URS

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:	Orica Botany-September 2008 Quarterly	**Project/Task Number:**	43217860
Analytical Laboratory:	ALS Labmark	**Batch/Ref. Number(s):**	ES0812853 E039556
Date Sampled:	2/09/2008	**Sample Type:**	Water

Sample Handling, Receipt and Holding Times	Yes/No	Comments
COC completed adequately	Yes	
All requested analysis conducted	Yes	Trip Spike_02/09/08 was not received by ALS
Samples received intact and chilled	Yes	3.0°C- Ice present
Samples analysed within appropriate holding times per analytical methods.	Yes	

# of Primary Samples	# of QAQC Samples	# of Duplicate Samples	# of Triplicate Samples
37	3	5	3

Blanks

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

Type	Comments
MB & TB(TripBlank02 & Tripblank03)	All blanks have acceptable results less than the limits of reporting

Laboratory Control Samples (LCS)

Analyte	Comments
	All lab control samples have acceptable results within laboratory control limits

Matrix Spike (MS)

Analyte	Comments
Halogenated Aliphatic Compounds	The MS recovery of 1.1-Dichloroethene for BP21_08.00_02/09/08 was not determined, background level greater than or equal to 4x spike level
Halogenated Aliphatic Compounds	The MS recovery of Trichloroethene for BP02_24.00__02/09/08 was not determined, background level greater than or equal to 4x spike level

Trip Spike /Control Trip Spike

Analyte	% R	Comments
	Sample ID Trip Spike_02/09/08 was included in the COC but was not received by ALS	

Duplicates

Laboratory Duplicates	Comments
BP03_06.00	The recovery of Carbon disulfide(21.2%) was above the control limit of 20%
BP02_24.00	The recovery of Carbon disulfide(23.8%) was above the control limit of 20%

Intra-Laboratory Duplicates	Comments
BP21_08.00 & QC302	Intra-Laboratory Duplicates have acceptable results less than the limits of reporting or RPDs within control limits
BP03_12.00 & QC303	The RPD recovery for Carbon Tetrachloride was 32.85%, which is outside the LOR based limits
	The RPD recovery for Tetrachloroethene was 33.71%, which is outside the LOR based limits
	The RPD recovery for Hexachloroethane was 48.02%, which is outside the LOR based limits
BP02_08.00 & QC304	The RPD recovery 1,1-Dichloroethene was 37.84%, which is outside the LOR based limits
	The RPD recovery 1,2-Dichloroethane was 69.23%, which is outside the LOR based limits
	The RPD recovery trans-1,2-Dichloroethene was 34.92%, which is outside the LOR based limits
	The RPD recovery Trichloroethene was 89.66%, which is outside the LOR based limits
WG225S & QC500	Intra-Laboratory Duplicates have results less than the limits of reporting
WG68D & QC501	Intra-Laboratory Duplicates have results less than the limits of reporting

URS

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:	Orica Botany-September 2008 Quarterly	**Project/Task Number:**	43217860
Analytical Laboratory:	ALS Labmark	**Batch/Ref. Number(s):**	ES0812853 E039556
Date Sampled:	2/09/2008	**Sample Type:**	Water

Inter-Laboratory Duplicates	**Comments**
BP03_12.00 & QC402	The RPD recovery for Carbon Tetrachloride was 70.53%, which is outside the LOR based limits
	The RPD recovery for Tetrachloroethene was 92.96%, which is outside the LOR based limits
	The RPD recovery for Hexachloroethane was 75.93%, which is outside the LOR based limits
	The RPD recovery 1,1-Dichloroethane was 38.10%, which is outside the LOR based limits
	The RPD recovery 1,1,2-Trichloroethane was 52.84%, which is outside the LOR based limits
	The RPD recovery 1,2-Dichloroethane was 59.26%, which is outside the LOR based limits
	The RPD recovery Vinyl Chloride was 174.93%, which is outside the LOR based limits
	The RPD recovery Trichloroethene was 74.74%, which is outside the LOR based limits
	The RPD recovery Carbon disulfide was 134.46%, which is outside the LOR based limits
	The RPD recovery Chloroform was 107.81%, which is outside the LOR based limits
BP02_08.00 & QC403	The RPD recovery 1,1-Dichloroethene was 48.10%, which is outside the LOR based limits
	The RPD recovery 1,2-Dichloroethane was 56.24%, which is outside the LOR based limits
	The RPD recovery trans-1,2-Dichloroethene was 32.26%, which is outside the LOR based
	The RPD recovery 1,1-Dichloroethane was 58.33%, which is outside the LOR based limits
	The RPD recovery Vinyl Chloride was 146.24%, which is outside the LOR based limits
WG225S & QC600	Inter-Laboratory Duplicates have results less than the limits of reporting

Surrogate Monitoring Compound Analyses	
Analyte	**Comments**
VOC Surrogates	The recovery of Toluene-D8 in WG225S_02/09/08(111%) is outside the control limits 110%
Acid Extractable Surrogates	The recovery of 2.4.6-Tribromophenol in BP03_06.00_02/09/08(126%) is outside the control limits 123%
	The recovery of 2.4.6-Tribromophenol in BP03_16.00_02/09/08(128%) is outside the control limits 123%
	The recovery of 2-Fluorophenol in BP03_22.00_02/09/08 was not determined due to (target or non-target) matrix interference
	The recovery of Phenol-d6 in BP03_22.00_02/09/08 was not determined due to (target or non-target) matrix interference
	The recovery of Phenol-d6 in BP03_14.00_02/09/08 was not determined due to (target or non-target) matrix interference
	The recovery of 2-Chlorophenol-D4 in BP03_22.00_02/09/08 was not determined due to (target or non-target) matrix interference
Base/Neutral Extractable Surrogates	The recovery of Anthracene-d10 in BP03_14.00_02/09/08(134%) is outside the control limits 133%

Overall Comments

Various samples required dilution due to the presence of high level contaminants. ALS and Labmark adjusted the LORs accordingly
The trip spike (TS) with the Sample ID-Trip Spike_02/09/08 was included in the COC but was not received by ALS and therefore was not analysed . However, another TS was successfully deployed in the field and analysed during this field program. This coupled with the use of other QA/QC sampling techniques (Trip B) is considered to be sufficient as a check on the sample transportation methods used in the whole program.

Two matrix spikes were unable to be determined due to sample background levels greater than or equal to 4x the spike level. This will not affect the quality of the data as the results of the other MS analysis for this compound group were within the control limits.

The lab duplicates RPD outliers are not considered to be significant to the overall data quality of this batch. The RPD results in the majority of analysis results for this compound (carbon Bisulfide) as acceptable. (3 out of 5)

Elevated RPDs were reported in intra-laboratory and inter-laboratory duplicates. In general, the primary, secondary, tertiary sample results were within the same order of magnitude. As such, the highest values will be used in the interpretation of data from this batch. Sample results have been reconfirmed by each laboratory with variation possibility attributable to different sample handling and dilution methods. However, the exceptions to the cases stated above are such that the highest reported values are consistent with historical results and therefore considered to be acceptable for use.

ALS has noted the poor surrogate recoveries are due to sample matrix interference. This is unlikely to affect the quality of the data as the surrogate analysis which has performed Acid Ext. & Base/Neutral Ext. Surrogates are not relevant to this analysis suite of VOCs
This data is deemed acceptable for environmental interpretive analysis

Performed By:	Dane Mallinson	Reviewed By:	Matthew James
Date:	18-Sep-08	Date:	30-Sep-08

Location		BP21_08.00_02/09/08	BP21_08.00_02/09/08
Sample ID		BP21_08.00_02/09/08	QC302_02/09/08
Date Sampled		2/09/2008	2/09/2008
Sample Type		Primary	Secondary

Analyte	LOR1	LOR2	Units			Primary vs. Duplicate
1,1,2,2-Tetrachloroethane	1	1	µg/L	4	3	28.57%
1,1,2-Trichloroethane	1	1	µg/L	79	73	7.90%
1,1-Dichloroethane	1	1	µg/L	43	43	0.00%
1,1-Dichloroethene	1	1	µg/L	142	140	1.42%
1,1-Dichloropropylene	1	1	µg/L	1	1	0.00%
1,2-Dichloroethane	1	1	µg/L	149	156	4.59%
cis-1,2-Dichloroethene	1	1	µg/L	276	295	6.66%
Tetrachloroethene	1	1	µg/L	8	9	11.77%
trans-1,2-Dichloroethene	1	1	µg/L	23	24	4.26%
Trichloroethene	1	1	µg/L	33	36	8.70%
Vinyl chloride	10	10	µg/L	3120	3140	0.64%
Carbon disulfide	1	1	µg/L	72	59	19.85%
Chloroform	1	1	µg/L	23	24	4.26%

DATA VALIDATION
RPD Calculations

Location		BP03_12.00_02/09/08	BP03_12.00_02/09/08	BP03_12.00_02/09/08
Sample ID		BP03_12.00_02/09/08	QC303_02/09/08	QC402_02/09/08
Date Sampled		2/09/2008	2/09/2008	2/09/2008
Sample Type		Primary	Secondary	Tertiary

Analyte	LOR1	LOR2	LOR3	Units				Primary vs. Duplicate	Primary vs. Triplicate
1,1,2,2-Tetrachloroethane	1	1	5	µg/L	92	108	118	16.00%	24.76%
1,1,2-Trichloroethane	1	1	5	µg/L	110	104	189	5.61%	**52.84%**
1,1-Dichloroethane	1	1	5	µg/L	51	54	75	5.71%	**38.10%**
1,1-Dichloroethene	1	1	5	µg/L	52	54	56	3.77%	7.41%
1,2-Dichloroethane	1	1	5	µg/L	35000	28800	19000	19.44%	**59.26%**
Carbon Tetrachloride	1	1	5	µg/L	5600	4020	2680	**32.85%**	**70.53%**
cis-1,2-Dichloroethene	1	1	5	µg/L	101	106	136	4.83%	29.54%
Hexachlorobutadiene	1	1	-	µg/L	341	318	467	6.98%	31.19%
Tetrachloroethene	1	1	5	µg/L	31200	22200	11400	**33.71%**	**92.96%**
Trichloroethene	1	1	5	µg/L	669	672	305	0.45%	**74.74%**
Vinyl chloride	10	10	50	µg/L	3440	3530	230	2.58%	**174.93%**
Hexachlorobutadiene	2	2	-	µg/L	388	407	467	4.78%	18.48%
Hexachloroethane	2	2	2	µg/L	125	204	278	**48.02%**	**75.93%**
Carbon disulfide	1	1	5	µg/L	1240	1250	243	0.80%	**134.46%**
Chloroform	1	1	5	µg/L	2060	2080	617	0.97%	**107.81%**

DATA VALIDATION
RPD Calculations

Location		BP02_08.00_02/09/08	BP02_08.00_02/09/08	BP02_08.00_02/09/08
Sample ID		BP02_08.00_02/09/08	QC304_02/09/08	QC403_02/09/08
Date Sampled		2/09/2008	2/09/2008	2/09/2008
Sample Type		**Primary**	**Secondary**	**Tertiary**

Analyte	LOR1	LOR2	LOR3	Units				Primary vs. Duplicate	Primary vs. Triplicate
1,1-Dichloroethane	1	1	5	µg/L	119	153	217	25.00%	**58.33%**
1,1-Dichloroethene	1	1	5	µg/L	30	44	49	**37.84%**	**48.10%**
1,2-Dichloroethane	1	1	5	µg/L	385	187	216	**69.23%**	**56.24%**
cis-1,2-Dichloroethene	1	1	5	µg/L	1020	1190	1020	15.39%	0.00%
Tetrachloroethene	1	1	5	µg/L	8	7	< 5	13.33%	46.15%
trans-1,2-Dichloroethene	1	1	5	µg/L	26	37	36	**34.92%**	**32.26%**
Trichloroethene	1	1	500	µg/L	21	8	<500	**89.66%**	183.88%
Vinyl chloride	10	10	50	µg/L	8050	9110	1250	12.35%	**146.24%**
Carbon disulfide	1	1	500	µg/L	65	52	<500	22.22%	153.98%
Chloroform	1	1	500	µg/L	8	9	<500	11.77%	193.70%

Location		WG68D_02/09/08	WG68D_02/09/08
Sample ID		WG68D_02/09/08	QC501_02/09/08
Date Sampled		2/09/2008	2/09/2008
Sample Type		Primary	Secondary

Analyte	LOR1	LOR2	Units			Primary vs. Duplicate
cis-1,2-Dichloroethene	1	1	µg/L	1	1	0.00%
Hexachlorobutadiene	1	1	µg/L	28	27	3.64%
trans-1,2-Dichloroethene	1	1	µg/L	7	6	15.39%
Vinyl chloride	10	10	µg/L	10	< 10	0.00%
Carbon disulfide	1	1	µg/L	2	2	0.00%

URS

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:	Orica Botany-September 2008 Quarterly	**Project/Task Number:**	43217860
Analytical Laboratory:	ALS Labmark	**Batch/Ref. Number(s):**	ES0812863 E039553
Date Sampled:	1/09/2008	**Sample Type:**	Water

Sample Handling, Receipt and Holding Times	Yes/No	Comments
COC completed adequately	Yes	
All requested analysis conducted	Yes	
Samples received intact and chilled	Yes	3.8°C- Ice present
Samples analysed within appropriate holding times per analytical methods.	Yes	

# of Primary Samples	# of QAQC Samples	# of Duplicate Samples	# of Triplicate Samples
40	1	1	1

Blanks

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

Type	Comments
MB & TB	All blanks have acceptable results less than the limits of reporting

Laboratory Control Samples (LCS)

Analyte	Comments
Halogenated Aliphatic Compounds	Recovery of Vinyl chloride(127.0%) is outside the control limits(72-123%)

Matrix Spike (MS)

Analyte	Comments
	All matrix spike recoveries are within laboratory control limits

Trip Spike /Control Trip Spike

Analyte	% R	Comments
n/a		

Duplicates

Laboratory Duplicates	Comments
	Laboratory Duplicates (LD) have acceptable results less than the limits of reporting or RPDs within control limits

Intra-Laboratory Duplicates	Comments
BP60_16.00 & QC301	Intra-Laboratory Duplicates have acceptable results less than the limits of reporting or RPDs within control limits

Inter-Laboratory Duplicates	Comments
BP60_16.00 & QC401	The RPD recovery for 1,1,2,2-Tetrachloroethane was 87.77%, which is outside the control limits
	The RPD recovery for 1,1,2-Trichloroethane was 53.37%, which is outside the control limits
	The RPD recovery for 1,1-Dichloroethane was 49.19%, which is outside the control limits
	The RPD recovery for 1,1-Dichloroethene was 91.41%, which is outside the control limits
	The RPD recovery for 1,2-Dichloroethane was 38.22%, which is outside the control limits
	The RPD recovery for cis-1,2-Dichloroethene was 60.42%, which is outside the control limits
	The RPD recovery for trans-1,2-Dichloroethene was 84.06%, which is outside the control limits
	The RPD recovery for Trichloroethene was 77.86%, which is outside the control limits
	The RPD recovery for Vinyl chloride was 175.97%, which is outside the control limits
	The RPD recovery for Carbon disulfide was 93.17%, which is outside the control limits
	The RPD recovery for Chloroform was 58.73%, which is outside the control limits

URS

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:	Orica Botany-September 2008 Quarterly	**Project/Task Number:**	43217860
Analytical Laboratory:	ALS Labmark	**Batch/Ref. Number(s):**	ES0812863 E039553
Date Sampled:	1/09/2008	**Sample Type:**	Water

Surrogate Monitoring Compound Analyses

Analyte	Comments
VOCs	The RPD recovery for Toluene-D8 in BP60_10.00_01/09/08 was 110%, which is outside the upper control limit (111%)
	The RPD recovery for Toluene-D8 in BP77_04.00_01/09/08 was 110%, which is outside upper control limit (111%)
	The RPD recovery for Toluene-D8 in BP77_28.00_01/09/08 was 110%, which is outsideupper control limit (111%)
	The RPD recovery for 1.2-Dichloroethane-D4 in WG231_S_01/09/08 was 122%, which is above the upper control limit (111%)
	The RPD recovery for 1.2-Dichloroethane-D4 in WG154_D_01/09/08 was not determined due to (target or non-target) matrix interferences
Acid Extractable Surrogate	The RPD recovery for 2-Chlorophenol-D4 in WG154_S_01/09/08 was not determined due to (target or non-target) matrix interferences

Overall Comments

The LCS outlier for Vinyl chloride could lead to an over reporting of Vinyl chloride. However, this is the only outlier in the LCS analysis for the Aliphatic compounds (run twice). This is considered not to affect the overall data quality of this batch.

RPDs in the field triplicate analysis were outside the control limits. Primary and secondary sample results were consistently higher than those reported in the triplicate samples. The triplicate sample results were run at different dilutions and reconfirmed by the secondary lab. The variation in the results may have been due to different sample handling methods (dilution). However the results of the primary and secondary samples are generally consistent with the historical results from this location and depth. The highest values will be used in the interpretation of the data for this batch.

Sample BP59_04.00 has been reported as recovering <1 Ug/L of Vinyl Chloride from the SIM analysis and 10ug/L from the normal analysis. ALS (Jacob Waugh: 22/10/08) has confirmed this result as a false positive and have re- issed the report with the corrected data.

The surrogate exceedances were marginal and considered not to affect the overall quality of the results.

Some surrogates were unable to be recovered due to sample matrix interference, this should not affect the quality of the data as these samples had no other QA/QC outliers.

ALS has reported that the elevated surrogates recoveries are due to sample matrix interferences. This was confirmed by re-analysis.
This data is deemed acceptable for environmental interpretive analysis

Performed By:	Dane Mallinson	Reviewed By:	Matthew James
Date:	23-Sep-08	Date:	01-Oct-08

Data Validation

RPD Exceedences

Location		BP60_16.00_01/09/08	BP60_16.00_01/09/08	BP60_16.00_01/09/08
Sample ID		BP60_16.00_01/09/08	QC301_01/09/08	QC401_01/09/2008
Date Sampled		9/01/2008	9/01/2008	9/01/2008
Sample Type		**Primary**	**Secondary**	**Tertiary**

Analyte	LOR1	LOR2	LOR3	Units				Primary vs. Duplicate	Primary vs. Triplicate
1,1,2,2-Tetrachloroethane	1	1	5	µg/L	1100	1120	429	1.80%	**87.77%**
1,1,2-Trichloroethane	1	1	5	µg/L	6670	6390	3860	4.29%	**53.37%**
1,1-Dichloroethane	1	1	5	µg/L	965	1070	584	10.32%	**49.19%**
1,1-Dichloroethene	1	1	5	µg/L	5340	4480	1990	17.52%	**91.41%**
1,2-Dichloroethane	1	1	5	µg/L	37400	40400	25400	7.71%	**38.22%**
cis-1,2-Dichloroethene	1	1	5	µg/L	2500	2740	1340	9.16%	**60.42%**
Methylene chloride	5	5	20	µg/L	1190	1260	660	5.71%	**57.30%**
Tetrachloroethene	1	1	5	µg/L	1130	1240	927	9.28%	19.74%
trans-1,2-Dichloroethene	1	1	5	µg/L	441	447	180	1.35%	**84.06%**
Trichloroethene	1	1	5	µg/L	3890	3760	1710	3.40%	**77.86%**
Vinyl chloride	10	10	50	µg/L	41000	31200	2620	27.15%	**175.97%**
Carbon disulfide	1	1	5	µg/L	236	252	86	6.56%	**93.17%**
Chloroform	1	1	5	µg/L	5110	5200	2790	1.75%	**58.73%**

URS

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:	Orica Botany-September 2008 Quarterly	**Project/Task Number:**	43217860
Analytical Laboratory:	ALS Labmark	**Batch/Ref. Number(s):**	ES0812914 E039558
Date Sampled:	3/09/2008	**Sample Type:**	Water

Sample Handling, Receipt and Holding Times	**Yes/No**	**Comments**
COC completed adequately	Yes	
All requested analysis conducted	Yes	
Samples received intact and chilled	Yes	2.6°C- Ice present
Samples analysed within appropriate holding times per analytical methods.	Yes	

# of Primary Samples	**# of QAQC Samples**	**# of Duplicate Samples**	**# of Triplicate Samples**
38	1	3	2

Blanks

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

Type	**Comments**
MB & TB	All blanks have acceptable results less than the limits of reporting

Laboratory Control Samples (LCS)

Analyte	**Comments**
Sulfonated Compunds	Recovery of Carbon disulfide(77.7%) is below the control limits(78.6-121%)
Halogenated Aliphatic Compounds	Recovery of Bromomethane(74.0%) is below the control limits(74.2-125%)

Matrix Spike (MS)

Analyte	**Comments**
	All matrix spike recoveries are within laboratory control limits

Trip Spike /Control Trip Spike

Analyte	**% R**	**Comments**
n/a		

Duplicates

Laboratory Duplicates	**Comments**
	Laboratory Duplicates (LD) have acceptable results less than the limits of reporting or RPDs within control limits

Intra-Laboratory Duplicates	**Comments**
BP89_06.00 & QC305	Intra-Laboratory Duplicates have acceptable results less than the limits of reporting or RPDs within control limits
BP111_06.00 & QC502	Intra-Laboratory Duplicates have acceptable results less than the limits of reporting or RPDs within control limits
WG30_03/09/08 & QC306	Intra-Laboratory Duplicates have acceptable results less than the limits of reporting or RPDs within control limits

Inter-Laboratory Duplicates	**Comments**
BP111_06.00 & QC602	Intra-Laboratory Duplicates have acceptable results less than the limits of reporting or RPDs within control limits
WG30_03/09/08 & QC404	The RPD recovery for Trichloroethene was 88.89%, which is outside the LOR based control limits

Surrogate Monitoring Compound Analyses	
Analyte	**Comments**
VOCs	The RPD recovery for Toluene-D8 was 111%, which is above the upper control limit (110%)
	The RPD recovery for Toluene-D8 was 116%, which is above the upper control limit (110%)
	The RPD recovery for Toluene-D8 was 111%, which is above the upper control limit (110%)
	The RPD recovery for Toluene-D8 was 114%, which is above the upper control limit (110%)
	The RPD recovery for Toluene-D8 was 111%, which is above the upper control limit (110%)
	The RPD recovery for Toluene-D8 was 111%, which is above the upper control limit (110%)
	The RPD recovery for 1.2-Dichloroethane-D4 was 122%, which is above the upper control limit (120%)

Overall Comments

The LCS recoveries for Carbon disulphide are only marginally below the control limits, this could will result in a slight over-reporting of results. As there is no other QC/QA outliers for this analyte, it is unlikely that this marginal exceedance will affect the quality of this data.

Level of Reporting raised for toluene may be due to ambient background levels in the laboratory

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

There is an elevated RPD of Trichloroethene detected between WG30 & QC404. The results are within the same order of magnitude. As a conservative measure, the highest value will be used when reporting

The surrogate outlier for 1.2-Dichloroethane-D4 could lead to over reporting of the recovery of this compound. As all other samples in this batch of 38 did not breach the surrogate recovery for this compound it is unlikely that this result will affect the quality of the data.

The surrogate outliers for Toluene-D8 are almost all marginally above the accepted control limit and could result in an over 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, the surrogate exceedances from this batch will not affect the quality of the data.

This data is deemed acceptable for environmental interpretive analysis

Performed By:	Dane Mallinson	Reviewed By:	Matthew James
Date:	18-Sep-08	Date:	09-Oct-08

DATA VALIDATION
RPD Calculations

Location	WG30_03/09/08	WG30_03/09/08	WG30_03/09/08
Sample ID	WG30_03/09/08	QC306_03/09/08	QC404_03/09/08
Date Sampled	9/03/2008	9/03/2008	9/03/2008
Sample Type	**Primary**	**Secondary**	**Tertiary**

Analyte	LOR1	LOR2	LOR3	Units				Primary vs. Duplicate	Primary vs. Triplicate
1,2-Dichloroethane	1	1	5	µg/L	2	1	< 5	66.67%	85.71%
cis-1,2-Dichloroethene	1	1	5	µg/L	3	3	< 5	0.00%	50.00%
Tetrachloroethene	1	1	5	µg/L	9	8	< 5	11.77%	57.14%
Trichloroethene	1	1	5	µg/L	13	12	< 5	8.00%	**88.89%**

DATA VALIDATION
RPD Calculations

Location	BP111_06.00_03/09/08	BP111_06.00_03/09/08	BP111_06.00_03/09/08
Sample ID	BP111_06.00_03/09/08	QC502_03/09/08	QC602_03/09/08
Date Sampled	9/03/2008	9/03/2008	9/03/2008
Sample Type	**Primary**	**Secondary**	**Tertiary**

Analyte	LOR1	LOR2	LOR3	Units				Primary vs. Duplicate	Primary vs. Triplicate
1,2-Dichloroethane	1	1	5	µg/L	6	6	< 5	0.00%	18.18%
Trichloroethene	1	1	5	µg/L	2	1	< 5	66.67%	85.71%

URS

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:	Orica Botany-September 2008 Quarterly	**Project/Task Number:**	43217860
Analytical Laboratory:	ALS Labmark	**Batch/Ref. Number(s):**	ES0813020 E039584 & E039662
Date Sampled:	04 & 05/09/2008	**Sample Type:**	Water

Sample Handling, Receipt and Holding Times	Yes/No	Comments
COC completed adequately	No	A sample to be forwarded on to Labmark by ALS not included on COC, sample BP113_18.00 was not received.
All requested analysis conducted	Yes	
Samples received intact and chilled	Yes	1.4°C-Ice present
Samples analysed within appropriate holding times per analytical methods.	Yes	

# of Primary Samples	# of QAQC Samples	# of Duplicate Samples	# of Triplicate Samples
29	3	3	2

Blanks

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

Type	Comments
MB & TB (Trip Blank01 & Trip Blank02)	All method blanks have acceptable results less than the limits of reporting

Laboratory Control Samples (LCS)

Analyte	Comments
VOCs	The recovery of 1.3- Dichlorobenzene (115%) was above the control limits (113%)
	The recovery of 1.4- Dichlorobenzene (115%) was above the control limits (114%)
	The recovery of 1.2- Dichlorobenzene (115%) was above the control limits (112%)
Chlorinated HCs	The recovery of Pentachlorobenzene (111%) was above the control limits (107%)
	The recovery of Hexachlorobenzene (HCB)(111%) was above the control limits (110%)
	The recovery of 1.3.5-Trichlorobenzene (111%) was above the control limits (110%)

Matrix Spike (MS)

Analyte	Comments
	All matrix spike recoveries are within laboratory control limits

Trip Spike /Control Trip Spike

Analyte	% R	Comments
TRIP SPIKE_04/09/08	The recovery of 1.1-Dichloroethene was 26µg/L = 104% recovery	
	The recovery of Trichloroethene was 23µg/L = 92% recovery	

Duplicates

Laboratory Duplicates	Comments
	All laboratory duplicate RPDs are within the LOR based control limits

Intra-Laboratory Duplicates	Comments
BP113_06.00 & QC305	Intra- Laboratory Duplicates have acceptable results less than the limits of reporting or RPDs within control limits
BP80_06.00 & QC503	Intra- Laboratory Duplicates have acceptable results less than the limits of reporting or RPDs within control limits
BP61_04.00 & QC504	Intra- Laboratory Duplicates have acceptable results less than the limits of reporting or RPDs within control limits

URS

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:	Orica Botany-September 2008 Quarterly	**Project/Task Number:**	43217860
Analytical Laboratory:	ALS Labmark	**Batch/Ref. Number(s):**	ES0813020 E039584 & E039662
Date Sampled:	04 & 05/09/2008	**Sample Type:**	Water

Inter-Laboratory Duplicates	**Comments**
BP113_06.00 & QC405	Intra- Laboratory Duplicates have acceptable results less than the limits of reporting or RPDs within control limits
BP61_04.00 & QC604	Intra- Laboratory Duplicates have acceptable results less than the limits of reporting or RPDs within control limits

Surrogate Monitoring Compound Analyses

Analyte	**Comments**
BP113_06.00_04/09/08	The recovery of 1.2-Dichloroethane-D4(122%) is greater than the upper data quality objective (120%)
BP113_06.00_04/09/08	The recovery of Toluene-D8(122%) is greater than the upper data quality objective (110%)
BP41_06.00_04/09/09	The recovery of Toluene-D8(87%) is less than the lower data quality objective (88%)
BP61_16.00_04/09/10	The recovery of Toluene-D8(80.6%) is less than the lower data quality objective (88%)
BP113_06.00_04/09/08	The recovery of 4-Bromofluorobenzene(119%) is greater than the upper data quality objective (115%)
BP113_06.00_04/09/10	The recovery for 2-Fluorophenol was not determined due to matrix (target or non-target) interferences
BP113_06.00_04/09/11	The recovery for Phenol-d6 was not determined due to matrix (target or non-target) interferences
BP113_06.00_04/09/12	The recovery for 2-Fluorobiphenol was not determined due to matrix (target or non-target) interferences

Overall Comments

The triplicate sample that was not marked on the COC to be passed on to Labmark by ALS, was corrected by field staff within the appropriate holding time. Sample BP113_18.00 was incorrectly recorded on the COC. It was not sampled on this day.

The LCS exceedences could result in over reporting of these analytes for all samples. As none of these analytes were recovered in the entire batch then it is unlikely that these exceedances will affect the quality of the data.

The 1.2-Dichloroethane-D4 surrogate recovery in BP113_06.00_04/09/08 could lead to an over reporting of the VOC compound group in this sample. As no recovery was detected it is unlikley that this result has affected the quality of this data. The Toluene-D8 aromatic surrogate and the Phenol surrogate are not representative of the analysis scan which targets aliphatic compounds. For the semi volatile analysis suite performed on BP113_06.00 and BP61_16.00 there were no detections of aromatic compounds which these surrogates are representative of. Therefore, this surrogate exceedance will not affect the quality of the data.

This data is deemed acceptable for environmental interpretive analysis

Performed By:	Dane Mallinson	Reviewed By:	M. James
Date:	29-Sep-08	Date:	10-Oct-08

Data Validation

RPD Calculations

Location	BP80_06.00_04/09/08	BP80_06.00_04/09/08
Sample ID	BP80_06.00_04/09/08	QC503_04/09/08
Date Sampled	9/04/2008	9/04/2008
Sample Type	Primary	Secondary

Analyte	LOR1	LOR2	Units			Primary vs. Duplicate
1,1,2,2-Tetrachloroethane	1	1	µg/L	8	9	11.77%
1,1,2-Trichloroethane	1	1	µg/L	76	79	3.87%
1,1-Dichloroethane	1	1	µg/L	1	1	0.00%
1,1-Dichloroethene	1	1	µg/L	2	2	0.00%
1,2-Dichloroethane	1	1	µg/L	1	2	66.67%
Carbon Tetrachloride	1	1	µg/L	59	64	8.13%
cis-1,2-Dichloroethene	1	1	µg/L	23	24	4.26%
Hexachlorobutadiene	1	1	µg/L	89	95	6.52%
Tetrachloroethene	1	1	µg/L	52	55	5.61%
trans-1,2-Dichloroethene	1	1	µg/L	14	14	0.00%
Trichloroethene	1	1	µg/L	86	90	4.55%
Vinyl chloride	10	10	µg/L	510	540	5.71%
Carbon disulfide	1	1	µg/L	2	2	0.00%
Chloroform	1	1	µg/L	3	4	28.57%

Data Validation

RPD Calculations

Location	BP61_04.00_05/09/08	BP61_04.00_05/09/08	BP61_04.00_05/09/08
Sample ID	BP61_04.00_05/09/08	QC504_05/09/08	QC604_05/09/08
Date Sampled	9/05/2008	9/05/2008	9/05/2008
Sample Type	**Primary**	**Secondary**	**Tertiary**

Analyte	LOR1	LOR2	LOR3	Units				Primary vs. Duplicate	Primary vs. Triplicate
1,1-Dichloroethane	1	1	5	µg/L	12	13	8	8.00%	40.00%
1,2-Dichloroethane	1	1	5	µg/L	2	2	< 5	0.00%	85.71%
Tetrachloroethene	1	1	5	µg/L	1	< 1	< 5	0.00%	133.33%
Carbon disulfide	1	1	5	µg/L	4	4	< 5	0.00%	22.22%

Data Validation

RPD Calculations

Location	BP113_03.00_04/09/08	BP113_06.00_04/09/08	BP113_06.00_04/09/08
Sample ID	BP113_03.00_04/09/08	QC307_04/09/08	QC405_04/09/08
Date Sampled	9/04/2008	9/04/2008	9/04/2008
Sample Type	**Primary**	**Secondary**	**Tertiary**

Analyte	LOR1	LOR2	LOR3	Units				Primary vs. Duplicate	Primary vs. Triplicate
Trichloroethene	1	1	5	µg/L	1	< 1	< 5	**0.00%**	**-**

URS

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:	Orica Botany-September 2008 Quarterly	**Project/Task Number:**	43217860
Analytical Laboratory:	ALS Labmark	**Batch/Ref. Number(s):**	ES0813238 E039682
Date Sampled:	8/09/2008	**Sample Type:**	Water

Sample Handling, Receipt and Holding Times	Yes/No	Comments
COC completed adequately	Yes	
All requested analysis conducted	Yes	
Samples received intact and chilled	Yes	2.6°C - Ice present
Samples analysed within appropriate holding times per analytical methods.	Yes	

# of Primary Samples	# of QAQC Samples	# of Duplicate Samples	# of Triplicate Samples
54	2	5	3

Blanks

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

Type	Comments
MB & TB(TB1 &TB2)	All method blanks have acceptable results less than the limits of reporting

Laboratory Control Samples (LCS)

Analyte	Comments
	The recovery of Vinyl chloride (125%) is greater than the upper control limit (123%)
	The recovery of Chloroethane (120%) is greater than the upper control limit (119%)

Matrix Spike (MS)

Analyte	Comments
	All matrix spike recoveries are within laboratory control limits

Trip Spike /Control Trip Spike

Analyte	% R	Comments
n/a		

Duplicates

Laboratory Duplicates	Comments
	Laboratory Duplicates (LD) have acceptable results less than the limits of reporting or RPDs within control limits

Intra-Laboratory Duplicates	Comments
BP43_00.50_L & QC101	Intra-Laboratory Duplicates have acceptable results less than the limits of reporting or RPDs within control limits
BP64_02.00_L & QC102	Intra-Laboratory Duplicates have acceptable results less than the limits of reporting or RPDs within control limits
BP115_06.50_L & QC103	Intra-Laboratory Duplicates have acceptable results less than the limits of reporting or RPDs within control limits
SW031_H & QC104	Intra-Laboratory Duplicates have acceptable results less than the limits of reporting or RPDs within control limits
BP65_02.00_H & QC105	Intra-Laboratory Duplicates have acceptable results less than the limits of reporting or RPDs within control limits

Inter-Laboratory Duplicates	Comments
BP43_00.50_L & QC201	The RPD recovery for Vinyl chloride was 97.14%, which is outside the LOR based control limits
BP64_02.00_L & QC202	The RPD recovery for 1,2-Dichloroethane was 37.50%, which is outside the LOR based control limits
	The RPD recovery for Vinyl chloride was 60.87%, which is outside the LOR based control limits
BP115_06.50_L & QC203	The RPD recovery for 1,1,2,2-Tetrachloroethane was 58.32%, which is outside the LOR based control
	The RPD recovery for trans-1,2-Dichloroethene was 38.77%, which is outside the LOR based control limits
	The RPD recovery for Carbon disulfide was 51.71%, which is outside the LOR based control limits
	The RPD recovery for Methylene chloride was 38.06%, which is outside the LOR based control limits

URS

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:	Orica Botany-September 2008 Quarterly	**Project/Task Number:**	43217860
Analytical Laboratory:	ALS Labmark	**Batch/Ref. Number(s):**	ES0813238 E039682
Date Sampled:	8/09/2008	**Sample Type:**	Water

Surrogate Monitoring Compound Analyses

Analyte	Comments
VOC analytes	The recovery of 1.2-Dichloroethane-D4 is greater than the upper data quality objective (120%) in the following samples: BP42_00.10_L_08/09/08 (123%), BP64_00.10_L_08/09/08 (123%), BP65_00.50_L_08/09/08 (126%), SW048_L_08/09/08 (126%), BP71A_01.00_L_08/09/08 (126%),BP42_00.10_H_08/09/08 (124%), BP42_02.00_H_08/09/08 (126%), BP64_02.00_H_08/09/08 (123%), SW028_H_08/09/08 (122%), BP42_00.50_L_08/09/08 (121%), BP65_00.10_L_08/09/08 (123%), BP65_02.00_L_08/09/08 (123%), SW030_08/09/08 (121%), SW060_08/09/08 (126%), WG75_I_08/09/08 (125%), MWF15_S_08/09/08 (124%), BP42_00.50_H_08/09/08 (125%), SW029_H_08/09/08 (122%) and SW048_H_08/09/09 (122%)
	The recovery of Toluene-D8 is less than the lower data quality objective (88-110%) in samples BP43_00.50_L_08/09/08 (80.9%), SW031_L_08/09/08 (86.5%), BP01_06.00_08/09/08 (82.4%), MWF15_I_08/09/08 (83.2%), BP43_00.10_L_08/09/08 (86.4%), BP43_02.00_L_08/09/08 (87.8%), BP64_00.50_L_08/09/08 (85.6%), BP01_02.00_08/09/08 (81.8%), MWF15_D_08/09/08 (80.2%), BP65_00.10_H_08/09/08 (86.6%) and BP65_02.00_H_08/09/09 (83.8%).
	The recovery of Toluene-D8 is greater than the higher data quality objective (88-110%) in samples: BP64_00.10_L_08/09/08 (111%), BP64_02.00_H_08/09/08 (111%), BP65_00.10_L_08/09/08 (111%), SW030_08/09/08 (113%) and SW060_08/09/08 (110%)
	The recovery of 4-Bromofluorobenzene is less than the lower data quality objective (88-110%) in samples: BP43_00.50_L_08/09/08 (81.8%), SW031_L_08/09/09 (85.5%), MWF15_I_08/09/08 (85.9%), BP43_02.00_L_08/09/08 (83.2%), MWF15_D_08/09/08 (80.8%) and BP65_02.00_H_08/09/08 (83.2%)
	The recovery of 4-Bromofluorobenzene is greater than the higher data quality objective (88-110%) in samples; BP65_02.00_L_08/09/08 (116%), BP42_00.50_L_08/09/08 (115%) and SW060_08/09/08 (115%),

Overall Comments

Particular samples required dilution due to the presence of high levels of target analytes. LORs were adjusted accordingly.

The LCS recoveries of Chloroethane only marginally exceeds the accepted upper control limits. This could lead to over reporting of these analytes. However, the outliers are not considered to affect the overall data quality of this batch since majority of the LCS recoveries for the VOC compound group were acceptable.

The elevated RPDs detected in intra-laboratory duplicates and inter-laboratory duplicates are generally the same order of magnitude and consistent with historical results. Thus the outliers are considered not to significantly affect the overall quality of this batch. As a conservative measure the highest value will be used for reporting.

The Toluene-D8 and 4-Bromofluorobenzene aromatic surrogates are not representative of the analysis scan which targets aliphatic compounds. Therefore, these surrogate exceedances are unlikely to affect the quality of the data in this batch.

The 1.2-Dichloroethane-D4 surrogate recoveries could result in an over reporting of this compound in these samples. ALS has noted that these surrogate outlirers are the result of matrix interferences and the results were confirmed by re-analysis. As such this is considered not to affect the overall data quality of this batch. This batch is acceptable for use.

Performed By:	Dane Mallinson	Reviewed By:	M. James
Date:	26-Sep-08	Date:	10-Oct-08

Data Validation

RPD Calculations

Location	BP43_00.50_L_08/09/08	BP43_00.50_L_08/09/08	BP43_00.50_L_08/09/08
Sample ID	BP43_00.50_L_08/09/08	QC101_08/09/08	QC201_08/09/08
Date Sampled	9/08/2008	9/08/2008	9/08/2008
Sample Type	**Primary**	**Secondary**	**Tertiary**

Analyte	**LOR1**	**LOR2**	**LOR3**	**Units**				**Primary vs. Duplicate**	**Primary vs. Triplicate**
1,1-Dichloroethane	1	1	5	µg/L	26	22	27	16.67%	3.77%
1,2-Dichloroethane	1	1	5	µg/L	16	15	24	6.45%	40.00%
cis-1,2-Dichloroethene	1	1	5	µg/L	6	6	7	0.00%	15.39%
Vinyl chloride	10	10	50	µg/L	520	440	180	16.67%	**97.14%**
Chloroform	1	1	5	µg/L	8	8	9	0.00%	11.77%

Data Validation

RPD Calculations

Location	BP64_02.00_L_08/09/08	BP64_02.00_L_08/09/08	BP64_02.00_L_08/09/08
Sample ID	BP64_02.00_L_08/09/08	QC102_08/09/08	QC202_08/09/08
Date Sampled	9/08/2008	9/08/2008	9/08/2008
Sample Type	**Primary**	**Secondary**	**Tertiary**

Analyte	LOR1	LOR2	LOR3	Units				Primary vs. Duplicate	Primary vs. Triplicate
1,1,2-Trichloroethane	1	1	5	µg/L	3	3	5	0.00%	50.00%
1,1-Dichloroethane	1	1	5	µg/L	8	8	9	0.00%	11.77%
1,1-Dichloroethene	1	1	5	µg/L	4	3	< 5	28.57%	22.22%
1,2-Dichloroethane	1	1	5	µg/L	91	87	133	4.49%	**37.50%**
cis-1,2-Dichloroethene	1	1	5	µg/L	31	27	33	13.79%	6.25%
Tetrachloroethene	1	1	5	µg/L	< 1	1	< 5	0.00%	-
trans-1,2-Dichloroethene	1	1	5	µg/L	17	14	12	19.36%	34.48%
Trichloroethene	1	1	5	µg/L	4	5	< 5	22.22%	22.22%
Vinyl chloride	10	10	50	µg/L	150	130	80	14.29%	**60.87%**
Chloroform	1	1	5	µg/L	2	2	< 5	0.00%	85.71%

Data Validation
RPD Calculations

Location		BP115_06.50_08/09/08	BP115_06.50_08/09/08	BP115_06.50_08/09/08
Sample ID		BP115_06.50_08/09/08	QC103_08/09/08	QC203_08/09/08
Date Sampled		9/08/2008	9/08/2008	9/08/2008
Sample Type		**Primary**	**Secondary**	**Tertiary**

Analyte	LOR1	LOR2	LOR3	Units				Primary vs. Duplicate	Primary vs. Triplicate
1,1,2,2-Tetrachloroethane	1	1	5	µg/L	713	676	1300	5.33%	**58.32%**
1,1,2-Trichloroethane	1	1	5	µg/L	931	794	1140	15.88%	20.18%
1,1-Dichloroethane	1	1	5	µg/L	63	64	62	1.58%	1.60%
1,1-Dichloroethene	1	1	5	µg/L	101	121	71	18.02%	34.88%
1,2-Dichloroethane	1	1	5	µg/L	1730	1550	2210	10.98%	24.37%
cis-1,2-Dichloroethene	1	1	5	µg/L	2250	2340	2490	3.92%	10.13%
Methylene chloride	5	5	20	µg/L	147	140	100	4.88%	**38.06%**
Tetrachloroethene	1	1	5	µg/L	425	480	526	12.16%	21.24%
trans-1,2-Dichloroethene	1	1	5	µg/L	388	357	262	8.32%	**38.77%**
Trichloroethene	1	1	5	µg/L	2200	2450	2180	10.75%	0.91%
Vinyl chloride	10	10	50	µg/L	2720	2260	2190	18.47%	21.59%
Carbon disulfide	1	1	5	µg/L	129	153	76	17.02%	**51.71%**
Chloroform	1	1	5	µg/L	728	712	844	2.22%	14.76%

Data Validation

RPD Calculations

Location	SW031_H_08/09/08	SW031_H_08/09/08
Sample ID	SW031_H_08/09/08	QC104_08/09/08
Date Sampled	9/08/2008	9/08/2008
Sample Type	**Primary**	**Secondary**

Analyte	LOR1	LOR2	Units			Primary vs. Duplicate
1,2-Dichloroethane	1	1	µg/L	8	8	0.00%
Carbon Tetrachloride	1	1	µg/L	4	4	0.00%
cis-1,2-Dichloroethene	1	1	µg/L	78	89	13.17%
Tetrachloroethene	1	1	µg/L	8	4	66.67%
trans-1,2-Dichloroethene	1	1	µg/L	9	12	28.57%
Trichloroethene	1	1	µg/L	13	14	7.41%
Vinyl chloride	10	10	µg/L	110	140	24.00%
Chloroform	1	1	µg/L	11	12	8.70%

Data Validation

RPD Calculations

Location	BP65_02.00_H_08/09/08	BP65_02.00_H_08/09/08
Sample ID	BP65_02.00_H_08/09/08	QC105_08/09/08
Date Sampled	9/08/2008	9/08/2008
Sample Type	Primary	Secondary

Analyte	LOR1	LOR2	Units			Primary vs. Duplicate
1,1-Dichloroethane	1	1	µg/L	3	3	0.00%
1,1-Dichloroethene	1	1	µg/L	4	4	0.00%
1,2-Dichloroethane	1	1	µg/L	26	23	12.24%
cis-1,2-Dichloroethene	1	1	µg/L	10	10	0.00%
Tetrachloroethene	1	1	µg/L	1	1	0.00%
trans-1,2-Dichloroethene	1	1	µg/L	1	1	0.00%
Trichloroethene	1	1	µg/L	4	3	28.57%

URS

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:	Orica Botany-September 2008 Quarterly	**Project/Task Number:**	43217860
Analytical Laboratory:	ALS	**Batch/Ref. Number(s):**	ES0813387
Date Sampled:	9th & 11/09/2008	**Sample Type:**	Water

Sample Handling, Receipt and Holding Times	Yes/No	Comments
COC completed adequately	Yes	
All requested analysis conducted	Yes	
Samples received intact and chilled	Yes	2.6°C-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	5	0

Blanks

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

Type	Comments
MB & TB	All method blanks have acceptable results less than the limits of reporting

Laboratory Control Samples (LCS)

Analyte	Comments
	All LCS recoveries are within laboratory control limits

Matrix Spike (MS)

Analyte	Comments
	All matrix spike recoveries are within laboratory control limits

Trip Spike /Control Trip Spike

Analyte	% R	Comments
n/a		

Duplicates

Laboratory Duplicates	Comments
	Laboratory Duplicates (LD) have acceptable results less than the limits of reporting or RPDs within control limits

Intra-Laboratory Duplicates	Comments
BP114_20.00 & QC308	Intra-Laboratory Duplicates have acceptable results less than the limits of reporting or RPDs within control limits
BP62_12.00 & QC309	Intra-Laboratory Duplicates have acceptable results less than the limits of reporting or RPDs within control limits
BP07_10.00 & QC310	Intra-Laboratory Duplicates have acceptable results less than the limits of reporting or RPDs within control limits
BP91_24.00 & QC311	Intra-Laboratory Duplicates have acceptable results less than the limits of reporting or RPDs within control limits
BP91_22.00 & QC312	Intra-Laboratory Duplicates have acceptable results less than the limits of reporting or RPDs within control limits

URS

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:	Orica Botany-September 2008 Quarterly	**Project/Task Number:**	43217860
Analytical Laboratory:	ALS	**Batch/Ref. Number(s):**	ES0813387
Date Sampled:	9th & 11/09/2008	**Sample Type:**	Water

Inter-Laboratory Duplicates	**Comments**
n/a	

Surrogate Monitoring Compound Analyses

Analyte	**Comments**
BP62_20.00_09/09/08	The recovery of Toluene-D8(114%) is greater than the upper data quality objective(110%)
BP114_20.00_09/09/08	The recovery of Toluene-D8(115%) is greater than the upper data quality objective(110%)
BP114_20.00_09/09/08	The recovery of 4-Bromofluorobenzene(115%) is greater than the upper data quality objective(115%)

Overall Comments

Breaches of surrogate recovery for Toluene-D8 and 4-Bromofluorobenzene are greater than the accepted upper control limit (110%) in 3 samples. This could result in over reporting of VOC analysis results in these samples. The toluene-D8 aromatic and 4-Bromofluorobenzene surrogates are not representative of the analysis scan which targets aliphatic compounds. Therefore, this surrogate exceedance is considered not to affect the overall data quality of this batch.

This data is deemed acceptable for environmental interpretive analysis

Performed By:	Dane Mallinson	Reviewed By:	M. James
Date:	03-Oct-08	Date:	10-Oct-08

Data Validation

RPD Calculations

Location	BP114_20.00_09/09/08	BP114_20.00_09/09/08
Sample ID	BP114_20.00_09/09/08	QC308_09/09/08
Date Sampled	9/09/2008	9/09/2008
Sample Type	**Primary**	**Secondary**

Analyte	LOR1	LOR2	Units			Primary vs. Duplicate
1,2-Dichloroethane	1	1	µg/L	9	9	0.00%
cis-1,2-Dichloroethene	1	1	µg/L	35	36	2.82%
Tetrachloroethene	1	1	µg/L	6	6	0.00%
trans-1,2-Dichloroethene	1	1	µg/L	8	8	0.00%
Trichloroethene	1	1	µg/L	86	89	3.43%
Vinyl chloride	10	10	µg/L	30	20	40.00%

Data Validation

RPD Calculations

Location	BP62_12.00_09/09/08	BP62_12.00_09/09/08
Sample ID	BP62_12.00_09/09/08	QC309_09/09/08
Date Sampled	9/09/2008	9/09/2008
Sample Type	**Primary**	**Secondary**

Analyte	LOR1	LOR2	Units			Primary vs. Duplicate
cis-1,2-Dichloroethene	1	1	µg/L	3	4	28.57%
Trichloroethene	1	1	µg/L	< 1	2	66.67%
Vinyl chloride	10	10	µg/L	< 10	10	0.00%

Data Validation

RPD Calculations

Location	BP07_10.00_11/09/08	BP07_10.00_11/09/08
Sample ID	BP07_10.00_11/09/08	Q310_11/09/08
Date Sampled	9/11/2008	9/11/2008
Sample Type	**Primary**	**Secondary**

Analyte	LOR1	LOR2	Units			Primary vs. Duplicate
1,1-Dichloroethane	1	1	µg/L	224	248	10.17%
1,1-Dichloroethene	1	1	µg/L	260	247	5.13%
1,2-Dichloroethane	1	1	µg/L	422000	436000	3.26%
cis-1,2-Dichloroethene	1	1	µg/L	742	772	3.96%
Tetrachloroethene	1	1	µg/L	337	279	18.83%
Trichloroethene	1	1	µg/L	4680	4450	5.04%
Vinyl chloride	10	10	µg/L	11200	10600	5.51%
Chloroform	1	1	µg/L	669	754	11.95%

Data Validation

RPD Calculations

Location	BP91_24.00_11/09/08	BP91_24.00_11/09/08
Sample ID	BP91_24.00_11/09/08	Q311_11/09/08
Date Sampled	9/11/2008	9/11/2008
Sample Type	**Primary**	**Secondary**

Analyte	LOR1	LOR2	Units			Primary vs. Duplicate
1,1,2,2-Tetrachloroethane	1	1	µg/L	222	217	2.28%
1,1,2-Trichloroethane	1	1	µg/L	278	274	1.45%
1,1-Dichloroethane	1	1	µg/L	1240	1250	0.80%
1,2-Dichloroethane	1	1	µg/L	76700	81200	5.70%
cis-1,2-Dichloroethene	1	1	µg/L	794	813	2.37%
Methylene chloride	5	5	µg/L	343	345	0.58%
trans-1,2-Dichloroethene	1	1	µg/L	212	204	3.85%
Trichloroethene	1	1	µg/L	922	898	2.64%
Vinyl chloride	10	10	µg/L	1110	1060	4.61%
Carbon disulfide	1	1	µg/L	177	152	15.20%
Chloroform	1	1	µg/L	2690	2710	0.74%

Data Validation

RPD Calculations

Location		BP91_22.00_11/09/08	BP91_22.00_11/09/08
Sample ID		BP91_22.00_11/09/08	Q312_11/09/08
Date Sampled		9/11/2008	9/11/2008
Sample Type		Primary	Secondary

Analyte	LOR1	LOR2	Units			Primary vs. Duplicate
1,1,2,2-Tetrachloroethane	1	1	µg/L	45	48	6.45%
1,1,2-Trichloroethane	1	1	µg/L	81	81	0.00%
1,1-Dichloroethane	1	1	µg/L	312	323	3.47%
1,2-Dichloroethane	1	1	µg/L	21200	25800	19.57%
cis-1,2-Dichloroethene	1	1	µg/L	218	230	5.36%
trans-1,2-Dichloroethene	1	1	µg/L	58	59	1.71%
Trichloroethene	1	1	µg/L	299	306	2.31%
Vinyl chloride	10	10	µg/L	320	330	3.08%
Carbon disulfide	1	1	µg/L	60	73	19.55%
Chloroform	1	1	µg/L	587	608	3.52%

URS

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:	Orica Botany-September 2008 Quarterly	**Project/Task Number:**	43217860
Analytical Laboratory:	ALS	**Batch/Ref. Number(s):**	ES0813478
Date Sampled:	11/09/2008	**Sample Type:**	Water

Sample Handling, Receipt and Holding Times	Yes/No	Comments
COC completed adequately	Yes	
All requested analysis conducted	Yes	
Samples received intact and chilled	Yes	2.6°C-Ice present
Samples analysed within appropriate holding times per analytical methods.	Yes	

# of Primary Samples	# of QAQC Samples	# of Duplicate Samples	# of Triplicate Samples
4	1	0	0

Blanks

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

Type	Comments
MB & TB	All method blanks have acceptable results less than the limits of reporting

Laboratory Control Samples (LCS)

Analyte	Comments
	All LCS recoveries are within laboratory control limits

Matrix Spike (MS)

Analyte	Comments
	All matrix spike recoveries are within laboratory control limits

Trip Spike /Control Trip Spike

Analyte	% R	Comments
n/a		

Duplicates

Laboratory Duplicates	Comments
	Laboratory Duplicates (LD) have acceptable results less than the limits of reporting or RPDs within control limits

Intra-Laboratory Duplicates	Comments
n/a	

Inter-Laboratory Duplicates	Comments
n/a	

Surrogate Monitoring Compound Analyses

Analyte	Comments
WG72I_11/09/08	The recovery of Toluene-D8(116%) is greater than the upper data quality objective(110%)

Overall Comments

The surrogate outlier for Toluene-D8 may result in over reporting of VOC analytes in this sample. 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

This data is deemed acceptable for environmental interpretive analysis

Performed By:	Dane Mallinson	Reviewed By:	M. James
Date:	03-Oct-08	Date:	10-Oct-08