



DATA VALIDATION SUMMARY

Note: Data validation assesses each analyte in terms of all the data validation variables and only the exceedances and outliers are reported in this form.

Project Name:	June Quarterly 2009	Project/Task Number:	43218011
Primary Laboratory:	ALS	Batch/Ref. Number(s):	ES0908032
Secondary Laboratory:	LabMark		E043084
Date Sampled:	1/06/2009	Sample Type:	Water

Sample Handling, Receipt and Holding Times	Yes/No	Comments	
COC completed adequately	No	MWF15I and MWF15D were mislabelled in the COC as MW15I and MW15D. Ammended by ALS upon URS' request	
All requested analysis conducted	Yes		
Samples received intact and chilled	Yes	Random Sample Temp 5.8°C - ice present	
Samples analysed within appropriate holding times per analytical methods.	Yes		
Samples volumes sufficient for QC analysis?	Yes	3 extra volumes were provided for laboratory duplicate (LD) and matrix spike (MS).	
Are there any non-NATA accredited methods used?	No		
Have chromatograms for positive TPH been supplied?		NA	
Laboratory reports signed by an authorised person	Yes		
# of Primary Samples	# of QAQC Samples	# of Duplicate Samples	# of Triplicate Samples
47	1	2	2

Method Blank (MB), Rinsate Blank (RB), Trip Blank (TB), Field Blank (FB)

Type	Comments
MB, TB (TB_01/06/09)	All blanks have acceptable results less than the limits of reporting. MB has not reached the frequency of quality control sample (1:10) for the primary laboratory (ALS)

Laboratory Control Samples (LCS)

Analyte	Comments
VCHCs	Recovery for 1,1-Dichloroethane (80.3%) is less than the lower control limit (81.7%) Recovery for 1,1-Dichloropropylene (79.1%) is less than the lower control limit (81.8%)

Matrix Spike (MS)

Analyte	Comments
	Matrix spikes recoveries are within laboratory control limits. No MS was run on carbon disulfide and thialomethanes. MS has not reached the frequency of quality control sample (1:10) for primary laboratory (ALS)

Trip Spike /Control Trip Spike

Analyte	Comments
NA	

Duplicates

Laboratory Duplicates

Analyte	Comments
	Laboratory duplicates RPDs within acceptable LOR based control limits or results less than LOR. All LD analysis were run on URS samples.

**DATA VALIDATION SUMMARY**

Note: Data validation assesses each analyte in terms of all the data validation variables and only the exceedances and outliers are reported in this form.

Project Name:	June Quarterly 2009	Project/Task Number:	43218011
Primary Laboratory:	ALS	Batch/Ref. Number(s):	ES0908032
Secondary Laboratory:	LabMark		E043084
Date Sampled:	1/06/2009	Sample Type:	Water

Intra-Laboratory Duplicates	Comments
Analyte	
BP 42_02.00_L & QC101 BP43_00.50_H / QC102	Intra-Laboratory duplicates RPDs within acceptable LOR based control limits or results less than LOR.

Inter-Laboratory Duplicates	Comments
Analyte	
BP 42_02.00_L & QC201 BP43_00.50_H / QC202	Intra-Laboratory duplicates RPDs within acceptable LOR based control limits or results less than LOR.

Surrogate Monitoring Compound Analyses	Comments
Analyte	
VOCs / 1,2-Dichloroethane-D4	Recovery of 1,2-Dichloroethane-D4 in samples BP65_00.50_L (123%), SW046 (124%), SW005 (126%), SW053 (122%), BP42_00.50_H (124%), SW048_H (123%), QC101 (122%), Trip Blank (123%), BP65_02.00_L (122%), SW049 (122%), SW030 (121%), SW052 (125%), BP42_00.10_H (124%), BP43_00.50_H (124%), SW029_H (124%), MWF15S (124%), MWF15D (121%), and QC102 (124%) greater than the upper control limit of 120%.
VOCs / 4-Bromofluorobenzene	Recovery of 4-Bromofluorobenzene in sample BP42_02.00_H (83.6%) and MWF15D (83.9%) less than the lower control limit (86%).

Overall Comments

Various samples required dilution due to the presence of high level contaminants. LOR values have been adjusted accordingly.

Various results for vinyl chloride have been reported from EP074-WF scan method due to high level of contamination.

Elevated surrogate recovery due to sample matrix interference, confirmed by re-analysis.

Results have been confirmed for QC101, QC103, BP42_02.00_H and BP43_00.50_L by re-analysis.

The LCS outliers below the lower control limit could potentially cause under reporting of results in this batch. However, LCS analysis were conducted 3 times on samples from this batch and have had acceptable results, 2 out of 3 times for these samples and 3 out of 3 times for the remaining samples. Therefore, these outliers are considered to significantly affect the overall data quality of this batch.

The surrogate outliers could potentially lead to over reporting of results for these samples. However, these outliers may have been due the high concentrations of contaminants present in the sample. Given that the other surrogates and other laboratory QC analysis conducted have acceptable results, it is unlikely that these surrogate outliers have significantly effects in the overall quality of this batch.

Data for this batch is considered suitable for environmental interpretative use.

Note: When concentrations are less than LOR for both the primary and secondary results, no RPDs are calculated.

Performed By:	C. Olmos	Reviewed By:	B. Gomez
Date:	01-Jul-09	Date:	02-Jul-09

DATA VALIDATION
RPD Calculations

Location
Sample ID
Date Sampled
Sample Type

BP 42_02.00_L_1/6/9	BP 42_02.00_L_1/6/9	BP 42_02.00_L_1/6/9
BP 42_02.00_L_1/6/9	QC101_1/6/9	QC201_01/06/2009
6/01/2009	6/01/2009	6/01/2009
Primary	Secondary	Tertiary

Analyte	LOR1	LOR2	LOR3	Units				Primary vs. Duplicate	Primary vs. Triplicate	Category1	Category2	Category3
1,1,1,2-Tetrachloroethane	1	1	5	µg/L	< 1	< 1	< 5	-	-	-	-	-
1,1,1-Trichloroethane	1	1	5	µg/L	< 1	< 1	< 5	-	-	-	-	-
1,1,2,2-Tetrachloroethane	1	1	5	µg/L	< 1	< 1	< 5	-	-	-	-	-
1,1,2-Trichloroethane	1	1	5	µg/L	< 1	< 1	< 5	-	-	-	-	-
1,1-Dichloroethane	1	1	5	µg/L	70	77	82	9.52%	15.79%	Pass	Pass	Pass
1,1-Dichloroethene	1	1	5	µg/L	< 1	< 1	< 5	-	-	-	-	-
1,1-Dichloropropylene	1	1	-	µg/L	< 1	< 1	-	-	-	-	-	-
1,2,3-Trichloropropane	1	1	-	µg/L	< 1	< 1	-	-	-	-	-	-
1,2-Dibromo-3-chloropropane	1	1	-	µg/L	< 1	< 1	-	-	-	-	-	-
1,2-Dichloroethane	1	1	5	µg/L	220	203	177	8.04%	21.66%	Pass	Pass	Pass
1,3-Dichloropropane	1	1	-	µg/L	< 1	< 1	-	-	-	-	-	-
Bromomethane	10	10	-	µg/L	< 10	< 10	-	-	-	-	-	-
Carbon Tetrachloride	1	1	5	µg/L	< 1	< 1	< 5	-	-	-	-	-
Chloroethane	10	10	50	µg/L	< 10	< 10	< 50	-	-	-	-	-
Chloromethane	10	10	-	µg/L	< 10	< 10	-	-	-	-	-	-
cis-1,2-Dichloroethene	1	1	5	µg/L	19	16	23	17.14%	19.05%	Pass	Pass	Pass-2
cis-1,4-Dichloro-2-butene	1	1	-	µg/L	< 1	< 1	-	-	-	-	-	-
Dibromomethane	1	1	-	µg/L	< 1	< 1	-	-	-	-	-	-
Dichlorodifluoromethane	10	10	-	µg/L	< 10	< 10	-	-	-	-	-	-
Dichloromethane	-	-	20	µg/L	-	-	< 20	-	-	-	-	-
Hexachlorobutadiene	1	1	-	µg/L	< 1	< 1	-	-	-	-	-	-
Iodomethane	1	1	-	µg/L	< 1	< 1	-	-	-	-	-	-
Methylene chloride	5	5	-	µg/L	< 5	< 5	-	-	-	-	-	-
Pentachloroethane	1	1	-	µg/L	< 1	< 1	-	-	-	-	-	-
Tetrachloroethene	1	1	5	µg/L	< 1	< 1	< 5	-	-	-	-	-
trans-1,2-Dichloroethene	1	1	5	µg/L	5	4	6	22.22%	18.18%	Pass	Pass	Pass-1
trans-1,4-Dichloro-2-butene	1	1	-	µg/L	< 1	< 1	-	-	-	-	-	-
Trichloroethene	1	1	5	µg/L	< 1	< 1	< 5	-	-	-	-	-
Trichlorofluoromethane	10	10	-	µg/L	< 10	< 10	-	-	-	-	-	-
Vinyl chloride	10	10	50	µg/L	460	480	360	4.26%	24.39%	Pass	Pass	Pass
Carbon disulfide	1	1	5	µg/L	6	5	< 5	18.18%	18.18%	Pass	Pass	Pass
Bromodichloromethane	1	1	-	µg/L	< 1	< 1	-	-	-	-	-	-
Bromoform	1	1	-	µg/L	< 1	< 1	-	-	-	-	-	-
Chloroform	1	1	5	µg/L	16	12	17	28.57%	6.06%	Pass	Pass	Pass-2
Dibromochloromethane	1	1	-	µg/L	< 1	< 1	-	-	-	-	-	-

Pass RPD <= 30%
 Pass-1 RPD > 30%, Analysis result < 10 times LOR
 Pass-2 RPD <= 50%, Analysis result > 10 times LOR and < 20 times LOR

DATA VALIDATION
RPD Calculations

Location
Sample ID
Date Sampled
Sample Type

BP43_00.50_H_1/6/9	BP43_00.50_H_1/6/9	BP43_00.50_H_1/6/9
BP43_00.50_H_1/6/9	QC102_1/6/9	QC202_01/06/2009
6/01/2009	6/01/2009	6/01/2009
Primary	Secondary	Tertiary

Analyte	LOR1	LOR2	LOR3	Units				Primary vs. Duplicate	Primary vs. Triplicate	Category1	Category2	Category3
1,1,1,2-Tetrachloroethane	1	1	5	µg/L	< 1	< 1	< 5	-	-	-	-	-
1,1,1-Trichloroethane	1	1	5	µg/L	< 1	< 1	< 5	-	-	-	-	-
1,1,2,2-Tetrachloroethane	1	1	5	µg/L	< 1	< 1	< 5	-	-	-	-	-
1,1,2-Trichloroethane	1	1	5	µg/L	< 1	< 1	< 5	-	-	-	-	-
1,1-Dichloroethane	1	1	5	µg/L	7	6	8	15.39%	13.33%	Pass	Pass	Pass
1,1-Dichloroethene	1	1	5	µg/L	< 1	< 1	< 5	-	-	-	-	-
1,1-Dichloropropylene	1	1	-	µg/L	< 1	< 1	-	-	-	-	-	-
1,2,3-Trichloropropane	1	1	-	µg/L	< 1	< 1	-	-	-	-	-	-
1,2-Dibromo-3-chloropropane	1	1	-	µg/L	< 1	< 1	-	-	-	-	-	-
1,2-Dichloroethane	1	1	5	µg/L	1	< 1	< 5	0.00%	133.33%	Pass	Pass-1	-
1,3-Dichloropropane	1	1	-	µg/L	< 1	< 1	-	-	-	-	-	-
Bromomethane	10	10	-	µg/L	< 10	< 10	-	-	-	-	-	-
Carbon Tetrachloride	1	1	5	µg/L	< 1	< 1	< 5	-	-	-	-	-
Chloroethane	10	10	50	µg/L	< 10	< 10	< 50	-	-	-	-	-
Chloromethane	10	10	50	µg/L	< 10	< 10	< 50	-	-	-	-	-
cis-1,2-Dichloroethene	1	1	5	µg/L	< 1	< 1	< 5	-	-	-	-	-
cis-1,4-Dichloro-2-butene	1	1	-	µg/L	< 1	< 1	-	-	-	-	-	-
Dibromomethane	1	1	-	µg/L	< 1	< 1	-	-	-	-	-	-
Dichlorodifluoromethane	10	10	-	µg/L	< 10	< 10	-	-	-	-	-	-
Dichloromethane	-	-	20	µg/L	-	-	< 20	-	-	-	-	-
Hexachlorobutadiene	1	1	-	µg/L	< 1	< 1	-	-	-	-	-	-
Iodomethane	1	1	-	µg/L	< 1	< 1	-	-	-	-	-	-
Methylene chloride	5	5	-	µg/L	< 5	< 5	-	-	-	-	-	-
Pentachloroethane	1	1	-	µg/L	< 1	< 1	-	-	-	-	-	-
Tetrachloroethene	1	1	5	µg/L	< 1	< 1	< 5	-	-	-	-	-
trans-1,2-Dichloroethene	1	1	5	µg/L	< 1	< 1	< 5	-	-	-	-	-
trans-1,4-Dichloro-2-butene	1	1	-	µg/L	< 1	< 1	-	-	-	-	-	-
Trichloroethene	1	1	5	µg/L	< 1	< 1	< 5	-	-	-	-	-
Trichlorofluoromethane	10	10	-	µg/L	< 10	< 10	-	-	-	-	-	-
Vinyl chloride	10	10	50	µg/L	< 10	< 10	< 50	-	-	-	-	-
Carbon disulfide	1	1	5	µg/L	< 1	< 1	< 5	-	-	-	-	-
Bromodichloromethane	1	1	-	µg/L	< 1	< 1	-	-	-	-	-	-
Bromoform	1	1	-	µg/L	< 1	< 1	-	-	-	-	-	-
Chloroform	1	1	5	µg/L	< 1	< 1	< 5	-	-	-	-	-
Dibromochloromethane	1	1	-	µg/L	< 1	< 1	-	-	-	-	-	-

Pass RPD <= 30%
 Pass-1 RPD > 30%, Analysis result < 10 times LOR
 Pass-2 RPD <= 50%, Analysis result > 10 times LOR and < 20 times LOR



DATA VALIDATION SUMMARY

Note: Data validation assesses each analyte in terms of all the data validation variables and only the exceedances and outliers are reported in this form.

Project Name:	June Quarterly 2009	Project/Task Number:	43218011
Primary Laboratory:	ALS	Batch/Ref. Number(s):	ES0908260
Secondary Laboratory:	LabMark		E043131
Date Sampled:	1/06/2009 - 2/06/2009	Sample Type:	Water

Sample Handling, Receipt and Holding Times	Yes/No	Comments
COC completed adequately	Yes	Sample BP115_05.25_1/6/2009 was received extra and placed on hold as per URS' request
All requested analysis conducted	Yes	
Samples received intact and chilled	Yes	Random Sample Temp 3.6°C - ice present
Samples analysed within appropriate holding times per analytical methods.	Yes	
Samples volumes sufficient for QC analysis?	Yes	1 extra volume was provided for laboratory duplicate (LD) and matrix spike (MS).
Are there any non-NATA accredited methods used?	No	
Have chromatograms for positive TPH been supplied?		NA
Laboratory reports signed by an authorised person	Yes	

# of Primary Samples	# of QAQC Samples	# of Duplicate Samples	# of Triplicate Samples
15	1	2	1

Method Blank (MB), Rinsate Blank (RB), Trip Blank (TB), Field Blank (FB)

Type	Comments
MB, TB (TB_02/06/09)	Blanks have acceptable results less than the limits of reporting.

Laboratory Control Samples (LCS)

Analyte	Comments
VCHCs	Recovery for carbon disulfide (78.2%) is less than the lower control limit (78.6%) Recovery for iodomethane (66.8%) is less than the lower control limit (71.4%)
	The rest of the laboratory control samples have acceptable results within laboratory control limits.

Matrix Spike (MS)

Analyte	Comments
	Matrix spikes recoveries are within laboratory control limits. No MS was run on carbon disulfide and thialomethanes.
	No MS was performed by secondary laboratory (Labmark)

Trip Spike /Control Trip Spike

Analyte	Comments
NA	

Duplicates

Laboratory Duplicates

Analyte	Comments
	Laboratory duplicates RPDs within LOR based control limits or results less than LOR.
	No MS was performed by secondary laboratory (Labmark)

**DATA VALIDATION SUMMARY**

Note: Data validation assesses each analyte in terms of all the data validation variables and only the exceedances and outliers are reported in this form.

Project Name:	June Quarterly 2009	Project/Task Number:	43218011
Primary Laboratory:	ALS	Batch/Ref. Number(s):	ES0908260
Secondary Laboratory:	LabMark		E043131
Date Sampled:	1/06/2009 - 2/06/2009	Sample Type:	Water

Intra-Laboratory Duplicates	Comments
Analyte	
BP72_03.00 & QC103 BP60_04.00 & QC104	Intra-Laboratory duplicates RPDs within LOR based control limits or results less than LOR.

Inter-Laboratory Duplicates	Comments
Analyte	
BP72_03.00 & QC203	Inter-Laboratory duplicates RPDs within LOR based control limits or results less than LOR.

Surrogate Monitoring Compound Analyses	Comments
Analyte	
VOCs / 1,2-Dichloroethane-D4	Recovery of 1,2-Dichloroethane-D4 in samples WG154S (122%), BP72_03.00 (122%), BP115_05.25 (122%), WG23S (124%), BP41_04.00 (122%), BP41_08.00 (122%), WG154D (128%), BP58_06.00 (121%), BP57_03.00 (123%), BP60_04.00 (124%), BP61_04.00 (123%), BP41_06.00 (121%), and Trip Blank (123%) greater than the upper control limit of 120%.
VOCs / 4-Bromofluorobenzene	Recovery of 4-Bromofluorobenzene in sample BP60_04.00 (83.5%) and Trip Blank (84.3%) were less than the lower control limit (86%).

Overall Comments

Most results confirmed by re-analysis.
Particular samples required dilution due to the presence of high levels of target analyte(s). LOR values have been adjusted accordingly.
Various results for vinyl chloride have been reported from EP074-WF scan method due to high level of contamination.
Elevated surrogate recovery due to sample matrix interference, confirmed by re-analysis.

The laboratory control sample (LCS) recovered of carbon disulfide (78.2%) and Iodomethane (66.8%) are below the control limits. This may result in the under reporting of VOC analytes in this batch. However, majority of the LCS analysis conducted have acceptable results, therefore, these exceedances are unlikely to significantly affect the overall data quality of this batch.

The surrogate outliers could potentially lead to over reporting of results for these samples. However, these outliers may have been due the high concentrations of contaminants present in the sample. Given that the other surrogates and other laboratory QC analysis conducted have acceptable results, it is unlikely that these surrogate outliers have significantly effects in the overall quality of this batch.

Data for this batch is considered suitable for environmental interpretation use.

Note: When concentrations are less than LOR for both the primary and secondary results, no RPDs are calculated.

Performed By:	C. Olmos	Reviewed By:	B. Gomez
Date:	01-Jul-09	Date:	02-Jul-09

DATA VALIDATION
RPD Calculations

Location
Sample ID
Date Sampled
Sample Type

BP72_03.00_02/06/09	BP72_03.00_02/06/09	BP72_03.00_02/06/09
BP72_03.00_02/06/09	QC103_02/06/09	QC203_02/06/2009
6/02/2009	6/02/2009	6/02/2009
Primary	Secondary	Tertiary

Analyte	LOR1	LOR2	LOR3	Units				Primary vs. Duplicate	Primary vs. Triplicate	Category1	Category2	Category3
1,1,1,2-Tetrachloroethane	1	1	5	µg/L	< 1	< 1	< 5	-	-	-	-	-
1,1,1-Trichloroethane	1	1	5	µg/L	< 1	< 1	< 5	-	-	-	-	-
1,1,2,2-Tetrachloroethane	1	1	5	µg/L	< 1	< 1	< 5	-	-	-	-	-
1,1,2-Trichloroethane	1	1	5	µg/L	< 1	< 1	< 5	-	-	-	-	-
1,1-Dichloroethane	1	1	5	µg/L	< 1	< 1	< 5	-	-	-	-	-
1,1-Dichloroethene	1	1	5	µg/L	< 1	< 1	< 5	-	-	-	-	-
1,1-Dichloropropylene	1	1	-	µg/L	< 1	< 1	-	-	-	-	-	-
1,2,3-Trichloropropane	1	1	-	µg/L	< 1	< 1	-	-	-	-	-	-
1,2-Dibromo-3-chloropropane	1	1	-	µg/L	< 1	< 1	-	-	-	-	-	-
1,2-Dichloroethane	1	1	5	µg/L	12	10	13	18.18%	8.00%	Pass	Pass	Pass
1,3-Dichloropropane	1	1	-	µg/L	< 1	< 1	-	-	-	-	-	-
Bromomethane	10	10	-	µg/L	< 10	< 10	-	-	-	-	-	-
Carbon Tetrachloride	1	1	5	µg/L	< 1	< 1	< 5	-	-	-	-	-
Chloroethane	10	10	50	µg/L	< 10	< 10	< 50	-	-	-	-	-
Chloromethane	10	10	-	µg/L	< 10	< 10	-	-	-	-	-	-
cis-1,2-Dichloroethene	1	1	5	µg/L	< 1	< 1	< 5	-	-	-	-	-
cis-1,4-Dichloro-2-butene	1	1	-	µg/L	< 1	< 1	-	-	-	-	-	-
Dibromomethane	1	1	-	µg/L	< 1	< 1	-	-	-	-	-	-
Dichlorodifluoromethane	10	10	-	µg/L	< 10	< 10	-	-	-	-	-	-
Dichloromethane	-	-	20	µg/L	-	-	< 20	-	-	-	-	-
Hexachlorobutadiene	1	1	-	µg/L	< 1	< 1	-	-	-	-	-	-
Iodomethane	1	1	-	µg/L	< 1	< 1	-	-	-	-	-	-
Methylene chloride	5	5	-	µg/L	< 5	< 5	-	-	-	-	-	-
Pentachloroethane	1	1	-	µg/L	< 1	< 1	-	-	-	-	-	-
Tetrachloroethene	1	1	5	µg/L	< 1	< 1	< 5	-	-	-	-	-
trans-1,2-Dichloroethene	1	1	5	µg/L	< 1	< 1	< 5	-	-	-	-	-
trans-1,4-Dichloro-2-butene	1	1	-	µg/L	< 1	< 1	-	-	-	-	-	-
Trichloroethene	1	1	5	µg/L	< 1	< 1	< 5	-	-	-	-	-
Trichlorofluoromethane	10	10	-	µg/L	< 10	< 10	-	-	-	-	-	-
Vinyl chloride	1	10	50	µg/L	< 1	< 10	< 50	-	-	-	-	-
Carbon disulfide	1	1	5	µg/L	< 1	< 1	< 5	-	-	-	-	-
Bromodichloromethane	1	1	-	µg/L	< 1	< 1	-	-	-	-	-	-
Bromoform	1	1	-	µg/L	< 1	< 1	-	-	-	-	-	-
Chloroform	1	1	5	µg/L	< 1	< 1	< 5	-	-	-	-	-
Dibromochloromethane	1	1	-	µg/L	< 1	< 1	-	-	-	-	-	-

Pass RPD <= 30%
 Pass-1 RPD > 30%, Analysis result < 10 times LOR
 Pass-2 RPD <= 50%, Analysis result > 10 times LOR and < 20 times LOR

DATA VALIDATION
RPD Calculations

Location
Sample ID
Date Sampled
Sample Type

BP60_04.00_02/06/09	BP60_04.00_02/06/09
BP60_04.00_02/06/09	QC104_02/06/09
6/02/2009	6/02/2009
Primary	Secondary

Analyte	LOR1	LOR2	LOR3	Units			Primary vs. Duplicate	Units Flag	Category1
1,1,1,2-Tetrachloroethane	1	1	-	µg/L	< 1	< 1	-		-
1,1,1-Trichloroethane	1	1	-	µg/L	< 1	< 1	-		-
1,1,2,2-Tetrachloroethane	1	1	-	µg/L	< 1	< 1	-		-
1,1,2-Trichloroethane	1	1	-	µg/L	< 1	< 1	-		-
1,1-Dichloroethane	1	1	-	µg/L	< 1	< 1	-		-
1,1-Dichloroethene	1	1	-	µg/L	< 1	< 1	-		-
1,1-Dichloropropylene	1	1	-	µg/L	< 1	< 1	-		-
1,2,3-Trichloropropane	1	1	-	µg/L	< 1	< 1	-		-
1,2-Dibromo-3-chloropropane	1	1	-	µg/L	< 1	< 1	-		-
1,2-Dichloroethane	1	1	-	µg/L	< 1	< 1	-		-
1,3-Dichloropropane	1	1	-	µg/L	< 1	< 1	-		-
Bromomethane	10	10	-	µg/L	< 10	< 10	-		-
Carbon Tetrachloride	1	1	-	µg/L	< 1	< 1	-		-
Chloroethane	10	10	-	µg/L	< 10	< 10	-		-
Chloromethane	10	10	-	µg/L	< 10	< 10	-		-
cis-1,2-Dichloroethene	1	1	-	µg/L	< 1	< 1	-		-
cis-1,4-Dichloro-2-butene	1	1	-	µg/L	< 1	< 1	-		-
Dibromomethane	1	1	-	µg/L	< 1	< 1	-		-
Dichlorodifluoromethane	10	10	-	µg/L	< 10	< 10	-		-
Hexachlorobutadiene	1	1	-	µg/L	< 1	< 1	-		-
Iodomethane	1	1	-	µg/L	< 1	< 1	-		-
Methylene chloride	5	5	-	µg/L	< 5	< 5	-		-
Pentachloroethane	1	1	-	µg/L	< 1	< 1	-		-
Tetrachloroethene	1	1	-	µg/L	10	8	22.22%		Pass
trans-1,2-Dichloroethene	1	1	-	µg/L	< 1	< 1	-		-
trans-1,4-Dichloro-2-butene	1	1	-	µg/L	< 1	< 1	-		-
Trichloroethene	1	1	-	µg/L	18	14	25.00%		Pass
Trichlorofluoromethane	10	10	-	µg/L	< 10	< 10	-		-
Vinyl chloride	1	10	-	µg/L	< 1	< 10	-		-
Carbon disulfide	1	1	-	µg/L	< 1	< 1	-		-
Bromodichloromethane	1	1	-	µg/L	< 1	< 1	-		-
Bromoform	1	1	-	µg/L	< 1	< 1	-		-
Chloroform	1	1	-	µg/L	< 1	< 1	-		-
Dibromochloromethane	1	1	-	µg/L	< 1	< 1	-		-

Pass RPD <= 30%
 Pass-1 RPD > 30%, Analysis result < 10 times LOR
 Pass-2 RPD <= 50%, Analysis result > 10 times LOR and < 20 times LOR



DATA VALIDATION SUMMARY

Note: Data validation assesses each analyte in terms of all the data validation variables and only the exceedances and outliers are reported in this form.

Project Name:	June Quarterly 2009	Project/Task Number:	43218011
Primary Laboratory:	ALS	Batch/Ref. Number(s):	ES0908262
Secondary Laboratory:	LabMark		E043132
Date Sampled:	3/06/2009 - 4/06/2009	Sample Type:	Water

Sample Handling, Receipt and Holding Times	Yes/No	Comments
COC completed adequately	No	Sample BP54_06.00 received mislabelled as BP56_06.00. Correctly relabelled and analysed upon URS' request.
All requested analysis conducted	Yes	
Samples received intact and chilled	Yes	Random Sample Temp 2.2 ^o C - ice present
Samples analysed within appropriate holding times per analytical methods.	Yes	
Samples volumes sufficient for QC analysis?	Yes	2 extra volume was provided for laboratory duplicate (LD) and matrix spike (MS).
Are there any non-NATA accredited methods used?	No	
Have chromatograms for positive TPH been supplied?		NA
Laboratory reports signed by an authorised person	Yes	

# of Primary Samples	# of QAQC Samples	# of Duplicate Samples	# of Triplicate Samples
15	1	4	1

Method Blank (MB), Rinsate Blank (RB), Trip Blank (TB), Field Blank (FB)

Type	Comments
MB, TB (TB_02/06/09)	Blanks have acceptable results less than the limits of reporting.

Laboratory Control Samples (LCS)

Analyte	Comments
VCHCs	Recovery for 1,1-Dichloroethane (80.7%) is less than the lower control limit (81.7%)
	All other LCS have acceptable results within laboratory control limits.

Matrix Spike (MS)

Analyte	Comments
	Matrix spikes recoveries are within laboratory control limits. No MS was run on carbon disulfide and trihalomethanes.
	No MS was performed by secondary laboratory (Labmark)

Trip Spike /Control Trip Spike

Analyte	Comments
NA	

Duplicates

Laboratory Duplicates

Analyte	Comments
	All Laboratory duplicates RPDs within acceptable LOR based control limits or results below LOR.
	All LD analysis were run on URS samples. No LD was performed by secondary laboratory (Labmark)

**DATA VALIDATION SUMMARY**

Note: Data validation assesses each analyte in terms of all the data validation variables and only the exceedances and outliers are reported in this form.

Project Name:	June Quarterly 2009	Project/Task Number:	43218011
Primary Laboratory:	ALS	Batch/Ref. Number(s):	ES0908262
Secondary Laboratory:	LabMark		E043132
Date Sampled:	3/06/2009 - 4/06/2009	Sample Type:	Water

Intra-Laboratory Duplicates	Comments
Analyte	
WG229S & QC105	All RPDs within acceptable LOR based control limits or results below LOR.
BP76-04.00 & QC106	
BP113-03.00 & QC107	
BP54-06.00 7 Qc108	

Inter-Laboratory Duplicates	Comments
Analyte	
BP76-04.00 & QC206	RPD for carbon disulfide (66.67%) is outside of the accepted control limits. All other RPDs within acceptable limits or result below LOR.

Surrogate Monitoring Compound Analyses	Comments
Analyte	
VOCs / 1,2-Dichloroethane-D4	Recovery of 1,2-Dichloroethane-D4 in samples WG229S (121%), QC105 (123%), BP59_04.00 (122%) and QC106 (124%) were greater than the upper control limit of 120%.
VOCs / 4-Bromofluorobenzene	Recovery of 4-Bromofluorobenzene in samples BP59_08.00 (85.6%), BP89_06.00 (85.3%) and BP95_03.00 (83.5%) were less than the lower control limit (86%).
VOCs / Toluene-D8	Recovery of Toluene-D8 in samples BP56_06.00 (116%), Trip Blank (116%) and QC108 (122%) were greater than the upper control limit of 110%.

Overall Comments

Most results confirmed by re-analysis.
Particular samples required dilution due to the presence of high levels of target analyte(s). LOR values have been adjusted accordingly.
Various results for vinyl chloride have been reported from EP074-WF scan method due to high level of contamination.
Elevated surrogate recovery due to sample matrix interference, confirmed by re-analysis.
The laboratory control sample (LCS) recovered of 1,1-Dichloroethane (80.7%) is below the control limits. This may result in the under reporting of VOC analytes in this batch. However, majority of the LCS analysis conducted have acceptable results, therefore, these exceedances are unlikely to significantly affect the overall data quality of this batch.
The inter-laboratory RPD exceedance may be due to the differences in sample handling between the two laboratories. However, the results for the primary sample and field duplicate are consistent with the historical results and are of the same magnitude. As a conservative measure, the highest values will be used in the interpretation of data for this batch.
The surrogate outliers could potentially lead to under or over reporting of results for these samples. Given that the results of other laboratory QC analysis conducted have acceptable results, it is unlikely that these surrogate outliers have significant effects in the overall quality of this batch.
Data for this batch is considered suitable for environmental interpretative use.

Note: When concentrations are less than LOR for both the primary and secondary results, no RPDs are calculated.

Performed By:	C. Olmos	Reviewed By:	B. Gomez
Date:	01-Jul-09	Date:	02-Jul-09

DATA VALIDATION
RPD Calculations

Location
Sample ID
Date Sampled
Sample Type

WG229S-03/06/09	WG229S-03/06/09
WG229S-03/06/09	QC105-03/06/09
6/03/2009	6/03/2009
Primary	Secondary

Analyte	LOR1	LOR2	Units			Primary vs. Duplicate	Category1
1,1,1,2-Tetrachloroethane	1	1	µg/L	< 1	< 1	-	-
1,1,1-Trichloroethane	1	1	µg/L	< 1	< 1	-	-
1,1,2,2-Tetrachloroethane	1	1	µg/L	< 1	< 1	-	-
1,1,2-Trichloroethane	1	1	µg/L	< 1	< 1	-	-
1,1-Dichloroethane	1	1	µg/L	< 1	< 1	-	-
1,1-Dichloroethene	1	1	µg/L	< 1	< 1	-	-
1,1-Dichloropropylene	1	1	µg/L	< 1	< 1	-	-
1,2,3-Trichloropropane	1	1	µg/L	< 1	< 1	-	-
1,2-Dibromo-3-chloropropane	1	1	µg/L	< 1	< 1	-	-
1,2-Dichloroethane	1	1	µg/L	6	6	0.00%	Pass
1,3-Dichloropropane	1	1	µg/L	< 1	< 1	-	-
Bromomethane	10	10	µg/L	< 10	< 10	-	-
Carbon Tetrachloride	1	1	µg/L	< 1	< 1	-	-
Chloroethane	10	10	µg/L	< 10	< 10	-	-
Chloromethane	10	10	µg/L	< 10	< 10	-	-
cis-1,2-Dichloroethene	1	1	µg/L	< 1	< 1	-	-
cis-1,4-Dichloro-2-butene	1	1	µg/L	< 1	< 1	-	-
Dibromomethane	1	1	µg/L	< 1	< 1	-	-
Dichlorodifluoromethane	10	10	µg/L	< 10	< 10	-	-
Hexachlorobutadiene	1	1	µg/L	< 1	< 1	-	-
Iodomethane	1	1	µg/L	< 1	< 1	-	-
Methylene chloride	5	5	µg/L	< 5	< 5	-	-
Pentachloroethane	1	1	µg/L	< 1	< 1	-	-
Tetrachloroethene	1	1	µg/L	< 1	< 1	-	-
trans-1,2-Dichloroethene	1	1	µg/L	< 1	< 1	-	-
trans-1,4-Dichloro-2-butene	1	1	µg/L	< 1	< 1	-	-
Trichloroethene	1	1	µg/L	< 1	< 1	-	-
Trichlorofluoromethane	10	10	µg/L	< 10	< 10	-	-
Vinyl chloride	10	10	µg/L	< 10	< 10	-	-
Carbon disulfide	1	1	µg/L	6	6	0.00%	Pass
Bromodichloromethane	1	1	µg/L	< 1	< 1	-	-
Bromoform	1	1	µg/L	< 1	< 1	-	-
Chloroform	1	1	µg/L	< 1	< 1	-	-
Dibromochloromethane	1	1	µg/L	< 1	< 1	-	-

Pass RPD <= 30%
Pass-1 RPD > 30%, Analysis result < 10 times LOR
Pass-2 RPD <= 50%, Analysis result > 10 times LOR and < 20 times LOR

DATA VALIDATION
RPD Calculations

Location
Sample ID
Date Sampled
Sample Type

BP76-04.00-03/06/09	BP76-04.00-03/06/09	BP76-04.00-03/06/09
BP76-04.00-03/06/09	QC106-03/06/09	QC206_03/06/2009
6/03/2009	6/03/2009	6/03/2009
Primary	Secondary	Tertiary

Analyte	LOR1	LOR2	LOR3	Units				Primary vs. Duplicate	Primary vs. Triplicate	Category1	Category2	Category3
1,1,1,2-Tetrachloroethane	1	1	5	µg/L	< 1	< 1	< 5	-	-	-	-	-
1,1,1-Trichloroethane	1	1	5	µg/L	< 1	< 1	< 5	-	-	-	-	-
1,1,2,2-Tetrachloroethane	1	1	5	µg/L	< 1	< 1	< 5	-	-	-	-	-
1,1,2-Trichloroethane	1	1	5	µg/L	< 1	< 1	< 5	-	-	-	-	-
1,1-Dichloroethane	1	1	5	µg/L	35	37	41	5.56%	15.79%	Pass	Pass	Pass
1,1-Dichloroethene	1	1	5	µg/L	21	25	21	17.39%	0.00%	Pass	Pass	Pass
1,1-Dichloropropylene	1	1	-	µg/L	< 1	< 1	-	-	-	-	-	-
1,2,3-Trichloropropane	1	1	-	µg/L	< 1	< 1	-	-	-	-	-	-
1,2-Dibromo-3-chloropropane	1	1	-	µg/L	< 1	< 1	-	-	-	-	-	-
1,2-Dichloroethane	1	1	5	µg/L	16	18	18	11.77%	11.77%	Pass	Pass	Pass
1,3-Dichloropropane	1	1	-	µg/L	< 1	< 1	-	-	-	-	-	-
Bromomethane	10	10	-	µg/L	< 10	< 10	-	-	-	-	-	-
Carbon Tetrachloride	1	1	5	µg/L	< 1	< 1	< 5	-	-	-	-	-
Chloroethane	10	10	50	µg/L	< 10	< 10	< 50	-	-	-	-	-
Chloromethane	10	10	50	µg/L	< 10	< 10	< 50	-	-	-	-	-
cis-1,2-Dichloroethene	1	1	5	µg/L	46	53	55	14.14%	17.82%	Pass	Pass	Pass
cis-1,4-Dichloro-2-butene	1	1	-	µg/L	< 1	< 1	-	-	-	-	-	-
Dibromomethane	1	1	-	µg/L	< 1	< 1	-	-	-	-	-	-
Dichlorodifluoromethane	10	10	-	µg/L	< 10	< 10	-	-	-	-	-	-
Dichloromethane	-	-	20	µg/L	-	-	< 20	-	-	-	-	-
Hexachlorobutadiene	1	1	-	µg/L	< 1	< 1	-	-	-	-	-	-
Iodomethane	1	1	-	µg/L	< 1	< 1	-	-	-	-	-	-
Methylene chloride	5	5	-	µg/L	< 5	< 5	-	-	-	-	-	-
Pentachloroethane	1	1	-	µg/L	< 1	< 1	-	-	-	-	-	-
Tetrachloroethene	1	1	5	µg/L	< 1	< 1	< 5	-	-	-	-	-
trans-1,2-Dichloroethene	1	1	5	µg/L	4	4	< 5	0.00%	22.22%	Pass	Pass	Pass
trans-1,4-Dichloro-2-butene	1	1	-	µg/L	< 1	< 1	-	-	-	-	-	-
Trichloroethene	1	1	5	µg/L	< 1	< 1	< 5	-	-	-	-	-
Trichlorofluoromethane	10	10	-	µg/L	< 10	< 10	-	-	-	-	-	-
Vinyl chloride	10	10	50	µg/L	150	150	110	0.00%	30.77%	Pass	Pass-2	Pass-2
Carbon disulfide	1	1	5	µg/L	10	7	< 5	35.29%	66.67%	Pass-2	Fail	Pass-1
Bromodichloromethane	1	1	-	µg/L	< 1	< 1	-	-	-	-	-	-
Bromoform	1	1	-	µg/L	< 1	< 1	-	-	-	-	-	-
Chloroform	1	1	5	µg/L	< 1	< 1	< 5	-	-	-	-	-
Dibromochloromethane	1	1	-	µg/L	< 1	< 1	-	-	-	-	-	-

Pass RPD <= 30%
 Pass-1 RPD > 30%, Analysis result < 10 times LOR
 Pass-2 RPD <= 50%, Analysis result > 10 times LOR and < 20 times LOR

DATA VALIDATION
RPD Calculations

Location
Sample ID
Date Sampled
Sample Type

BP113-03.00-03/06/09	BP113-03.00-03/06/09
BP113-03.00-03/06/09	QC107--03/06/09
6/03/2009	6/03/2009
Primary	Secondary

Analyte	LOR1	LOR2	Units			Primary vs. Duplicate	Category1
1,1,1,2-Tetrachloroethane	1	1	µg/L	< 1	< 1	-	-
1,1,1-Trichloroethane	1	1	µg/L	< 1	< 1	-	-
1,1,2,2-Tetrachloroethane	1	1	µg/L	< 1	< 1	-	-
1,1,2-Trichloroethane	1	1	µg/L	< 1	< 1	-	-
1,1-Dichloroethane	1	1	µg/L	< 1	< 1	-	-
1,1-Dichloroethene	1	1	µg/L	< 1	< 1	-	-
1,1-Dichloropropylene	1	1	µg/L	< 1	< 1	-	-
1,2,3-Trichloropropane	1	1	µg/L	< 1	< 1	-	-
1,2-Dibromo-3-chloropropane	1	1	µg/L	< 1	< 1	-	-
1,2-Dichloroethane	1	1	µg/L	< 1	< 1	-	-
1,3-Dichloropropane	1	1	µg/L	< 1	< 1	-	-
Bromomethane	10	10	µg/L	< 10	< 10	-	-
Carbon Tetrachloride	1	1	µg/L	< 1	< 1	-	-
Chloroethane	10	10	µg/L	< 10	< 10	-	-
Chloromethane	10	10	µg/L	< 10	< 10	-	-
cis-1,2-Dichloroethene	1	1	µg/L	< 1	< 1	-	-
cis-1,4-Dichloro-2-butene	1	1	µg/L	< 1	< 1	-	-
Dibromomethane	1	1	µg/L	< 1	< 1	-	-
Dichlorodifluoromethane	10	10	µg/L	< 10	< 10	-	-
Hexachlorobutadiene	1	1	µg/L	< 1	< 1	-	-
Iodomethane	1	1	µg/L	< 1	< 1	-	-
Methylene chloride	5	5	µg/L	< 5	< 5	-	-
Pentachloroethane	1	1	µg/L	< 1	< 1	-	-
Tetrachloroethene	1	1	µg/L	< 1	< 1	-	-
trans-1,2-Dichloroethene	1	1	µg/L	< 1	< 1	-	-
trans-1,4-Dichloro-2-butene	1	1	µg/L	< 1	< 1	-	-
Trichloroethene	1	1	µg/L	< 1	< 1	-	-
Trichlorofluoromethane	10	10	µg/L	< 10	< 10	-	-
Vinyl chloride	1	10	µg/L	< 1	< 10	-	-
Carbon disulfide	1	1	µg/L	< 1	< 1	-	-
Bromodichloromethane	1	1	µg/L	< 1	< 1	-	-
Bromoform	1	1	µg/L	< 1	< 1	-	-
Chloroform	1	1	µg/L	< 1	< 1	-	-
Dibromochloromethane	1	1	µg/L	< 1	< 1	-	-

Pass RPD <= 30%
 Pass-1 RPD > 30%, Analysis result < 10 times LOR
 Pass-2 RPD <= 50%, Analysis result > 10 times LOR and < 20 times LOR

DATA VALIDATION
RPD Calculations

Location
Sample ID
Date Sampled
Sample Type

BP54-06.00-04/06/09	BP54-06.00-04/06/09
BP54-06.00-04/06/09	QC108-04/06/09
6/04/2009	6/04/2009
Primary	Secondary

Analyte	LOR1	LOR2	Units			Primary vs. Duplicate	Category1
1,1,1,2-Tetrachloroethane	1	1	µg/L	< 1	< 1	-	-
1,1,1-Trichloroethane	1	1	µg/L	< 1	< 1	-	-
1,1,2,2-Tetrachloroethane	1	1	µg/L	< 1	< 1	-	-
1,1,2-Trichloroethane	1	1	µg/L	< 1	< 1	-	-
1,1-Dichloroethane	1	1	µg/L	< 1	< 1	-	-
1,1-Dichloroethene	1	1	µg/L	< 1	< 1	-	-
1,1-Dichloropropylene	1	1	µg/L	< 1	< 1	-	-
1,2,3-Trichloropropane	1	1	µg/L	< 1	< 1	-	-
1,2-Dibromo-3-chloropropane	1	1	µg/L	< 1	< 1	-	-
1,2-Dichloroethane	1	1	µg/L	< 1	< 1	-	-
1,3-Dichloropropane	1	1	µg/L	< 1	< 1	-	-
Bromomethane	10	10	µg/L	< 10	< 10	-	-
Carbon Tetrachloride	1	1	µg/L	< 1	< 1	-	-
Chloroethane	10	10	µg/L	< 10	< 10	-	-
Chloromethane	10	10	µg/L	< 10	< 10	-	-
cis-1,2-Dichloroethene	1	1	µg/L	< 1	< 1	-	-
cis-1,4-Dichloro-2-butene	1	1	µg/L	< 1	< 1	-	-
Dibromomethane	1	1	µg/L	< 1	< 1	-	-
Dichlorodifluoromethane	10	10	µg/L	< 10	< 10	-	-
Hexachlorobutadiene	1	1	µg/L	< 1	< 1	-	-
Iodomethane	1	1	µg/L	< 1	< 1	-	-
Methylene chloride	5	5	µg/L	< 5	< 5	-	-
Pentachloroethane	1	1	µg/L	< 1	< 1	-	-
Tetrachloroethene	1	1	µg/L	< 1	< 1	-	-
trans-1,2-Dichloroethene	1	1	µg/L	< 1	< 1	-	-
trans-1,4-Dichloro-2-butene	1	1	µg/L	< 1	< 1	-	-
Trichloroethene	1	1	µg/L	< 1	< 1	-	-
Trichlorofluoromethane	10	10	µg/L	< 10	< 10	-	-
Vinyl chloride	10	10	µg/L	< 10	< 10	-	-
Carbon disulfide	1	1	µg/L	< 1	< 1	-	-
Bromodichloromethane	1	1	µg/L	< 1	< 1	-	-
Bromoform	1	1	µg/L	< 1	< 1	-	-
Chloroform	1	1	µg/L	< 1	< 1	-	-
Dibromochloromethane	1	1	µg/L	< 1	< 1	-	-

Pass RPD <= 30%
Pass-1 RPD > 30%, Analysis result < 10 times LOR
Pass-2 RPD <= 50%, Analysis result > 10 times LOR and < 20 times LOR