

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 Orica	Project/Task Number:	43217830
Analytical Laboratory:	ALS LabMark	Batch/Ref. Number (s):	ES0807849 E038037
Date Sampled:	3/06/2008	Sample Type:	Water

Sample Handling, Receipt and Holding Times	Yes/No	Comments
COC completed adequately	Yes	
Samples received intact and chilled	Yes	4.6°C upon receiving, ice present
Samples analysed within appropriate holding times per analytical methods.	Yes	

# of Primary Samples	# of QAQC Samples	# of Duplicate Samples	# of Triplicate Samples
18	1	1	1

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

Type	Comments
MB and TB	Analyzed results are all below their respective LORs

Laboratory Control Samples (LCS)

Analyte	Comments
Halogenated Aliphatic Compounds	Recovery of 1.1.1.2-Tetrachloroethane (120%) breaches the upper control limit (119%)

Matrix Spike (MS)

Analyte	Comments
	MS recoveries are within the accepted recovery control limits

Trip Spike /Control Trip Spike

Analyte	% R	Comments
n/a		

Duplicates

Laboratory Duplicates	Comments
	All results are below their respective LORs or within the accepted recovery control limits

Intra-Laboratory Duplicates

Duplicates	Comments
BP77_06.00_03/06/08 & QC300_03/06/08	RPD results are within the accepted control limits

Inter-Laboratory Duplicates

Duplicates	Comments
BP77_06.00_03/06/08 & QC400_03/06/08	RPD results are within the accepted control limits

Surrogate Monitoring Compound Analyses

Analyte	Comments
VOC	Recovery of Toluene-D8 from Sample BP61_08.00_03/06/08 (111%) breaches the upper recovery control limit (110%)

Overall Comments

Recovery of 1.1.1.2-tetrachloroethane (120%) in LCS only marginally breaches the accepted upper control limit (119%). This could lead to an over reporting of 1.1.1.2-tetrachloroethane. However, there were no analytical results above LORs so it is not likely that this has affected the quality of this data. The recovery of Toluene-D8 for Sample BP61_08.00_03/06/08 (111%) breaches the respective upper recovery control limit (110%). The outlier is marginal, however, it could lead to an over reporting of VOCs in this sample. The toluene-D8 aromatic surrogate is not representative of the analysis scan which targets lighter molecular weight aliphatic compounds that are the project CoPCs. Therefore, this surrogate exceedance will not affect the quality of the data. The results from this batch is acceptable for environmental interpretive use.

Performed By:	KY	Reviewed By:	MJ
Date:	20-Jun-08	Date:	23-Jun-08

DATA VALIDATION
RPD Calculations

Sample ID
Date Sampled
Sample Type

BP77_06.00_03/06/08	QC300_03/06/08	QC400_03/06/08
6/03/2008	6/03/2008	6/03/2008
Primary	Secondary	Tertiary

Analyte	LOR1	LOR2	LOR3	Units				Primary vs. Duplicate	Primary vs. Triplicate
1,1,2,2-Tetrachloroethane	1	1	5	µg/L	1	2	< 5	66.67%	133.33%
1,1,2-Trichloroethane	1	1	5	µg/L	2	< 1	< 5	66.67%	85.71%
1,1-Dichloroethane	1	1	5	µg/L	22	22	23	0.00%	4.44%
1,1-Dichloroethene	1	1	5	µg/L	3	3	< 5	0.00%	50.00%
1,2-Dichloroethane	1	1	5	µg/L	175	182	155	3.92%	12.12%
cis-1,2-Dichloroethene	1	1	5	µg/L	14	13	14	7.41%	0.00%
Tetrachloroethene	1	1	5	µg/L	6	7	5	15.39%	18.18%
trans-1,2-Dichloroethene	1	1	5	µg/L	2	2	< 5	0.00%	85.71%
Trichloroethene	1	1	5	µg/L	12	15	10	22.22%	18.18%
Vinyl chloride	10	10	50	µg/L	70	70	130	0.00%	60.00%
Carbon disulfide	1	1	5	µg/L	8	8	< 5	0.00%	46.15%
Chloroform	1	1	5	µg/L	4	4	< 5	0.00%	22.22%

**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 Orica	Project/Task Number:	43217830
Analytical Laboratory:	ALS LabMark	Batch/Ref. Number (s):	ES0807990 E038099
Date Sampled:	4/06/2008	Sample Type:	Water

Sample Handling, Receipt and Holding Times	Yes/No	Comments
COC completed adequately	No	Time of URS release not recorded
Samples received intact and chilled	Yes	1.9°C upon receiving, ice present
Samples analysed within appropriate holding times per analytical methods.	Yes	

# of Primary Samples	# of QAQC Samples	# of Duplicate Samples	# of Triplicate Samples
58	2	6	3

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

Type	Comments
MB and TB	Analyzed results are all below their respective LORs

Laboratory Control Samples (LCS)

Analyte	Comments
	All results are within the accepted recovery control limits

Matrix Spike (MS)

Analyte	Comments
	All results are within the accepted recovery control limits

Trip Spike /Control Trip Spike

Analyte	% R	Comments
n/a		

Duplicates

Laboratory Duplicates	Comments
	All results are below their respective LORs or within the accepted recovery control limits

Intra-Laboratory Duplicates

	Comments
BP65_02.00_H_04/06/08 & QC500_04/06/08	RPD results are within the accepted control limits
BP43_02.00_H_04/06/08 & QC501_04/06/08	Recoveries of 1,1,2,2-Tetrachloroethane (38.14%), 1,1,2-Trichloroethane (33.51%), Tetrachloroethane (31.58%) and Trichloroethane (64.08%) have breached the accepted control limits
SW028_H_04/06/08 & QC502_04/06/08	RPD results are within the accepted control limits
BP64_02.00_L_04/06/08 & QC503_04/06/08	Recovery of cis-1,2-Dichloroethene (41.18%) has breached the accepted control limit
BP42_02.00_L_04/06/08 & QC504_04/06/08	RPD results are within the accepted control limits
SW031_L_04/06/08 & QC505_04/06/08	RPD results are within the accepted control limits

Inter-Laboratory Duplicates

	Comments
BP65_02.00_H_04/06/08 & QC600_04/06/08	RPD results are within the accepted control limits
BP42_02.00_L_04/06/08 & QC601_04/06/08	Recoveries of 1,1-Dichloroethene (38.60%) and 1,2-Dichloroethane (66.67%) have breached the accepted control limit
SW028_H_04/06/08 & QC602_04/06/08	RPD results are within the accepted control limits

Surrogate Monitoring Compound Analyses

Analyte	Comments
VOC (1,2-Dichloroethane-D4)	Recovery of 1,2-Dichloroethane-D4 from Sample BP42_00.10_H_04/06/08 (121%) is greater than the upper control limit (120%)
VOC (Toluene-D8)	Recoveries of Toluene-D8 from Sample BP43_00.50_H_04/06/08 (111%), SW053_04/06/08 (83.7%), BP42_00.50_L_04/06/08 (85.1%), BP01_01.25_04/06/08 (85.8%), SW030_04/06/08 (86.2%), SW029_04/06/08 (82.9%), and BP01_00.75_04/06/08 (87.2%) breach the accepted upper control limit (88% - 110%)
VOC (4-Bromofluorobenzene)	Recovery of 4-Bromofluorobenzene from Sample BP01_10.00_04/06/08 (85.6%) breaches the accepted lower control limit (86%)

Overall Comments

There are RPD breaches in both inter-lab duplicates and intra-lab duplicates. However, the results for the same analyte are all within the same order of magnitude. As a conservative measure, the highest value will be used for reporting. Breaches of surrogate recoveries for 1,2-Dichloroethane-D4, 4-Bromofluorobenzene, Toluene-D8 (BP43_00.50_H_04/06/08 and BP01_00.75_04/06/08) are only marginal and are not expected to affect the overall data quality. Surrogate recoveries of Toluene-D8 for Samples SW053_04/06/08 (83.7%), BP42_00.50_L_04/06/08 (85.1%), BP01_01.25_04/06/08 (85.8%), SW030_04/06/08 (86.2%) and SW029_04/06/08 (82.9%) are below the accepted lower control limit (88%) and could possibly cause under reporting of VOC analysis results. Since Toluene-D8 is primarily used for heavy aromatics QC, it is unlikely that this scan for aliphatics will be affected by the outliers. The data in this batch is therefore ready for environmental interpretive purposes.

Performed By:	KY	Reviewed By:	MJ
Date:	23-Jun-08	Date:	25-Jun-08

DATA VALIDATION
RPD Calculations

Sample ID	BP65_02.00_H_04/06/08	QC500_04/06/08	QC600_04/06/2008
Date Sampled	4/06/2008	4/06/2008	4/06/2008
Sample Type	Primary	Secondary	Tertiary

Analyte	LOR1	LOR2	LOR3	Units				Primary vs. Duplicate	Primary vs. Triplicate
1,1-Dichloroethane	1	1	5	µg/L	2	< 1	< 5	66.67%	85.71%
1,1-Dichloroethene	1	1	5	µg/L	5	< 1	< 5	133.33%	0.00%
1,2-Dichloroethane	1	1	5	µg/L	11	11	15	0.00%	30.77%
cis-1,2-Dichloroethene	1	1	5	µg/L	8	6	7	28.57%	13.33%
trans-1,2-Dichloroethene	1	1	5	µg/L	3	< 1	< 5	100.00%	50.00%

Sample ID	BP42_02.00_L_04/06/08	QC504_04/06/08	QC601_04/06/2008
Date Sampled	4/06/2008	4/06/2008	4/06/2008
Sample Type	Primary	Secondary	Tertiary

Analyte	LOR1	LOR2	LOR3	Units				Primary vs. Duplicate	Primary vs. Triplicate
1,1,1,2,2-Tetrachloroethane	1	1	5	µg/L	6	6	14	0.00%	80.00%
1,1,1,2-Trichloroethane	1	1	5	µg/L	3	4	6	28.57%	66.67%
1,1-Dichloroethane	1	1	5	µg/L	23	22	34	4.44%	38.60%
1,2-Dichloroethane	1	1	5	µg/L	10	9	20	10.53%	66.67%
1,3-Dichloropropane	1	1	-	µg/L	< 1	2	-	66.67%	-
cis-1,2-Dichloroethene	1	1	5	µg/L	2	2	< 5	0.00%	85.71%
Trichloroethene	1	1	5	µg/L	10	10	16	0.00%	46.15%
Vinyl chloride	10	10	50	µg/L	20	20	< 50	0.00%	85.71%
Chloroform	1	1	5	µg/L	6	6	10	0.00%	50.00%

Sample ID	SW028_H_04/06/08	QC502_04/06/08	QC602_04/06/2008
Date Sampled	4/06/2008	4/06/2008	4/06/2008
Sample Type	Primary	Secondary	Tertiary

Analyte	LOR1	LOR2	LOR3	Units				Primary vs. Duplicate	Primary vs. Triplicate
1,2-Dichloroethane	1	1	5	µg/L	< 1	2	< 5	66.67%	133.33%
trans-1,2-Dichloroethene	1	1	5	µg/L	< 1	1	< 5	0.00%	133.33%

DATA VALIDATION
RPD Calculations

Sample ID	BP43_02.00_H_04/06/08	QC501_04/06/08
Date Sampled	4/06/2008	4/06/2008
Sample Type	Primary	Secondary

Analyte	LOR1	LOR2	Units			Primary vs. Duplicate
1,1,2,2-Tetrachloroethane	1	1	µg/L	87	128	38.14%
1,1,2-Trichloroethane	1	1	µg/L	154	216	33.51%
1,1-Dichloroethane	1	1	µg/L	165	185	11.43%
1,2-Dichloroethane	1	1	µg/L	2850	3200	11.57%
cis-1,2-Dichloroethene	1	1	µg/L	227	226	0.44%
Tetrachloroethene	1	1	µg/L	24	33	31.58%
trans-1,2-Dichloroethene	1	1	µg/L	1170	1410	18.61%
Trichloroethene	1	1	µg/L	68	35	64.08%
Vinyl chloride	10	10	µg/L	2370	2500	5.34%
Chloroform	1	1	µg/L	177	207	15.63%

Sample ID	BP64_02.00_L_04/06/08	QC503_04/06/08
Date Sampled	4/06/2008	4/06/2008
Sample Type	Primary	Secondary

Analyte	LOR1	LOR2	Units			Primary vs. Duplicate
1,1,2-Trichloroethane	1	1	µg/L	14	13	7.41%
1,1-Dichloroethane	1	1	µg/L	4	7	54.55%
1,1-Dichloroethene	1	1	µg/L	3	7	80.00%
1,2-Dichloroethane	1	1	µg/L	189	218	14.25%
cis-1,2-Dichloroethene	1	1	µg/L	27	41	41.18%
trans-1,2-Dichloroethene	1	1	µg/L	9	12	28.57%
Trichloroethene	1	1	µg/L	8	12	40.00%
Vinyl chloride	10	10	µg/L	20	40	66.67%
Chloroform	1	1	µg/L	3	5	50.00%

Sample ID	SW031_L_04/06/08	QC505_04/06/08
Date Sampled	4/06/2008	4/06/2008
Sample Type	Primary	Secondary

Analyte	LOR1	LOR2	Units			Primary vs. Duplicate
cis-1,2-Dichloroethene	1	1	µg/L	4	2	66.67%
Trichloroethene	1	1	µg/L	1	< 1	0.00%
Vinyl chloride	1	10	µg/L	2	< 10	133.33%

**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 Orica	Project/Task Number:	43217830
Analytical Laboratory:	ALS	Batch/Ref. Number (s):	ES0808067
Date Sampled:	5/06/2008	Sample Type:	Water

Sample Handling, Receipt and Holding Times	Yes/No	Comments
COC completed adequately	No	Person and Time of URS release not recorded
Samples received intact and chilled	Yes	1.8°C upon receiving, ice present
Samples analysed within appropriate holding times per analytical methods.	Yes	

# of Primary Samples	# of QAQC Samples	# of Duplicate Samples	# of Triplicate Samples
23	1	2	0

Blanks	
Method Blank (MB), Rinsate Blank (RB), Trip Blank (TB), Field Blank (FB)	
Type	Comments
MB and TB	Analyzed results are all below their respective LORs

Laboratory Control Samples (LCS)	
Analyte	Comments
Sulfonated Compounds	Recovery of Carbon disulfide (122%) is greater than the upper recovery control limit (121%)

Matrix Spike (MS)	
Analyte	Comments
	MS recoveries are all within the accepted recovery control limits

Trip Spike /Control Trip Spike		
Analyte	% R	Comments
n/a		

Duplicates	
Laboratory Duplicates	Comments
	All results are below their respective LORs or within the accepted recovery control limits

Intra-Laboratory Duplicates	
	Comments
BP73_10.00_05/06/08 & QC301_05/06/08	RPD recoveries of 1.1-Dichloroethene (31.92%), 1.2-Dichloroethane (40.00%), Vinyl chloride (44.47%), and Chloroform (34.04%) breach the accepted recovery control limits
MWF15_1_05/06/08 & QC302_05/06/08	Recovery of Methylene chloride (30.12%) breaches the accepted control limits

Inter-Laboratory Duplicates	
	Comments
n/a	

Surrogate Monitoring Compound Analyses	
Analyte	Comments
VOC (1.2-Dichloroethane-D4)	Recovery of 1.2-Dichloroethane-D4 from Sample BP115_05.00_05/06/08 (123%) is greater than the accepted upper control limit (120%)
VOC (Toluene-D8)	Recoveries of Toluene-D8 from Samples BP52_06.00_05/06/08 (87.5%), BP115_03.00_05/06/08 (82.0%), BP73_04.00_05/06/08 (86.9%), and BP89_06.00_05/06/08 (86.2%) are less than the accepted lower control limit (88%)

Overall Comments

LCS recovery of Carbon disulfide (122%) is greater than the accepted upper recovery control limit (121%). This could result in over reporting of carbon disulfide concentrations for all samples. However, as the LCS' recovery is only marginally higher than the control limit, it is not expected to affect the general quality of lab data.

There are RPD breaches between inter-lab duplicates. The results for the same analyte are within the same order of magnitude. As a conservative measure, the higher values will be used.

Breaches of surrogate recovery for 1.2-Dichloroethane-D4 from Sample BP115_05.00_05/06/08 (123%) is greater than the accepted upper control limit (120%) and could cause over reporting of the analysis results. As all other samples within this batch of 23 samples did not breach the control limits, it is unlikely that this result will affect the quality of this data. Surrogate recoveries of Toluene-D8 in Samples BP52_06.00_05/06/08 (87.5%), BP115_03.00_05/06/08 (82.0%), BP73_04.00_05/06/08 (86.9%), and BP89_06.00_05/06/08 (86.2%) are less than the accepted lower control limit (88%) and could result in under reporting of VOC analysis results in these samples. The toluene-D8 aromatic surrogate is not representative of the analysis scan which targets aliphatic compounds. Therefore, this surrogate exceedance will not affect the quality of the data. The results from this batch therefore are acceptable for environmental interpretive use.

Performed By:	KY	Reviewed By:	MJ
Date:	24-Jun-08	Date:	25-Jun-08

DATA VALIDATION
RPD Calculations

Sample ID
Date Sampled
Sample Type

BP73-10.00-05/06/08	QC301-05/06/08
5/06/2008	5/06/2008
Primary	Secondary

Analyte	LOR1	LOR2	Units			Primary vs. Duplicate
1,1-Dichloroethane	1	1	µg/L	736	632	15.21%
1,1-Dichloroethene	1	1	µg/L	3270	2370	31.92%
1,2-Dichloroethane	1	1	µg/L	195	130	40.00%
cis-1,2-Dichloroethene	1	1	µg/L	3790	3090	20.35%
trans-1,2-Dichloroethene	1	1	µg/L	361	275	27.04%
Trichloroethene	1	1	µg/L	6	< 5	18.18%
Vinyl chloride	10	10	µg/L	48100	30600	44.47%
Carbon disulfide	1	1	µg/L	140	152	8.22%
Chloroform	1	1	µg/L	55	39	34.04%

Sample ID
Date Sampled
Sample Type

MWF15-I-05/06/08	QC302-05/06/08
5/06/2008	5/06/2008
Primary	Secondary

Analyte	LOR1	LOR2	Units			Primary vs. Duplicate
1,1,1,2-Tetrachloroethane	1	1	µg/L	18100	23100	24.27%
1,1,1,2-Trichloroethane	1	1	µg/L	7890	10000	23.59%
1,1-Dichloroethane	1	1	µg/L	530	427	21.53%
1,1-Dichloroethene	1	1	µg/L	1710	1950	13.12%
1,2-Dichloroethane	1	1	µg/L	14300	17500	20.13%
Carbon Tetrachloride	1	1	µg/L	9470	10100	6.44%
cis-1,2-Dichloroethene	1	1	µg/L	2510	3080	20.39%
Methylene chloride	5	5	µg/L	233	172	30.12%
Tetrachloroethene	1	1	µg/L	22400	25900	14.49%
trans-1,2-Dichloroethene	1	1	µg/L	749	699	6.91%
Trichloroethene	1	1	µg/L	33100	40200	19.37%
Vinyl chloride	10	10	µg/L	4250	3380	22.81%
Carbon disulfide	1	1	µg/L	5310	4180	23.82%
Chloroform	1	1	µg/L	22100	26800	19.22%

**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 Orica	Project/Task Number:	43217830
Analytical Laboratory:	ALS	Batch/Ref. Number (s):	ES0808103
Date Sampled:	6/06/2008	Sample Type:	Water
Sample Handling, Receipt and Holding Times		Yes/No	Comments
COC completed adequately		No	Time of URS release not recorded
Samples received intact and chilled		Yes	2.2°C upon receiving, ice present
Samples analysed within appropriate holding times per analytical methods.		Yes	
# of Primary Samples	# of QAQC Samples	# of Duplicate Samples	# of Triplicate Samples
10	1	1	0
Blanks			
Method Blank (MB), Rinsate Blank (RB), Trip Blank (TB), Field Blank (FB)			
Type	Comments		
MB and TB	Analyzed results are all below their respective LORs		
Laboratory Control Samples (LCS)			
Analyte	Comments		
Sulfonated Compounds	Recovery of Carbon disulfide (122%) is greater than the upper recovery control limit (121%)		
Matrix Spike (MS)			
Analyte	Comments		
Halogenated Aliphatic Compounds	MS recovery of Trichloroethene in Sample WG234_S_06/06/08 is not determined due to its high background level		
Trip Spike /Control Trip Spike			
Analyte	% R	Comments	
n/a			
Duplicates			
Laboratory Duplicates	Comments		
	All results are below their respective LORs or within the accepted recovery control limits		
Intra-Laboratory Duplicates	Comments		
BP41_08.00_05/06/08 & QC303_05/06/08	RPD recoveries are all within the accepted recovery control limits		
Inter-Laboratory Duplicates	Comments		
n/a			
Surrogate Monitoring Compound Analyses			
Analyte	Comments		
	Surrogate recoveries are all within the accepted recovery control limits		
Overall Comments			
LCS recovery of Carbon disulfide (122%) is greater than the upper recovery control limit (121%), which could lead to over reporting of carbon disulfide concentrations. However, the outlier is only marginal and is not expected to affect the overall quality of lab data. This data is therefore acceptable for environmental interpretive use.			

Performed By:
Date:

KY
24-Jun-08

Reviewed By:
Date:

MJ
25-Jun-08

DATA VALIDATION
RPD Calculations

Sample ID
Date Sampled
Sample Type

BP41_08.00-06/06/08	QC303_06/06/08
6/06/2008	6/06/2008
Primary	Secondary

Analyte	LOR1	LOR2	Units			Primary vs. Duplicate
Carbon disulfide	1	1	µg/L	7	9	25.00%
Vinyl chloride	10	10	µg/L	30	30	0.00%
1,1-Dichloroethene	1	1	µg/L	2	2	0.00%
cis-1,2-Dichloroethene	1	1	µg/L	10	10	0.00%
1,2-Dichloroethane	1	1	µg/L	10	9	10.53%
Trichloroethene	1	1	µg/L	4	3	28.57%
Tetrachloroethene	1	1	µg/L	1	1	0.00%