µg/L	1			-	-	<5	<5	<5	-	-	-	<5	<5	<5	<5	<5	<5
	Sum of BTEX	µg/L	1			<1	<1	-	<1	<1	<1	<1	-	<1	<1	-	<1	<1	-
	1,3,5-trimethylbenzene	µg/L	1			-	-	<5	<5	<5	-	-	-	<5	<5	<5	<5	<5	<5
	Total BTEX	µg/L	1			<9	<9	<1	<9	<9	-	-	<1	-	-	<1	-	-	<1
Naphthalene	Naphthalene	µg/L	1	**70**		-	-	<1	<1	<1	-	-	-	<1	<1	<1	<1	<1	<1
	Naphthalene (VOC)	µg/L	5			<5	<5	<5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5
Polynuclear Aromatic Hydrocarbons	Acenaphthylene	µg/L	1			-	-	<1	<1	<1	-	-	-	<1	<1	<1	<1	<1	<1
	Acenaphthene	µg/L	1			-	-	<1	<1	<1	-	-	-	<1	<1	<1	<1	<1	<1
	Anthracene	µg/L	1			-	-	<1	<1	<1	-	-	-	<1	<1	<1	<1	<1	<1
	Fluorene	µg/L	1			-	-	<1	<1	<1	-	-	-	<1	<1	<1	<1	<1	<1
	Phenanthrene	µg/L	1			-	-	<1	<1	<1	-	-	-	<1	<1	<1	<1	<1	<1
	Fluoranthene	µg/L	1			-	-	<1	<1	<1	-	-	-	<1	<1	<1	<1	<1	<1
	Benz(a)anthracene	µg/L	1			-	-	<1	<1	<1	-	-	-	<1	<1	<1	<1	<1	<1
	Benzo(b)fluoranthene	µg/L	1			-	-	<1	<1	<1	-	-	-	<1	<1	<1	<1	<1	<1
	Benzo(k)fluoranthene	µg/L	1			-	-	<1	<1	<1	-	-	-	<1	<1	<1	<1	<1	<1
	Benzo(b&k)fluoranthene	µg/L	2			-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Benzo(a)pyrene	µg/L	0.5			-	-	<0.5	<0.5	<0.5	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	Benzo(a)pyrene TEQ	µg/L	0.5			-	-	<0.5	-	-	-	-	-	-	-	<0.5	-	-	<0.5
	Chrysene	µg/L	1			-	-	<1	<1	<1	-	-	-	<1	<1	<1	<1	<1	<1
	Pyrene	µg/L	1			-	-	<1	<1	<1	-	-	-	<1	<1	<1	<1	<1	<1
	Benzo(g,h,i)perylene	µg/L	1			-	-	<1	<1	<1	-	-	-	<1	<1	<1	<1	<1	<1
	Dibenz(a,h)anthracene	µg/L	1			-	-	<1	<1	<1	-	-	-	<1	<1	<1	<1	<1	<1
	Indeno(1,2,3-cd)pyrene	µg/L	1			-	-	<1	<1	<1	-	-	-	<1	<1	<1	<1	<1	<1
	Sum of PAHs	µg/L	0.5			-	-	<0.5	<0.5	<0.5	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Metals	Arsenic	mg/L	0.001		**0.1**	-	-	-	-	-	-	-	-	-	-	<0.001	-	-	<0.001
	Arsenic (Dissolved)	mg/L	0.001		**0.1**	<0.001	**0.009**	**0.002**	<0.001	**0.002**	-	-	-	<0.001	<0.001	-	<0.001	<0.001	-
	Cadmium	mg/L	0.0001	**0.0055**	**0.01**	-	-	-	-	-	-	-	-	-	-	<0.0001	-	-	<0.0001
	Cadmium (Dissolved)	mg/L	0.0001	**0.0055**	**0.01**	<0.0001	<0.0001	<0.0001	**0.0162**	<0.0001	-	-	-	<0.0001	<0.0001	-	<0.0001	<0.0001	-
	Chromium	mg/L	0.001		**0.1**	-	-	-	-	-	-	-	-	-	-	<0.001	-	-	<0.001
	Chromium (Dissolved)	mg/L	0.001		**0.1**	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	-	<0.001	<0.001	-	<0.001	<0.001	-
	Copper	mg/L	0.001	**0.0013**	**0.2**	-	-	-	-	-	-	-	-	-	-	<0.001	-	-	<0.001
	Copper (Dissolved)	mg/L	0.001	**0.0013**	**0.2**	<0.001	<0.001	<0.001	**0.004**	**0.001**	-	-	-	<0.001	<0.001	-	<0.001	<0.001	-
	Lead	mg/L	0.001	**0.0044**	**2**	-	-	-	-	-	-	-	-	-	-	<0.001	-	-	<0.001
	Lead (Dissolved)	mg/L	0.001	**0.0044**	**2**	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	-	<0.001	<0.001	-	<0.001	<0.001	-
	Iron (Dissolved)	mg/L	0.01		**0.2**	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Manganese	mg/L	0.001		**0.2**	-	-	-	-	-	-	-	-	-	-	<0.001	-	-	<0.001
	Manganese (Dissolved)	mg/L	0.001		**0.2**	**0.152**	**0.092**	**0.337**	**1.32**	**2.71**	-	-	-	<0.001	<0.001	-	<0.001	**0.003**	-
	Mercury	mg/L	0.0001	**0.0004**	**0.002**	-	-	-	-	-	-	-	-	-	-	<0.0001	-	-	<0.0001
	Mercury (Dissolved)	mg/L	0.00005	**0.0004**	**0.002**	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	-	-	-	<0.0001	<0.0001	-	<0.0001	<0.0001	-
	Nickel	mg/L	0.001	**0.07**	**0.2**	-	-	-	-	-	-	-	-	-	-	<0.001	-	-	<0.001
	Nickel (Dissolved)	mg/L	0.001	**0.07**	**0.2**	**0.03**	<0.001	**0.002**	**0.001**	**0.001**	-	-	-	<0.001	<0.001	-	<0.001	<0.001	-
	Zinc	mg/L	0.005	**0.015**	**2**	-	-	-	-	-	-	-	-	-	-	<0.005	-	-	<0.005
	Zinc (Dissolved)	mg/L	0.001	**0.015**	**2**	**0.005**	<0.005	<0.005	**1.33**	**0.024**	-	-	-	<0.005	<0.005	-	<0.005	<0.005	-
	Vanadium	mg/L	0.01	**0.1**	**0.1**	-	-	-	-	-	-	-	-	-	-	<0.01	-	-	<0.01
	Vanadium(Dissolved)	mg/L	0.001	**0.1**	**0.1**	<0.01	<0.01	<0.01	<0.01	<0.01	-	-	-	<0.01	<0.01	-	<0.01	<0.01	-
Halogenated Aromatic Compounds	Chlorobenzene	µg/L	1			-	-	<5	<5	<5	-	-	-	<5	<5	<5	<5	<5	<5
	n-butylbenzene	µg/L	1			-	-	<5	<5	<5	-	-	-	<5	<5	<5	<5	<5	<5
	n-propylbenzene	µg/L	1			-	-	<5	<5	<5	-	-	-	<5	<5	<5	<5	<5	<5
	p-isopropyltoluene	µg/L	1			-	-	<5	<5	<5	-	-	-	<5	<5	<5	<5	<5	<5
	tert-butylbenzene	µg/L	1			-	-	<5	<5	<5	-	-	-	<5	<5	<5	<5	<5	<5
	1,2,3-Trichlorobenzene	µg/L	1			-	-	<5	<5	<5	-	-	-	<5	<5	<5	<5	<5	<5
	1,2,4-Trichlorobenzene	µg/L	1	**80**		-	-	<5	<5	<5	-	-	-	<5	<5	<5	<5	<5	<5
	1,2-Dichlorobenzene	µg/L	1			-	-	<5	<5	<5	-	-	-	<5	<5	<5	<5	<5	<5
	1,3-Dichlorobenzene	µg/L	1			-	-	<5	<5	<5	-	-	-	<5	<5	<5	<5	<5	<5
	1,4-Dichlorobenzene	µg/L	1			-	-	<5	<5	<5	-	-	-	<5	<5	<5	<5	<5	<5
	2-Chlorotoluene	µg/L	1			-	-	<5	<5	<5	-	-	-	<5	<5	<5	<5	<5	<5
	4-Chlorotoluene	µg/L	1			-	-	<5	<5	<5	-	-	-	<5	<5	<5	<5	<5	<5
	Bromobenzene	µg/L	1			-	-	<5	<5	<5	-	-	-	<5	<5	<5	<5	<5	<5

Table 2
Analytical Results - September 2012 GME
Darwin Waterfront Corporation

						Location Code	MW128	MW129	MW134	MW135	MW136									
						Field ID	MW128	MW129	MW134	MW135	MW136	QCA01	QCA01	QCA03	QCB01	QCB01	QCB03	QCC01	QCC01	QCC03
						Sampled_Date_Time	4/09/2012	4/09/2012	5/09/2012	4/09/2012	4/09/2012	5/09/2012	5/09/2012	6/09/2012	4/09/2012	5/09/2012	6/09/2012	4/09/2012	5/09/2012	6/09/2012
						Sample Type	Primary Sample	Primary Sample	Primary Sample	Primary Sample	Primary Sample	Trip Blank	Trip Blank	Trip Blank	Field Blank	Field Blank	Field Blank	Rinsate Blank	Rinsate Blank	Rinsate Blank
						Lab Report Number	ES1221357	ES1221483	ES1221566	ES1221357	ES1221357	ES1221357	ES1221483	ES1221566	ES1221357	ES1221483	ES1221566	ES1221357	ES1221483	ES1221566
Halogenated Aliphatic Compounds	1,1,1-Trichloroethane	µg/L	1			-	-	<5	<5	<5	-	-	-	<5	<5	<5	<5	<5	<5
	1,1-Dichloroethane	µg/L	1			-	-	<5	<5	<5	-	-	-	<5	<5	<5	<5	<5	<5
	1,1-Dichloroethene	µg/L	1			-	-	<5	<5	<5	-	-	-	<5	<5	<5	<5	<5	<5
	1,2-Dichloroethane	µg/L	1			-	-	<5	<5	<5	-	-	-	<5	<5	<5	<5	<5	<5
	Carbon Tetrachloride	µg/L	1			-	-	<5	<5	<5	-	-	-	<5	<5	<5	<5	<5	<5
	Chloroethane	µg/L	10			-	-	<50	<50	<50	-	-	-	<50	<50	<50	<50	<50	<50
	cis-1,2-Dichloroethene	µg/L	1			-	-	<5	<5	<5	-	-	-	<5	<5	<5	<5	<5	<5
	Dichlorodifluoromethane	µg/L	10			-	-	<50	<50	<50	-	-	-	<50	<50	<50	<50	<50	<50
	Hexachlorobutadiene	µg/L	1			-	-	<5	<5	<5	-	-	-	<5	<5	<5	<5	<5	<5
	Tetrachloroethene	µg/L	1			-	-	<5	<5	<5	-	-	-	<5	<5	<5	<5	<5	<5
	trans-1,2-Dichloroethene	µg/L	1			-	-	<5	<5	<5	-	-	-	<5	<5	<5	<5	<5	<5
	Trichloroethene	µg/L	1			-	-	<5	<5	<5	-	-	-	<5	<5	<5	<5	<5	<5
	Trichlorofluoromethane	µg/L	10			-	-	<50	<50	<50	-	-	-	<50	<50	<50	<50	<50	<50
	Vinyl chloride	µg/L	10			-	-	<50	<50	<50	-	-	-	<50	<50	<50	<50	<50	<50
	1,1,1,2-Tetrachloroethane	µg/L	1			-	-	<5	<5	<5	-	-	-	<5	<5	<5	<5	<5	<5
	1,1,2,2-Tetrachloroethane	µg/L	1			-	-	<5	<5	<5	-	-	-	<5	<5	<5	<5	<5	<5
	1,1,2-Trichloroethane	µg/L	1	**1900**		-	-	<5	<5	<5	-	-	-	<5	<5	<5	<5	<5	<5
	1,1-Dichloropropene	µg/L	1			-	-	<5	<5	<5	-	-	-	<5	<5	<5	<5	<5	<5
	1,2,3-Trichloropropane	µg/L	1			-	-	<5	<5	<5	-	-	-	<5	<5	<5	<5	<5	<5
	1,2-Dibromo-3-chloropropane	µg/L	1			-	-	<5	<5	<5	-	-	-	<5	<5	<5	<5	<5	<5
	1,3-Dichloropropane	µg/L	1			-	-	<5	<5	<5	-	-	-	<5	<5	<5	<5	<5	<5
	Chloromethane	µg/L	10			-	-	<50	<50	<50	-	-	-	<50	<50	<50	<50	<50	<50
	cis-1,4-Dichloro-2-butene	µg/L	5			-	-	<5	<5	<5	-	-	-	<5	<5	<5	<5	<5	<5
	Dibromomethane	µg/L	1			-	-	<5	<5	<5	-	-	-	<5	<5	<5	<5	<5	<5
	Iodomethane	µg/L	5			-	-	<5	<5	<5	-	-	-	<5	<5	<5	<5	<5	<5
	Pentachloroethane	µg/L	5			-	-	<5	<5	<5	-	-	-	<5	<5	<5	<5	<5	<5
	trans-1,4-Dichloro-2-butene	µg/L	5			-	-	<5	<5	<5	-	-	-	<5	<5	<5	<5	<5	<5
Fumigants	Bromomethane	µg/L	10			-	-	<50	<50	<50	-	-	-	<50	<50	<50	<50	<50	<50
	1,2-Dibromoethane (EDB)	µg/L	1			-	-	<5	<5	<5	-	-	-	<5	<5	<5	<5	<5	<5
	1,2-Dichloropropane	µg/L	1			-	-	<5	<5	<5	-	-	-	<5	<5	<5	<5	<5	<5
	2,2-Dichloropropane	µg/L	1			-	-	<5	<5	<5	-	-	-	<5	<5	<5	<5	<5	<5
	cis-1,3-Dichloropropene	µg/L	1			-	-	<5	<5	<5	-	-	-	<5	<5	<5	<5	<5	<5
	trans-1,3-Dichloropropene	µg/L	1			-	-	<5	<5	<5	-	-	-	<5	<5	<5	<5	<5	<5
Trihalomethanes	Bromochloromethane	µg/L	1			-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Bromodichloromethane	µg/L	1			-	-	<5	<5	<5	-	-	-	<5	<5	<5	<5	<5	<5
	Bromoform	µg/L	1			-	-	<5	<5	<5	-	-	-	<5	<5	<5	<5	<5	<5
	Chloroform	µg/L	1			-	-	<5	<5	<5	-	-	-	<5	<5	<5	<5	<5	<5
	Dibromochloromethane	µg/L	1			-	-	<5	<5	<5	-	-	-	<5	<5	<5	<5	<5	<5
Total Dissolved Solids	Total Dissolved Solids	mg/L	5			-	-	**2170**	-	-	-	-	-	-	-	-	-	-	-
C1 - C4 Hydrocabon Gases	Methane	mg/L	0.005			**2.91**	**4.65**	**0.081**	**0.144**	**1.48**	-	-	-	-	-	-	-	-	-
Alkalinity	Bicarbonate as HCO3	mg/L	1			**105**	**418**	**374.54**	**430**	**602**	-	-	-	-	-	-	-	-	-
	Carbonate as CO3	mg/L	1			<1	<1	**0.6**	<1	<1	-	-	-	-	-	-	-	-	-
	Total Alkalinity	mg/L	5			-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Bicarbonate Alkalinity as CaCO3	mg/L	1			-	-	**307**	-	-	-	-	-	-	-	-	-	-	-
	Carbonate Alkalinity as CaCO3	mg/L	1			-	-	<1	-	-	-	-	-	-	-	-	-	-	-
	Hydroxide Alkalinity as CaCO3	mg/L	1			<1	<1	<1	<1	<1	-	-	-	-	-	-	-	-	-
	Total Alkalinity as CaCO3	mg/L	1			**105**	**418**	**307**	**430**	**602**	-	-	-	-	-	-	-	-	-
Nutrients	Nitrate	mg/L	0.01			<0.01	<0.01	-	<0.01	<0.01	-	-	-	-	-	-	-	-	-
	Nitrate (as N)	mg/L	0.002258967			<0	<0	**0.01**	<0	<0	-	-	-	-	-	-	-	-	-
	Nitrite (as N)	mg/L	0.005			<0.01	<0.01	<0.01	<0.01	<0.01	-	-	-	-	-	-	-	-	-
	Nitrate & Nitrite (as N)	mg/L	0.01			<0.01	<0.01	**0.01**	<0.01	<0.01	-	-	-	-	-	-	-	-	-
Major Ions	Chloride	mg/L	1			**40**	**6**	**854**	**270**	**808**	-	-	-	-	-	-	-	-	-
	Calcium (Dissolved)	mg/L	0.5			**29**	**110**	**17**	**181**	**59**	-	-	-	-	-	-	-	-	-
	Magnesium (Dissolved)	mg/L	0.5			**6**	**22**	**24**	**43**	**38**	-	-	-	-	-	-	-	-	-
	Potassium (Dissolved)	mg/L	0.5			**6**	**21**	**39**	**24**	**24**	-	-	-	-	-	-	-	-	-
	Sodium (Dissolved)	mg/L	0.5			**31**	**12**	**734**	**160**	**675**	-	-	-	-	-	-	-	-	-
	Sulphide (as S2-)	mg/L	0.1			<0.1	**0.2**	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-
	Sulphite (as SO3-)	mg/L	2			<2	<2	<2	<2	<2	-	-	-	-	-	-	-	-	-
	Sulphur (as S)	mg/L	0.5			-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Sulphur (as S) (Dissolved)	mg/L	1			**3**	<1	**43**	**79**	**20**	-	-	-	-	-	-	-	-	-
	Sulphate (as SO4-)	mg/L	1			**8**	<1	-	**253**	**62**	-	-	-	-	-	-	-	-	-
	Sulphate (as SO4-) (Dissolved)	mg/L	1			-	-	**130**	-	-	-	-	-	-	-	-	-	-	-
	Total Anions	meq/L	0.01			**3.39**	**8.52**	**32.9**	**21.5**	**36.1**	-	-	-	-	-	-	-	-	-
	Total Cations	meq/L	0.01			**3.44**	**8.36**	**35.8**	**20.1**	**36**	-	-	-	-	-	-	-	-	-
	Ionic Balance	%	0.01			**0.74**	**0.94**	**4.08**	**3.18**	**0.12**	-	-	-	-	-	-	-	-	-
Ferrous/Ferric Iron	Ferrous Iron	mg/L	0.05			**8.87**	**10.2**	<0.05	**0.26**	**6.5**	-	-	-	-	-	-	-	-	-
	Ferric Iron	mg/L	0.05			-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Ferric Iron (Dissolved)	mg/L	0.05			<0.05	**1.1**	**1.97**	**0.18**	**0.37**	-	-	-	-	-	-	-	-	-
Oxygenated Compounds	Vinyl acetate	µg/L	50			-	-	<50	<50	<50	-	-	-	<50	<50	<50	<50	<50	<50
	2-Butanone (MEK)	µg/L	50			-	-	<50	<50	<50	-	-	-	<50	<50	<50	<50	<50	<50
	2-hexanone (MBK)	µg/L	50			-	-	<50	<50	<50	-	-	-	<50	<50	<50	<50	<50	<50
	4-Methyl-2-pentanone (MIBK)	µg/L	50			-	-	<50	<50	<50	-	-	-	<50	<50	<50	<50	<50	<50
Sulfonated Compounds	Carbon disulfide	µg/L	5			-	-	<5	<5	<5	-	-	-	<5	<5	<5	<5	<5	<5
Chlorinated Hydrocarbons	1,2-Dichloroethene	µg/L				-	-	<10	<10	<10	-	-	-	-	-	-	-	-	-
Solvents	Cyclohexane	µg/L	1			-	-	-	-	-	-	-	-	-	-	-	-	-	-

*LOR exceeds Adopted Guidelines

DATA VALIDATION REPORT_December 2012

URS Project number:	42213719	**Data verified by:**	Bek Aagaard	Date: 25/03/2013
Client:	Darwin Waterfront Corporation			
Site:	Waterfront Precinct	Signed:	Ubeke Aagaard	
URS Project Manager:	Tim Smith			
		Validation by:	Mitch Bacon	Date:
Matrix type:	Groundwater			
No Primary samples:	10			
Laboratory:	ALS; Envirolab	Signed:		3/4/2013
Lab reference:	ES1229380, 83189			
		Project Manager:	Tim Smith	Date:
		Signed:		

Data quality objectives

Field data comparison

Slight hydrocarbon odours were noted for MW127_11122012, but no Total Petroleum Hydrocarbons (TPHs) or benzene, toluene, ethylbenzene and xylenes (BTEX) were reported for MW127_11122012 in Batch ES1229380.

Frequency of field QC

Field QC samples were collected to project specifications.

		Discrepancy	Frequency	Requested Frequency
Intra-laboratory Duplicates Taken	1	None noted	1	1
Inter-laboratory Duplicates Taken	1	None noted	1	1
Intra-laboratory Duplicates Analysed	1	None noted	1	1
Inter-laboratory Duplicates Analysed	1	None noted	1	1
		Total Frequency	**2**	**2**

Inter-laboratory duplicates were not analysed at the required frequency for oxygenated compounds, carbon disulfide and halogenated aliphatic analytes. However, the presence of intra-laboratory duplicates and laboratory duplicates for these analytes is considered sufficient for interpretation of the precision of the results except for these analytes.

Frequency of laboratory QC

Laboratory QC analysis was reported to project specifications, except for the frequency of laboratory duplicates for total metals. The rate was 8.1% and was supposed to be 10%.

Tests requested/reported

Samples were analysed and reported as requested on the COC, except for MW135 was added twice on the COC.

Limits of reporting

LORs were sufficiently low to enable assessment against adopted guideline criteria with the following limitations:

- Protocol LOR for anthracene (1 µg/L) above the adopted ILs (0.4 µg/L)
- Protocol LOR for benzo(a)pyrene (0.5 µg/L) above the adopted ILs (0.2 µg/L)

The limits of reporting were above the adopted investigation levels for anthracene and benzo(a)pyrene. As a result, potential exists for samples to contain concentrations of these analytes above the adopted investigation levels, but below detection limits. This lack of definitive data should be taken into consideration when interpreting analytical results below LOR for these PAHs.

- Protocol LOR exceeds the guideline trigger value for arsenic (0.1 mg/L)
- Protocol LOR exceeds the guideline trigger value for cadmium (0.0055 mg/L)
- Protocol LOR exceeds the guideline trigger value for chromium (0.0044 mg/L)
- Protocol LOR exceeds the guideline trigger value for copper (0.0013 mg/L)
- Protocol LOR exceeds the guideline trigger value for iron (0.2 mg/L)
- Protocol LOR exceeds the guideline trigger value for lead (0.0044 mg/L)
- Protocol LOR exceeds the guideline trigger value for nickel (0.07 mg/L)
- Protocol LOR exceeds the guideline trigger value for zinc (0.015 mg/L)

The limits of reporting exceeded the guideline trigger levels for several metals. As a result, potential exists for samples to contain concentrations of these analytes above the adopted investigation levels, but below detection limits. This lack of definitive data should be taken into consideration

	when interpreting analytical results below these metals.
Data transcription	A random 10% check of the laboratory results identified no anomalies within the electronic data, the laboratory reports, and tables generated by URS.
Sample management	
Chain of Custody	Chain of custody documents completed.
Handling and preservation	Samples were correctly preserved, chilled with ice and received at the laboratory at 12.9°C (ice present). The recorded temperature for batch ES1229380 was slightly above the recommended temperature, potentially resulting in some loss of volatiles, and therefore possible under-reporting of associated analytes. This is not considered to affect the reported results, as concentrations of volatile analytes for the current and historical investigation have reported below the LOR and analytes were below the LOR in the trip blank (QCA_12122012).
Holding time compliance	Samples were extracted and analysed within recommended holding times.
Data precision	
Field duplicate RPDs	RPDs were within control limits for Batch ES1229380.
Interlaboratory Replicate (Field triplicate) RPDs	RPDs were within control limits for Batch ES1229380.
Laboratory duplicate RPDs	RPDs were within control limits for Batch ES1229380.
Data accuracy	
Laboratory control spike recovery	Laboratory control spike recoveries were within control limits.
Matrix spike recovery	The following recoveries were outside control limits and may affect data interpretation:

Sample	Analyte	Recovery (%)	LCL (%)	UCL (%)	Comment
MW136_11122012	Manganese	ND	-	-	MS recovery not determined, background level greater than or equal to 4x spike level.
ND – Not determined					

Matrix spike recovery was not determined for manganese due to elevated sample concentrations. . The accuracy of the data for manganese is considered acceptable based on the presence of other quality control data, such as method blanks, LCS recoveries and matrix spike recoveries for other metals analysed under the same analytical method.

Matrix spike recoveries were not reported for PAHs, calcium, magnesium, potassium, sodium, halogenated methanes, oxygenated compounds, monocyclic aromatic hydrocarbons, carbon disulphide, halogenated aliphatics and alkalinity. The accuracy of the data for these compound groups is considered acceptable based on the presence of other quality control data, such as method blanks, LCS recoveries and surrogate recoveries (where applicable).

Surrogate spike recovery	Surrogate recoveries were within control limits for Batch ES1229380.
Blank monitoring	
Equipment rinsate blank	Concentrations of all analytes were reported below the LOR.
Field blank	Concentrations of all analytes were reported below the LOR.
Trip blank	Concentrations of all analytes were reported below the LOR.
Method blank	Concentrations of all analytes were reported below the LOR. Method blank recoveries were not reported for alkalinity. The accuracy of alkalinity data could not be assessed. This should be taken into consideration when interpreting the accuracy of the results for this analyte.
Other observations	None reported.

Site Name	Waterfront Precinct
Project No.	42213719
Project Manager	Tim Smith
Matrix	Water
Laboratory	ALS / EnviroLab
Batch File Number	ES1229380

Analytical Method	Analytical Parameter	Number of Tests Requested	Number of Tests Reported	Number of Primary Samples	Holding Times (a)	Limits of Reporting (b)	Field Blank (1 per day)		Rinsate Blank (1 per day)		Trip Blank (1 per esky with VOCs)		Method Blank (1 per batch)		Intra-Laboratory Duplicate Sample (1 in 20)		Inter-Laboratory Duplicate Sample (1 in 20)		Lab Duplicate (1 in 10)		Matrix Spike (1 in 20)		LCS (1 per batch)		Surrogates (GC-MS organics)	
							Number Required	Number Reported	Number Required	Number Reported	Number Required	Number Reported	Number Required	Number Reported	Number Required	Number Reported	Number Required	Number Reported	Number Required	Number Reported	Number Required	Number Reported	Number Required	Number Reported	Reported	OK
METALS ANALYSIS/ALS/EG020F	Arsenic	12	12	10	✓	×	1	1	1	1	0	0	1	3	1	1	1	1	2	5	1	3	1	3	-	-
	Cadmium	12	12	10	✓	×	1	1	1	1	0	0	1	3	1	1	1	1	2	5	1	3	1	3	-	-
	Chromium	12	12	10	✓	×	1	1	1	1	0	0	1	3	1	1	1	1	2	5	1	3	1	3	-	-
	Copper	12	12	10	✓	×	1	1	1	1	0	0	1	3	1	1	1	1	2	5	1	3	1	3	-	-
	Lead	12	12	10	✓	×	1	1	1	1	0	0	1	3	1	1	1	1	2	5	1	3	1	3	-	-
	Manganese	12	12	10	✓	✓	1	1	1	1	0	0	1	3	1	1	1	1	2	5	1	3	1	3	-	-
	Nickel	12	12	10	✓	×	1	1	1	1	0	0	1	3	1	1	1	1	2	5	1	3	1	3	-	-
	Vanadium	12	12	10	✓	×	1	1	1	1	0	0	1	3	1	1	1	1	2	5	1	3	1	3	-	-
	Zinc	12	12	10	✓	×	1	1	1	1	0	0	1	3	1	1	1	1	2	5	1	3	1	3	-	-
METALS ANALYSIS/ALS/EG035F	Mercury	12	12	10	✓	✓	1	1	1	1	0	0	1	2	1	1	1	1	2	4	1	2	1	2	-	-
VOLATILES ANALYSIS/ALS/EP080	Benzene	12	12	8	✓	✓	1	1	1	1	0	0	1	1	1	1	1	1	2	2	1	1	1	1	✓	✓
	Ethylbenzene	12	12	8	✓	✓	1	1	1	1	0	0	1	1	1	1	1	1	2	2	1	1	1	1	✓	✓
	meta- & para-Xylene	12	12	8	✓	✓	1	1	1	1	0	0	1	1	1	1	1	1	2	2	1	1	1	1	✓	✓
	Naphthalene	12	12	5	✓	✓	2	2	2	2	0	0	1	1	1	1	1	1	2	2	1	1	1	1	✓	✓
	ortho-Xylene	12	12	8	✓	✓	1	1	1	1	0	0	1	1	1	1	1	1	2	2	1	1	1	1	✓	✓
	Toluene	12	12	8	✓	✓	1	1	1	1	0	0	1	1	1	1	1	1	2	2	1	1	1	1	✓	✓
VOLATILES ANALYSIS/ALS/EP080/071	C6 - C10 Fraction	13	13	8	✓	✓	1	1	1	1	1	1	1	1	1	1	1	1	2	2	1	1	1	1	✓	✓
	C6 - C10 Fraction minus BTEX (F1)	12	12	8	✓	✓	1	1	1	1	0	0	1	1	1	1	1	1	2	2	1	1	1	1	✓	✓
	C6 - C9 Fraction	13	13	8	✓	✓	1	1	1	1	1	1	1	1	1	1	1	1	2	2	1	1	1	1	✓	✓
SEMIVOLATILES ANALYSIS/ALS/EP075(SIM)B	Acenaphthene	12	12	8	✓	✓	1	1	1	1	0	0	1	2	1	1	1	1	2	2	1	1	1	2	✓	✓
	Acenaphthylene	12	12	8	✓	✓	1	1	1	1	0	0	1	2	1	1	1	1	2	2	1	0	1	2	✓	✓
	Anthracene	12	12	8	✓	×	1	1	1	1	0	0	1	2	1	1	1	1	2	2	1	0	1	2	✓	✓
	Benz(a)anthracene	12	12	8	✓	✓	1	1	1	1	0	0	1	2	1	1	1	1	2	2	1	0	1	2	✓	✓
	Benzo(a)pyrene	12	12	8	✓	×	1	1	1	1	0	0	1	2	1	1	1	1	2	2	1	0	1	2	✓	✓
	Benzo(b)fluoranthene	12	12	8	✓	✓	1	1	1	1	0	0	1	2	1	1	1	1	2	2	1	0	1	2	✓	✓
	Benzo(g,h,i)perylene	12	12	8	✓	✓	1	1	1	1	0	0	1	2	1	1	1	1	2	2	1	0	1	2	✓	✓
	Benzo(k)fluoranthene	12	12	8	✓	✓	1	1	1	1	0	0	1	2	1	1	1	1	2	2	1	0	1	2	✓	✓
	Chrysene	12	12	8	✓	✓	1	1	1	1	0	0	1	2	1	1	1	1	2	2	1	0	1	2	✓	✓
	Dibenz(a,h)anthracene	12	12	8	✓	✓	1	1	1	1	0	0	1	2	1	1	1	1	2	2	1	0	1	2	✓	✓
	Fluoranthene	12	12	8	✓	✓	1	1	1	1	0	0	1	2	1	1	1	1	2	2	1	0	1	2	✓	✓
	Fluorene	12	12	8	✓	✓	1	1	1	1	0	0	1	2	1	1	1	1	2	2	1	0	1	2	✓	✓
	Indeno(1,2,3,cd)pyrene	12	12	8	✓	✓	1	1	1	1	0	0	1	2	1	1	1	1	2	2	1	0	1	2	✓	✓
	Naphthalene	12	12	5	✓	✓	2	2	2	2	0	0	1	2	1	1	1	1	2	2	1	1	1	2	✓	✓
	Phenanthrene	12	12	8	✓	✓	1	1	1	1	0	0	1	2	1	1	1	1	2	2	1	0	1	2	✓	✓
	Pyrene	12	12	8	✓	✓	1	1	1	1	0	0	1	2	1	1	1	1	2	2	1	1	1	2	✓	✓
SEMIVOLATILES ANALYSIS/ALS/EP080/071	>C10 - C16 Fraction	12	12	8	✓	✓	1	1	1	1	0	0	1	2	1	1	1	1	2	2	1	1	1	2	-	-
	>C16 - C34 Fraction	12	12	8	✓	✓	1	1	1	1	0	0	1	2	1	1	1	1	2	2	1	1	1	2	-	-
	>C34 - C40 Fraction	12	12	8	✓	✓	1	1	1	1	0	0	1	2	1	1	1	1	2	2	1	1	1	2	-	-
	C10 - C14 Fraction	12	12	8	✓	✓	1	1	1	1	0	0	1	2	1	1	1	1	2	2	1	1	1	2	-	-
	C15 - C28 Fraction	12	12	8	✓	✓	1	1	1	1	0	0	1	2	1	1	1	1	2	2	1	1	1	2	-	-
	C29 - C36 Fraction	12	12	8	✓	✓	1	1	1	1	0	0	1	2	1	1	1	1	2	2	1	1	1	2	-	-
METALS ANALYSIS/ALS/ED093F	Calcium	12	12	10	✓	✓	0	0	0	0	0	0	1	1	1	1	1	1	2	2	1	0	1	1	-	-
	Magnesium	12	12	10	✓	✓	0	0	0	0	0	0	1	1	1	1	1	1	2	2	1	0	1	1	-	-
	Potassium	12	12	10	✓	✓	0	0	0	0	0	0	1	1	1	1	1	1	2	2	1	0	1	1	-	-
	Sodium	12	12	10	✓	✓	0	0	0	0	0	0	1	1	1	1	1	1	2	2	1	0	1	1	-	-
VOLATILES ANALYSIS/ALS/EP074G	Bromodichloromethane	9	9	8	✓	✓	0	0	0	0	0	0	1	1	1	1	1	1	1	2	1	0	1	1	✓	✓
	Bromoform	9	9	8	✓	✓	0	0	0	0	0	0	1	1	1	1	1	1	1	2	1	0	1	1	✓	✓
	Chloroform	9	9	8	✓	✓	0	0	0	0	0	0	1	1	1	1	1	1	1	2	1	0	1	1	✓	✓
	Dibromochloromethane	9	9	8	✓	✓	0	0	0	0	0	0	1	1	1	1	1	1	1	2	1	0	1	1	✓	✓
VOLATILES ANALYSIS/ALS/EP074B	2-Butanone (MEK)	9	9	8	✓	✓	0	0	0	0	0	0	1	1	1	1	1	0	1	2	1	0	1	1	✓	✓
	2-Hexanone (MBK)	9	9	8	✓	✓	0	0	0	0	0	0	1	1	1	1	1	0	1	2	1	0	1	1	✓	✓
	4-Methyl-2-pentanone (MIBK)	9	9	8	✓	✓	0	0	0	0	0	0	1	1	1	1	1	0	1	2	1	0	1	1	✓	✓
	Vinyl Acetate	9	9	8	✓	✓	0	0	0	0	0	0	1	1	1	1	1	0	1	2	1	0	1	1	✓	✓
VOLATILES ANALYSIS/ALS/EP074A	1,2,4-Trimethylbenzene	9	9	8	✓	✓	0	0	0	0	0	0	1	1	1	1	1	1	1	2	1	0	1	1	✓	✓
	1,3,5-Trimethylbenzene	9	9	8	✓	✓	0	0	0	0	0	0	1	1	1	1	1	1	1	2	1	0	1	1	✓	✓
	Isopropylbenzene	9	9	8	✓	✓	0	0	0	0	0	0	1	1	1	1	1	1	1	2	1	0	1	1	✓	✓
	n-Butylbenzene	9	9	8	✓	✓	0	0	0	0	0	0	1	1	1	1	1	1	1	2	1	0	1	1	✓	✓
	n-Propylbenzene	9	9	8	✓	✓	0	0	0	0	0	0	1	1	1	1	1	1	1	2	1	0	1	1	✓	✓
	p-Isopropyltoluene	9	9	8	✓	✓	0	0	0	0	0	0	1	1	1	1	1	1	1	2	1	0	1	1	✓	✓
	sec-Butylbenzene	9	9	8	✓	✓	0	0	0	0	0	0	1	1	1	1	1	1	1	2	1	0	1	1	✓	✓
	Styrene	9	9	8	✓	✓	0	0	0	0	0	0	1	1	1	1	1	1	1	2	1	0	1	1	✓	✓
	tert-Butylbenzene	9	9	8	✓	✓	0	0	0	0	0	0	1	1	1	1	1	1	1	2	1	0	1	1	✓	✓

Site Name	Waterfront Precinct
Project No.	42213719
Project Manager	Tim Smith
Matrix	Water
Laboratory	ALS / EnviroLab
Batch File Number	ES1229380

Analytical Method	Analytical Parameter	Number of Tests Requested	Number of Tests Reported	Number of Primary Samples	Holding Times (a)	Limits of Reporting (b)	Field Blank (1 per day)		Rinsate Blank (1 per day)		Trip Blank (1 per esky with VOCs)		Method Blank (1 per batch)		Intra-Laboratory Duplicate Sample (1 in 20)		Inter-Laboratory Duplicate Sample (1 in 20)		Lab Duplicate (1 in 10)		Matrix Spike (1 in 20)		LCS (1 per batch)		Surrogates (GC-MS organics)	
							Number Required	Number Reported	Number Required	Number Reported	Number Required	Number Reported	Number Required	Number Reported	Number Required	Number Reported	Number Required	Number Reported	Number Required	Number Reported	Number Required	Number Reported	Number Required	Number Reported	Reported	OK
VOLATILES ANALYSIS/ALS/EP074E	1,1,1,2-Tetrachloroethane	9	9	8	✓	✓	0	0	0	0	0	0	1	1	1	1	1	1	1	2	1	0	1	1	✓	✓
	1,1,1-Trichloroethane	9	9	8	✓	✓	0	0	0	0	0	0	1	1	1	1	1	1	1	2	1	0	1	1	✓	✓
	1,1,2,2-Tetrachloroethane	9	9	8	✓	✓	0	0	0	0	0	0	1	1	1	1	1	1	1	2	1	0	1	1	✓	✓
	1,1,2-Trichloroethane	9	9	8	✓	✓	0	0	0	0	0	0	1	1	1	1	1	1	1	2	1	0	1	1	✓	✓
	1,1-Dichloroethane	9	9	8	✓	✓	0	0	0	0	0	0	1	1	1	1	1	1	1	2	1	0	1	1	✓	✓
	1,1-Dichloroethene	9	9	8	✓	✓	0	0	0	0	0	0	1	1	1	1	1	1	1	2	1	1	1	1	✓	✓
	1,1-Dichloropropylene	9	9	8	✓	✓	0	0	0	0	0	0	1	1	1	1	1	1	1	2	1	0	1	1	✓	✓
	1,2,3-Trichloropropane	9	9	8	✓	✓	0	0	0	0	0	0	1	1	1	1	1	1	1	2	1	0	1	1	✓	✓
	1,2-Dibromo-3-chloropropane	9	9	8	✓	✓	0	0	0	0	0	0	1	1	1	1	1	1	1	2	1	0	1	1	✓	✓
	1,2-Dichloroethane	9	9	8	✓	✓	0	0	0	0	0	0	1	1	1	1	1	1	1	2	1	0	1	1	✓	✓
	1,3-Dichloropropane	9	9	8	✓	✓	0	0	0	0	0	0	1	1	1	1	1	1	1	2	1	0	1	1	✓	✓
	Bromomethane	9	9	8	✓	✓	0	0	0	0	0	0	1	1	1	1	1	1	1	2	1	0	1	1	✓	✓
	Carbon Tetrachloride	9	9	8	✓	✓	0	0	0	0	0	0	1	1	1	1	1	1	1	2	1	0	1	1	✓	✓
	Chloroethane	9	9	8	✓	✓	0	0	0	0	0	0	1	1	1	1	1	1	1	2	1	0	1	1	✓	✓
	Chloromethane	9	9	8	✓	✓	0	0	0	0	0	0	1	1	1	1	1	1	1	2	1	0	1	1	✓	✓
	cis-1,2-Dichloroethene	9	9	8	✓	✓	0	0	0	0	0	0	1	1	1	1	1	1	1	2	1	0	1	1	✓	✓
	cis-1,4-Dichloro-2-butene	9	9	8	✓	✓	0	0	0	0	0	0	1	1	1	1	1	1	1	2	1	0	1	1	✓	✓
	Dibromomethane	9	9	8	✓	✓	0	0	0	0	0	0	1	1	1	1	1	1	1	2	1	0	1	1	✓	✓
	Dichlorodifluoromethane	9	9	8	✓	✓	0	0	0	0	0	0	1	1	1	1	1	1	1	2	1	0	1	1	✓	✓
	Hexachlorobutadiene	9	9	8	✓	✓	0	0	0	0	0	0	1	1	1	1	1	1	1	2	1	0	1	1	✓	✓
	Iodomethane	9	9	8	✓	✓	0	0	0	0	0	0	1	1	1	1	1	1	1	2	1	0	1	1	✓	✓
	Pentachloroethane	9	9	8	✓	✓	0	0	0	0	0	0	1	1	1	1	1	1	1	2	1	0	1	1	✓	✓
	Tetrachloroethene	9	9	8	✓	✓	0	0	0	0	0	0	1	1	1	1	1	1	1	2	1	0	1	1	✓	✓
	trans-1,2-Dichloroethene	9	9	8	✓	✓	0	0	0	0	0	0	1	1	1	1	1	1	1	2	1	0	1	1	✓	✓
	trans-1,4-Dichloro-2-butene	9	9	8	✓	✓	0	0	0	0	0	0	1	1	1	1	1	1	1	2	1	0	1	1	✓	✓
	Trichloroethene	9	9	8	✓	✓	0	0	0	0	0	0	1	1	1	1	1	1	1	2	1	1	1	1	✓	✓
	Trichlorofluoromethane	9	9	8	✓	✓	0	0	0	0	0	0	1	1	1	1	1	1	1	2	1	0	1	1	✓	✓
	Vinyl chloride	9	9	8	✓	✓	0	0	0	0	0	0	1	1	1	1	1	1	1	2	1	0	1	1	✓	✓
VOLATILES ANALYSIS/ALS/EP074F	1,2,3-Trichlorobenzene	9	9	8	✓	✓	0	0	0	0	0	0	1	1	1	1	1	1	1	2	1	0	1	1	✓	✓
	1,2,4-Trichlorobenzene	9	9	8	✓	✓	0	0	0	0	0	0	1	1	1	1	1	1	1	2	1	0	1	1	✓	✓
	1,2-Dichlorobenzene	9	9	8	✓	✓	0	0	0	0	0	0	1	1	1	1	1	1	1	2	1	0	1	1	✓	✓
	1,3-Dichlorobenzene	9	9	8	✓	✓	0	0	0	0	0	0	1	1	1	1	1	1	1	2	1	0	1	1	✓	✓
	1,4-Dichlorobenzene	9	9	8	✓	✓	0	0	0	0	0	0	1	1	1	1	1	1	1	2	1	0	1	1	✓	✓
	2-Chlorotoluene	9	9	8	✓	✓	0	0	0	0	0	0	1	1	1	1	1	1	1	2	1	0	1	1	✓	✓
	4-Chlorotoluene	9	9	8	✓	✓	0	0	0	0	0	0	1	1	1	1	1	1	1	2	1	0	1	1	✓	✓
	Bromobenzene	9	9	8	✓	✓	0	0	0	0	0	0	1	1	1	1	1	1	1	2	1	0	1	1	✓	✓
	Chlorobenzene	9	9	8	✓	✓	0	0	0	0	0	0	1	1	1	1	1	1	1	2	1	1	1	1	✓	✓
VOLATILES ANALYSIS/ALS/EP074C	Carbon disulfide	9	9	8	✓	✓	0	0	0	0	0	0	1	1	1	1	1	0	1	2	1	0	1	1	-	-
VOLATILES ANALYSIS/ALS/EP074D	1,2-Dibromoethane (EDB)	9	9	8	✓	✓	0	0	0	0	0	0	1	1	1	1	1	0	1	2	1	0	1	1	✓	✓
	1,2-Dichloropropane	9	9	8	✓	✓	0	0	0	0	0	0	1	1	1	1	1	0	1	2	1	0	1	1	✓	✓
	2,2-Dichloropropane	9	9	8	✓	✓	0	0	0	0	0	0	1	1	1	1	1	0	1	2	1	0	1	1	✓	✓
	cis-1,3-Dichloropropylene	9	9	8	✓	✓	0	0	0	0	0	0	1	1	1	1	1	0	1	2	1	0	1	1	✓	✓
	trans-1,3-Dichloropropylene	9	9	8	✓	✓	0	0	0	0	0	0	1	1	1	1	1	0	1	2	1	0	1	1	✓	✓
INSTRUMENT LABORATORY (NON-METALL	Bicarbonate Alkalinity as CaCO3	12	12	10	✓	✓	0	0	0	0	0	0	1	0	1	1	1	1	2	2	1	0	1	0	-	-
	Carbonate Alkalinity as CaCO3	12	12	10	✓	✓	0	0	0	0	0	0	1	0	1	1	1	1	2	2	1	0	1	0	-	-
	Hydroxide Alkalinity as CaCO3	12	12	10	✓	✓	0	0	0	0	0	0	1	0	1	1	1	1	2	2	1	0	1	0	-	-
	Total Alkalinity as CaCO3	12	12	10	✓	✓	0	0	0	0	0	0	1	0	1	1	1	1	2	2	1	0	1	1	-	-
INSTRUMENT LABORATORY (NON-METALL	Chloride	12	12	10	✓	✓	0	0	0	0	0	0	1	1	1	1	1	1	2	2	1	1	1	2	-	-
WET CHEMISTRY AND PREPARATION/ALS/E	Total Dissolved Solids @180°C	12	12	10	✓	✓	0	0	0	0	0	0	1	2	1	1	1	1	2	4	1	0	1	2	-	-

Table 3
Analytical Results - December 2012 GME
Darwin Waterfront Corporation

Location Code	MW106	MW108	MW115	MW116	MW125	MW127	MW128	MW134	MW135	MW135	MW135
Field ID	MW106	MW108	MW115	MW116	MW125	MW127	MW128	MW134	MW135	QAQC01	QAQC02
Sampled_Date_Time	12/12/2012	11/12/2012	11/12/2012	11/12/2012	12/12/2012	11/12/2012	12/12/2012	12/12/2012	11/12/2012	11/12/2012	11/12/2012
Sample Type	Primary sample	Primary sample	Primary sample	Primary sample	Primary sample	Primary sample	Primary sample	Primary sample	Primary sample	Duplicate Sample	Triplicate Sample
Lab Report Number	ES1229380	ES1229380	ES1229380	ES1229380	ES1229380	ES1229380	ES1229380	ES1229380	ES1229380	ES1229380	

Chem_Group	ChemName	output unit	EQL	ANZECC 2000 Marine water 95%	ANZECC 2000 Irrigation LTV										
Total Petroleum Hydrocarbons	C6-C9 fraction	µg/L	10			<20	<20	<20	<20	-	<20	-	<20	<20	<20	<10
	C10-C14 fraction	µg/L	50			<50	**80**	<50	<50	-	<50	-	**80**	<50	<50	<50
	C15-C28 fraction	µg/L	100			<100	**200**	<100	<100	-	<100	-	**410**	<100	<100	<100
	C29-C36 fraction	µg/L	50			<50	<50	<50	<50	-	<50	-	<50	<50	<50	<100
	C10-C36 fraction (sum)	µg/L	50			<50	**280**	<50	<50	-	<50	-	**490**	<50	<50	<250
Total Recoverable Hydrocarbons	C6-C10 fraction (F1 minus BTEX)	µg/L	10			<20	<20	<20	<20	-	<20	-	<20	<20	<20	<10
	C6-C10 fraction	µg/L	10			<20	<20	<20	<20	-	<20	-	<20	<20	<20	<10
	>C10-C16 fraction	µg/L	50			<100	**130**	<100	<100	-	<100	-	**140**	<100	<100	<50
	>C10-C16 (less Naphthalene)	µg/L	50			-	-	-	-	-	-	-	-	-	-	<50
	>C16-C34 fraction	µg/L	100			<100	**130**	<100	<100	-	<100	-	**310**	<100	<100	<100
	>C34-C40 fraction	µg/L	100			<100	<100	<100	<100	-	<100	-	<100	<100	<100	<100
	>C10-C40 fraction (sum)	µg/L	100			<100	**260**	<100	<100	-	<100	-	**450**	<100	<100	-
Monocyclic Aromatic Hydrocarbons	Benzene	µg/L	1	**700**		<1	<1	<1	<1	-	<1	-	<1	<1	<1	<1
	Toluene	µg/L	1			<2	<2	<2	<2	-	<2	-	<2	<2	<2	<1
	Ethylbenzene	µg/L	1			<2	<2	<2	<2	-	<2	-	<2	<2	<2	<1
	m&p-Xylene	µg/L	2			<2	<2	<2	<2	-	<2	-	<2	<2	<2	<2
	o-Xylene	µg/L	1			<2	<2	<2	<2	-	<2	-	<2	<2	<2	<1
	Total Xylenes	µg/L	2			<2	<2	<2	<2	-	<2	-	<2	<2	<2	<3
	1,2,4-trimethylbenzene	µg/L	1			<5	<5	<5	<5	-	<5	-	<5	<5	<5	<1
	Isopropylbenzene	µg/L	1			<5	<5	<5	<5	-	<5	-	<5	<5	<5	<1
	Styrene	µg/L	1			<5	<5	<5	<5	-	<5	-	<5	<5	<5	<1
	sec-butylbenzene	µg/L	1			<5	<5	<5	<5	-	<5	-	<5	<5	<5	<1
	1,3,5-trimethylbenzene	µg/L	1			<5	<5	<5	<5	-	<5	-	<5	<5	<5	<1
	Total BTEX	µg/L	1			<1	<1	<1	<1	-	<1	-	<1	<1	<1	<6
Naphthalene	Naphthalene	µg/L	1	**70**		<1	**1**	<1	<1	-	<1	-	<1	<1	<1	<1
	Naphthalene (VOC)	µg/L	5			<5	<5	<5	<5	-	<5	-	<5	<5	<5	-
Polynuclear Aromatic Hydrocarbons	Acenaphthylene	µg/L	1			<1	<1	<1	<1	-	<1	-	<1	<1	<1	<1
	Acenaphthene	µg/L	1			<1	<1	<1	<1	-	<1	-	<1	<1	<1	<1
	Anthracene	µg/L	1			<1	<1	<1	<1	-	<1	-	<1	<1	<1	<1
	Fluorene	µg/L	1			<1	<1	<1	<1	-	<1	-	<1	<1	<1	<1
	Phenanthrene	µg/L	1			<1	<1	<1	<1	-	<1	-	<1	<1	<1	<1
	Fluoranthene	µg/L	1			<1	<1	<1	<1	-	<1	-	<1	<1	<1	<1
	Benz(a)anthracene	µg/L	1			<1	<1	<1	<1	-	<1	-	<1	<1	<1	<1
	Benzo(b)fluoranthene	µg/L	1			<1	<1	<1	<1	-	<1	-	<1	<1	<1	-
	Benzo(k)fluoranthene	µg/L	1			<1	<1	<1	<1	-	<1	-	<1	<1	<1	-
	Benzo(b&k)fluoranthene	µg/L	2			-	-	-	-	-	-	-	-	-	-	<2
	Benzo(a)pyrene	µg/L	0.5			<0.5	<0.5	<0.5	<0.5	-	<0.5	-	<0.5	<0.5	<0.5	<1
	Benzo(a)pyrene TEQ	µg/L	0.5			<0.5	<0.5	<0.5	<0.5	-	<0.5	-	<0.5	<0.5	<0.5	<5
	Chrysene	µg/L	1			<1	<1	<1	<1	-	<1	-	<1	<1	<1	<1
	Pyrene	µg/L	1			<1	<1	<1	<1	-	<1	-	<1	<1	<1	<1
	Benzo(g,h,i)perylene	µg/L	1			<1	<1	<1	<1	-	<1	-	<1	<1	<1	<1
	Dibenz(a,h)anthracene	µg/L	1			<1	<1	<1	<1	-	<1	-	<1	<1	<1	<1
	Indeno(1,2,3-cd)pyrene	µg/L	1			<1	<1	<1	<1	-	<1	-	<1	<1	<1	<1
	Sum of PAHs	µg/L	0.5			<0.5	**1**	<0.5	<0.5	-	<0.5	-	<0.5	<0.5	<0.5	-
Metals	Arsenic	mg/L	0.001		**0.1**	-	-	-	-	-	-	-	-	-	-	-
	Arsenic (Filtered)	mg/L	0.001		**0.1**	**0.006**	**0.002**	<0.01	**0.001**	**0.002**	**0.004**	**0.001**	**0.003**	**0.002**	<0.001	<0.001
	Cadmium	mg/L	0.0001	**0.0055**	**0.01**	-	-	-	-	-	-	-	-	-	-	-
	Cadmium (Filtered)	mg/L	0.0001	**0.0055**	**0.01**	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	**0.0074**	**0.0075**	**0.007**
	Chromium	mg/L	0.001		**0.1**	-	-	-	-	-	-	-	-	-	-	-
	Chromium (Filtered)	mg/L	0.001		**0.1**	<0.001	<0.001	<0.01	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
	Copper	mg/L	0.001	**0.0013**	**0.2**	-	-	-	-	-	-	-	-	-	-	-
	Copper (Filtered)	mg/L	0.001	**0.0013**	**0.2**	<0.001	<0.001	<0.01*	<0.001	<0.001	<0.001	<0.001	<0.001	**0.02**	**0.018**	**0.016**
	Lead	mg/L	0.001	**0.0044**	**2**	-	-	-	-	-	-	-	-	-	-	-
	Lead (Filtered)	mg/L	0.001	**0.0044**	**2**	<0.001	<0.001	<0.01*	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
	Manganese	mg/L	0.001		**0.2**	-	-	-	-	-	-	-	-	-	-	-
	Manganese (Filtered)	mg/L	0.001		**0.2**	**17.3**	**0.427**	**0.164**	**10.6**	**0.532**	**0.214**	**0.107**	**0.107**	**0.991**	**0.972**	**0.91**
	Mercury	mg/L	0.0001	**0.0004**	**0.002**	-	-	-	-	-	-	-	-	-	-	-
	Mercury (Filtered)	mg/L	0.00005	**0.0004**	**0.002**	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00005
	Nickel	mg/L	0.001	**0.07**	**0.2**	-	-	-	-	-	-	-	-	-	-	-
	Nickel (Filtered)	mg/L	0.001	**0.07**	**0.2**	**0.009**	<0.001	<0.01	**0.005**	**0.001**	**0.002**	**0.013**	**0.001**	**0.001**	**0.001**	<0.001
	Zinc	mg/L	0.005	**0.015**	**2**	-	-	-	-	-	-	-	-	-	-	-
	Zinc (Filtered)	mg/L	0.001	**0.015**	**2**	<0.005	<0.005	<0.05*	**0.039**	<0.005	<0.005	<0.005	**0.016**	**0.865**	**0.845**	**0.7**
	Vanadium	mg/L	0.01	**0.1**	**0.1**	-	-	-	-	-	-	-	-	-	-	-
	Vanadium (Filtered)	mg/L	0.001	**0.1**	**0.1**	<0.01	<0.01	<0.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.001
Halogenated Aromatic Compounds	Chlorobenzene	µg/L	1			<5	<5	<5	<5	-	<5	-	<5	<5	<5	<1
	n-butylbenzene	µg/L	1			<5	<5	<5	<5	-	<5	-	<5	<5	<5	<1
	n-propylbenzene	µg/L	1			<5	<5	<5	<5	-	<5	-	<5	<5	<5	<1
	p-isopropyltoluene	µg/L	1			<5	<5	<5	<5	-	<5	-	<5	<5	<5	<1
	tert-butylbenzene	µg/L	1			<5	<5	<5	<5	-	<5	-	<5	<5	<5	<1
	1,2,3-Trichlorobenzene	µg/L	1			<5	<5	<5	<5	-	<5	-	<5	<5	<5	<1
	1,2,4-Trichlorobenzene	µg/L	1	**80**		<5	<5	<5	<5	-	<5	-	<5	<5	<5	<1
	1,2-Dichlorobenzene	µg/L	1			<5	<5	<5	<5	-	<5	-	<5	<5	<5	<1
	1,3-Dichlorobenzene	µg/L	1			<5	<5	<5	<5	-	<5	-	<5	<5	<5	<1
	1,4-Dichlorobenzene	µg/L	1			<5	<5	<5	<5	-	<5	-	<5	<5	<5	<1
	2-Chlorotoluene	µg/L	1			<5	<5	<5	<5	-	<5	-	<5	<5	<5	<1
	4-Chlorotoluene	µg/L	1			<5	<5	<5	<5	-	<5	-	<5	<5	<5	<1
	Bromobenzene	µg/L	1			<5	<5	<5	<5	-	<5	-	<5	<5	<5	<1

Table 3
Analytical Results - December 2012 GME
Darwin Waterfront Corporation

Location Code	MW106	MW108	MW115	MW116	MW125	MW127	MW128	MW134	MW135	MW135	MW135
Field ID	MW106	MW108	MW115	MW116	MW125	MW127	MW128	MW134	MW135	QAQC01	QAQC02
Sampled_Date_Time	12/12/2012	11/12/2012	11/12/2012	11/12/2012	12/12/2012	11/12/2012	12/12/2012	12/12/2012	11/12/2012	11/12/2012	11/12/2012
Sample Type	Primary sample	Primary sample	Primary sample	Primary sample	Primary sample	Primary sample	Primary sample	Primary sample	Primary sample	Duplicate Sample	Triplicate Sample
Lab Report Number	ES1229380	ES1229380	ES1229380	ES1229380	ES1229380	ES1229380	ES1229380	ES1229380	ES1229380	ES1229380	

Chem_Group	ChemName	output unit	EQL	ANZECC 2000 Marine water 95%	ANZECC 2000 Irrigation LTV										
Halogenated Aliphatic Compounds	1,1,1-Trichloroethane	µg/L	1			<5	<5	<5	<5	-	<5	-	<5	<5	<5	<1
	1,1-Dichloroethane	µg/L	1			<5	<5	<5	<5	-	<5	-	<5	<5	<5	<1
	1,1-Dichloroethene	µg/L	1			<5	<5	<5	<5	-	<5	-	<5	<5	<5	<1
	1,2-Dichloroethane	µg/L	1			<5	<5	<5	<5	-	<5	-	<5	<5	<5	<1
	Carbon Tetrachloride	µg/L	1			<5	<5	<5	<5	-	<5	-	<5	<5	<5	<1
	Chloroethane	µg/L	10			<50	<50	<50	<50	-	<50	-	<50	<50	<50	<10
	cis-1,2-Dichloroethene	µg/L	1			<5	<5	<5	<5	-	<5	-	<5	<5	<5	<1
	Dichlorodifluoromethane	µg/L	10			<50	<50	<50	<50	-	<50	-	<50	<50	<50	<10
	Hexachlorobutadiene	µg/L	1			<5	<5	<5	<5	-	<5	-	<5	<5	<5	<1
	Tetrachloroethene	µg/L	1			<5	<5	<5	<5	-	<5	-	<5	<5	<5	<1
	trans-1,2-Dichloroethene	µg/L	1			<5	<5	<5	<5	-	<5	-	<5	<5	<5	<1
	Trichloroethene	µg/L	1			<5	<5	<5	<5	-	<5	-	<5	<5	<5	<1
	Trichlorofluoromethane	µg/L	10			<50	<50	<50	<50	-	<50	-	<50	<50	<50	<10
	Vinyl chloride	µg/L	10			<50	<50	<50	<50	-	<50	-	<50	<50	<50	<10
	1,1,1,2-Tetrachloroethane	µg/L	1			<5	<5	<5	<5	-	<5	-	<5	<5	<5	<1
	1,1,2,2-Tetrachloroethane	µg/L	1			<5	<5	<5	<5	-	<5	-	<5	<5	<5	<1
	1,1,2-Trichloroethane	µg/L	1	1900		<5	<5	<5	<5	-	<5	-	<5	<5	<5	<1
	1,1-Dichloropropene	µg/L	1			<5	<5	<5	<5	-	<5	-	<5	<5	<5	<1
	1,2,3-Trichloropropane	µg/L	1			<5	<5	<5	<5	-	<5	-	<5	<5	<5	<1
	1,2-Dibromo-3-chloropropane	µg/L	1			<5	<5	<5	<5	-	<5	-	<5	<5	<5	<1
	1,3-Dichloropropane	µg/L	1			<5	<5	<5	<5	-	<5	-	<5	<5	<5	<1
	Chloromethane	µg/L	10			<50	<50	<50	<50	-	<50	-	<50	<50	<50	<10
	cis-1,4-Dichloro-2-butene	µg/L	5			<5	<5	<5	<5	-	<5	-	<5	<5	<5	-
	Dibromomethane	µg/L	1			<5	<5	<5	<5	-	<5	-	<5	<5	<5	<1
	Iodomethane	µg/L	5			<5	<5	<5	<5	-	<5	-	<5	<5	<5	-
	Pentachloroethane	µg/L	5			<5	<5	<5	<5	-	<5	-	<5	<5	<5	-
	trans-1,4-Dichloro-2-butene	µg/L	5			<5	<5	<5	<5	-	<5	-	<5	<5	<5	-
Fumigants	Bromomethane	µg/L	10			<50	<50	<50	<50	-	<50	-	<50	<50	<50	<10
	1,2-Dibromoethane (EDB)	µg/L	1			<5	<5	<5	<5	-	<5	-	<5	<5	<5	<1
	1,2-Dichloropropane	µg/L	1			<5	<5	<5	<5	-	<5	-	<5	<5	<5	<1
	2,2-Dichloropropane	µg/L	1			<5	<5	<5	<5	-	<5	-	<5	<5	<5	<1
	cis-1,3-Dichloropropene	µg/L	1			<5	<5	<5	<5	-	<5	-	<5	<5	<5	<1
	trans-1,3-Dichloropropene	µg/L	1			<5	<5	<5	<5	-	<5	-	<5	<5	<5	<1
Trihalomethanes	Bromochloromethane	µg/L	1			-	-	-	-	-	-	-	-	-	-	<1
	Bromodichloromethane	µg/L	1			<5	<5	<5	<5	-	<5	-	<5	<5	<5	<1
	Bromoform	µg/L	1			<5	<5	<5	<5	-	<5	-	<5	<5	<5	<1
	Chloroform	µg/L	1			<5	<5	<5	<5	-	<5	-	<5	<5	<5	<1
	Dibromochloromethane	µg/L	1			<5	<5	<5	<5	-	<5	-	<5	<5	<5	<1
Total Dissolved Solids	Total Dissolved Solids	mg/L	5			**9350**	**2350**	**32,000**	**1360**	**726**	**480**	**188**	**2860**	**722**	**716**	**710**
Alkalinity	Bicarbonate as HCO3	mg/L				**167.14**	**318.42**	**844.24**	**109.8**	**496.54**	**351.36**	**165.92**	**356.24**	**359.9**	**367.22**	**402.6**
	Carbonate as CO3	mg/L				**0.6**	**0.6**	**0.6**	**0.6**	**0.6**	**0.6**	**0.6**	**0.6**	**0.6**	**0.6**	**3**
	Total Alkalinity	mg/L	5			-	-	-	-	-	-	-	-	-	-	**330**
	Bicarbonate Alkalinity as CaCO3	mg/L	1			**137**	**261**	**692**	**90**	**407**	**288**	**136**	**292**	**295**	**301**	**330**
	Carbonate Alkalinity as CaCO3	mg/L	1			<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5
	Hydroxide Alkalinity as CaCO3	mg/L	1			<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5
	Total Alkalinity as CaCO3	mg/L	1			**137**	**261**	**692**	**90**	**407**	**288**	**136**	**292**	**295**	**301**	-
Major Ions	Chloride	mg/L	1			**5360**	**1290**	**18,000**	**530**	**112**	**60**	**40**	**1490**	**85**	**95**	**81**
	Calcium (Filtered)	mg/L	0.5			**159**	**79**	**86**	**74**	**4**	**6**	**36**	**31**	**114**	**118**	**110**
	Magnesium (Filtered)	mg/L	0.5			**225**	**62**	**935**	**36**	**6**	**6**	**6**	**45**	**27**	**28**	**25**
	Potassium (Filtered)	mg/L	0.5			**116**	**34**	**407**	**16**	**22**	**16**	**7**	**56**	**22**	**22**	**20**
	Sodium (Filtered)	mg/L	0.5			**2620**	**763**	**10,000**	**352**	**297**	**169**	**37**	**1100**	**64**	**68**	**67**
	Sulphate (as SO4-)	mg/L	1			-	-	-	-	-	-	-	-	-	-	**140**
	Ionic Balance	%				-	-	-	-	-	-	-	-	-	-	**-3.9**
Oxygenated Compounds	Vinyl acetate	µg/L	50			<50	<50	<50	<50	-	<50	-	<50	<50	<50	-
	2-Butanone (MEK)	µg/L	50			<50	<50	<50	<50	-	<50	-	<50	<50	<50	-
	2-hexanone (MBK)	µg/L	50			<50	<50	<50	<50	-	<50	-	<50	<50	<50	-
	4-Methyl-2-pentanone (MIBK)	µg/L	50			<50	<50	<50	<50	-	<50	-	<50	<50	<50	-
Sulfonated Compounds	Carbon disulfide	µg/L	5			<5	<5	<5	<5	-	<5	-	<5	<5	<5	-
Chlorinated Hydrocarbons	1,2-Dichloroethene	µg/L				<10	<10	<10	<10	-	<10	-	<10	<10	<10	<2
Solvents	Cyclohexane	µg/L	1			-	-	-	-	-	-	-	-	-	-	<1

*LOR exceeds Adopted Guidelines

Location Code	MW136			
Field ID	MW136	QCA01	QCB01	QCC01
Sampled_Date_Time	11/12/2012	12/12/2012	12/12/2012	12/12/2012
Sample Type	Primary sample	Trip_B	Field_B	Rinsate
Lab Report Number	ES1229380	ES1229380	ES1229380	ES1229380

Chem_Group	ChemName	output unit	EQL	ANZECC 2000 Marine water 95%	ANZECC 2000 Irrigation LTV				
Total Petroleum Hydrocarbons	C6-C9 fraction	µg/L	10			<20	<20	<20	<20
	C10-C14 fraction	µg/L	50			<50	-	<50	<50
	C15-C28 fraction	µg/L	100			<100	-	<100	<100
	C29-C36 fraction	µg/L	50			<50	-	<50	<50
	C10-C36 fraction (sum)	µg/L	50			<50	-	<50	<50
Total Recoverable Hydrocarbons	C6-C10 fraction (F1 minus BTEX)	µg/L	10			<20	-	<20	<20
	C6-C10 fraction	µg/L	10			<20	<20	<20	<20
	>C10-C16 fraction	µg/L	50			<100	-	<100	<100
	>C10-C16 (less Naphthalene)	µg/L	50			-	-	-	-
	>C16-C34 fraction	µg/L	100			<100	-	<100	<100
	>C34-C40 fraction	µg/L	100			<100	-	<100	<100
	>C10-C40 fraction (sum)	µg/L	100			<100	-	<100	<100
Monocyclic Aromatic Hydrocarbons	Benzene	µg/L	1	**700**		<1	-	<1	<1
	Toluene	µg/L	1			<2	-	<2	<2
	Ethylbenzene	µg/L	1			<2	-	<2	<2
	m&p-Xylene	µg/L	2			<2	-	<2	<2
	o-Xylene	µg/L	1			<2	-	<2	<2
	Total Xylenes	µg/L	2			<2	-	<2	<2
	1,2,4-trimethylbenzene	µg/L	1			<5	-	-	-
	Isopropylbenzene	µg/L	1			<5	-	-	-
	Styrene	µg/L	1			<5	-	-	-
	sec-butylbenzene	µg/L	1			<5	-	-	-
	1,3,5-trimethylbenzene	µg/L	1			<5	-	-	-
	Total BTEX	µg/L	1			<1	-	<1	<1
Naphthalene	Naphthalene	µg/L	1	**70**		<1	-	<1	<1
	Naphthalene (VOC)	µg/L	5			<5	-	<5	<5
Polynuclear Aromatic Hydrocarbons	Acenaphthylene	µg/L	1			<1	-	<1	<1
	Acenaphthene	µg/L	1			<1	-	<1	<1
	Anthracene	µg/L	1			<1	-	<1	<1
	Fluorene	µg/L	1			<1	-	<1	<1
	Phenanthrene	µg/L	1			<1	-	<1	<1
	Fluoranthene	µg/L	1			<1	-	<1	<1
	Benz(a)anthracene	µg/L	1			<1	-	<1	<1
	Benzo(b)fluoranthene	µg/L	1			<1	-	<1	<1
	Benzo(k)fluoranthene	µg/L	1			<1	-	<1	<1
	Benzo(b&k)fluoranthene	µg/L	2			-	-	-	-
	Benzo(a)pyrene	µg/L	0.5			<0.5	-	<0.5	<0.5
	Benzo(a)pyrene TEQ	µg/L	0.5			<0.5	-	<0.5	<0.5
	Chrysene	µg/L	1			<1	-	<1	<1
	Pyrene	µg/L	1			<1	-	<1	<1
	Benzo(g,h,i)perylene	µg/L	1			<1	-	<1	<1
	Dibenz(a,h)anthracene	µg/L	1			<1	-	<1	<1
	Indeno(1,2,3-cd)pyrene	µg/L	1			<1	-	<1	<1
	Sum of PAHs	µg/L	0.5			<0.5	-	<0.5	<0.5
Metals	Arsenic	mg/L	0.001		**0.1**	-	-	<0.001	<0.001
	Arsenic (Filtered)	mg/L	0.001		**0.1**	**0.004**	-	-	-
	Cadmium	mg/L	0.0001	**0.0055**	**0.01**	-	-	<0.0001	<0.0001
	Cadmium (Filtered)	mg/L	0.0001	**0.0055**	**0.01**	<0.0001	-	-	-
	Chromium	mg/L	0.001		**0.1**	-	-	<0.001	<0.001
	Chromium (Filtered)	mg/L	0.001		**0.1**	<0.001	-	-	-
	Copper	mg/L	0.001	**0.0013**	**0.2**	-	-	<0.001	<0.001
	Copper (Filtered)	mg/L	0.001	**0.0013**	**0.2**	**0.001**	-	-	-
	Lead	mg/L	0.001	**0.0044**	**2**	-	-	<0.001	<0.001
	Lead (Filtered)	mg/L	0.001	**0.0044**	**2**	<0.001	-	-	-
	Manganese	mg/L	0.001		**0.2**	-	-	<0.001	<0.001
	Manganese (Filtered)	mg/L	0.001		**0.2**	**2.4**	-	-	-
	Mercury	mg/L	0.0001	**0.0004**	**0.002**	-	-	<0.0001	<0.0001
	Mercury (Filtered)	mg/L	0.00005	**0.0004**	**0.002**	<0.0001	-	-	-
	Nickel	mg/L	0.001	**0.07**	**0.2**	-	-	<0.001	<0.001
	Nickel (Filtered)	mg/L	0.001	**0.07**	**0.2**	**0.001**	-	-	-
	Zinc	mg/L	0.005	**0.015**	**2**	-	-	<0.005	<0.005
	Zinc (Filtered)	mg/L	0.001	**0.015**	**2**	**0.02**	-	-	-
	Vanadium	mg/L	0.01	**0.1**	**0.1**	-	-	<0.01	<0.01
	Vanadium (Filtered)	mg/L	0.001	**0.1**	**0.1**	<0.01	-	-	-
Halogenated Aromatic Compounds	Chlorobenzene	µg/L	1			<5	-	-	-
	n-butylbenzene	µg/L	1			<5	-	-	-
	n-propylbenzene	µg/L	1			<5	-	-	-
	p-isopropyltoluene	µg/L	1			<5	-	-	-
	tert-butylbenzene	µg/L	1			<5	-	-	-
	1,2,3-Trichlorobenzene	µg/L	1			<5	-	-	-
	1,2,4-Trichlorobenzene	µg/L	1	**80**		<5	-	-	-
	1,2-Dichlorobenzene	µg/L	1			<5	-	-	-
	1,3-Dichlorobenzene	µg/L	1			<5	-	-	-
	1,4-Dichlorobenzene	µg/L	1			<5	-	-	-
	2-Chlorotoluene	µg/L	1			<5	-	-	-
	4-Chlorotoluene	µg/L	1			<5	-	-	-
	Bromobenzene	µg/L	1			<5	-	-	-

Location Code	MW136			
Field ID	MW136	QCA01	QCB01	QCC01
Sampled_Date_Time	11/12/2012	12/12/2012	12/12/2012	12/12/2012
Sample Type	Primary sample	Trip_B	Field_B	Rinsate
Lab Report Number	ES1229380	ES1229380	ES1229380	ES1229380

Chem_Group	ChemName	output unit	EQL	ANZECC 2000 Marine water 95%	ANZECC 2000 Irrigation LTV				
Halogenated Aliphatic Compounds	1,1,1-Trichloroethane	ug/L	1			<5	-	-	-
	1,1-Dichloroethane	ug/L	1			<5	-	-	-
	1,1-Dichloroethene	ug/L	1			<5	-	-	-
	1,2-Dichloroethane	ug/L	1			<5	-	-	-
	Carbon Tetrachloride	ug/L	1			<5	-	-	-
	Chloroethane	ug/L	10			<50	-	-	-
	cis-1,2-Dichloroethene	ug/L	1			<5	-	-	-
	Dichlorodifluoromethane	ug/L	10			<50	-	-	-
	Hexachlorobutadiene	ug/L	1			<5	-	-	-
	Tetrachloroethene	ug/L	1			<5	-	-	-
	trans-1,2-Dichloroethene	ug/L	1			<5	-	-	-
	Trichloroethene	ug/L	1			<5	-	-	-
	Trichlorofluoromethane	ug/L	10			<50	-	-	-
	Vinyl chloride	ug/L	10			<50	-	-	-
	1,1,1,2-Tetrachloroethane	ug/L	1			<5	-	-	-
	1,1,2,2-Tetrachloroethane	ug/L	1			<5	-	-	-
	1,1,2-Trichloroethane	ug/L	1	**1900**		<5	-	-	-
	1,1-Dichloropropene	ug/L	1			<5	-	-	-
	1,2,3-Trichloropropane	ug/L	1			<5	-	-	-
	1,2-Dibromo-3-chloropropane	ug/L	1			<5	-	-	-
	1,3-Dichloropropane	ug/L	1			<5	-	-	-
	Chloromethane	ug/L	10			<50	-	-	-
	cis-1,4-Dichloro-2-butene	ug/L	5			<5	-	-	-
	Dibromomethane	ug/L	1			<5	-	-	-
	Iodomethane	ug/L	5			<5	-	-	-
	Pentachloroethane	ug/L	5			<5	-	-	-
	trans-1,4-Dichloro-2-butene	ug/L	5			<5	-	-	-
Fumigants	Bromomethane	ug/L	10			<50	-	-	-
	1,2-Dibromoethane (EDB)	ug/L	1			<5	-	-	-
	1,2-Dichloropropane	ug/L	1			<5	-	-	-
	2,2-Dichloropropane	ug/L	1			<5	-	-	-
	cis-1,3-Dichloropropene	ug/L	1			<5	-	-	-
	trans-1,3-Dichloropropene	ug/L	1			<5	-	-	-
Trihalomethanes	Bromochloromethane	ug/L	1			-	-	-	-
	Bromodichloromethane	ug/L	1			<5	-	-	-
	Bromoform	ug/L	1			<5	-	-	-
	Chloroform	ug/L	1			<5	-	-	-
	Dibromochloromethane	ug/L	1			<5	-	-	-
Total Dissolved Solids	Total Dissolved Solids	mg/L	5			**1840**	-	-	-
Alkalinity	Bicarbonate as HCO3	mg/L				**437.98**	-	-	-
	Carbonate as CO3	mg/L				**0.6**	-	-	-
	Total Alkalinity	mg/L	5			-	-	-	-
	Bicarbonate Alkalinity as CaCO3	mg/L	1			**359**	-	-	-
	Carbonate Alkalinity as CaCO3	mg/L	1			<1	-	-	-
	Hydroxide Alkalinity as CaCO3	mg/L	1			<1	-	-	-
	Total Alkalinity as CaCO3	mg/L	1			**359**	-	-	-
Major Ions	Chloride	mg/L	1			**831**	-	-	-
	Calcium (Filtered)	mg/L	0.5			**44**	-	-	-
	Magnesium (Filtered)	mg/L	0.5			**36**	-	-	-
	Potassium (Filtered)	mg/L	0.5			**27**	-	-	-
	Sodium (Filtered)	mg/L	0.5			**632**	-	-	-
	Sulphate (as SO4-)	mg/L	1			-	-	-	-
	Ionic Balance	%				-	-	-	-
Oxygenated Compounds	Vinyl acetate	ug/L	50			<50	-	-	-
	2-Butanone (MEK)	ug/L	50			<50	-	-	-
	2-hexanone (MBK)	ug/L	50			<50	-	-	-
	4-Methyl-2-pentanone (MIBK)	ug/L	50			<50	-	-	-
Sulfonated Compounds	Carbon disulfide	ug/L	5			<5	-	-	-
Chlorinated Hydrocarbons	1,2-Dichloroethene	ug/L				<10	-	-	-
Solvents	Cyclohexane	ug/L	1			-	-	-	-

*LOR exceeds Adopted Guidelines