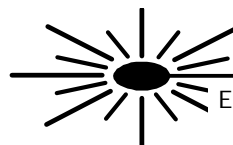




Appendix B – Data Usability Summary Reports



Data Validation Report

SDG#	3031860
Validation Report Date	May 20, 2011
Validation Guidance	USEPA CLP National Functional Guidelines for Organic Data Review
Client Name	WSP Environmental Strategies Consulting, LLC
Project Name	EPT Ithaca
Laboratory	PACE Analytical Services, Inc.
Method(s) Utilized	SW 846 8260
Analytical Fraction	VOCs

Samples/Matrix:

Date Sampled	Sample ID	Laboratory ID	VOCs	Matrix
08/02/10	WPOSTGAC	3031860001	X	Aqueous
08/02/10	WMIDGAC	3031860002	X	Aqueous
08/02/10	WAS	3031860003	X	Aqueous
08/02/10	WINF	3031860004	X	Aqueous
08/02/10	TB080210	3031860005	X	Aqueous

Analytical data in this report were screened to determine analytical limitations of the data based on specific quality control criteria. This screening assumes analytical results are correct as reported and merely provides an interpretation of the reported quality control results. This is a PACE level II data package; therefore, no raw data and only limit quality control data are provided for review. Due to the limited information provided in the data package, laboratory calculations could not be verified as part of this validation. Specific findings on analytical limitations are presented in this report. Annotated Form 1s or spreadsheets for samples reviewed are included after the Data Assessment Findings. Form 1s for the MS/MSD samples and spreadsheets are not annotated.

SUMMARY

The sample set for the EPT Ithaca site consists of 4 aqueous field samples and one trip blank. The samples were analyzed for the parameters as listed above.

The organic findings presented in this review of the analytical data assume that the information presented by the analytical laboratory is correct.

The VOC findings are based upon the assessment of the following:

- *
 - Holding Times and sample preservation
 - Blanks
 - *
 - System Monitoring Compounds (Surrogate Spikes)
 - NP
 - Matrix Spike/Matrix Spike Duplicates
 - Laboratory Control Sample
- * Criteria were met for this evaluation item; NP – Not Performed by laboratory

This evaluation was conducted in accordance with USEPA CLP National Functional Guidelines for Organic Data Review and the analytical method. This is only a limited review of the information provide in the level II data package. Findings from this evaluation should be considered when using the analytical data. This report presents a summary of the data qualifications based on the review of the aforementioned evaluation criteria. This is followed by annotated Form 1s/ spreadsheets. Finally, the worksheets used to perform the evaluation are provided.

FINDINGS

VOLATILE ORGANIC COMPOUNDS

1. Laboratory Control Sample

For 200321 laboratory control sample, the percent recovery of methyl acetate (203%) was greater than the high control limit. For the following samples, qualify positive results of this constituent as estimated biased high “J”.

TB080210	WAS	WMIDGAC	WPOSTGAC
WINF			

For 200321 laboratory control sample, the percent recovery of dichlorodifluoromethane (45%), chloromethane (56%) and cyclohexane (69%) was less than the low control limit. For the following samples, qualify positive results of these constituents as estimated biased low “J” and nondetected results as estimated “UJ”.

TB080210	WAS	WMIDGAC	WPOSTGAC
WINF			

2. Blanks

The following compound was reported in the trip blank at the listed maximum concentrations.

Blank	Compound	Maximum Concentration (ppb)	Action
Trip Blank	chloromethane	3.1	SR< RL; U RL SR<BLK&>RL; BLK U

SR – Sample Result; RL – Reporting Limit; BLK - Blank

NOTES**VOLATILE ORGANIC COMPOUNDS****Data Completeness**

This is a limited level II data package. No raw data and only limit quality control information is presented in the data package. Only information provided was reviewed.

Matrix Spike/Matrix Spike Duplicate

The matrix spike/matrix spike duplicate associated with this sample delivery group was not a project sample. The percent recovery of several constituents was outside control limits. Data are not qualified on this basis.

Compound Quantitation

The following samples were analyzed at the listed dilution for the noted parameters.

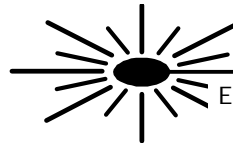
Sample ID	Parameter(s)	Dilution Factor
WINF	cis-1,2-Dichloroethene Trichloroethene	10x

Field Duplicates

No field duplicates were associated with this sample delivery group.

Data Reviewer

Date



Data Validation Report

SDG#	3033529
Validation Report Date	May 20, 2011
Validation Guidance	USEPA CLP National Functional Guidelines for Organic Data Review
Client Name	WSP Environmental Strategies Consulting, LLC
Project Name	EPT Ithaca
Laboratory	PACE Analytical Services, Inc.
Method(s) Utilized	SW 846 8260
Analytical Fraction	VOCs

Samples/Matrix:

Date Sampled	Sample ID	Laboratory ID	VOCs	Matrix
09/03/10	WPOSTGAC	3033529001	X	Aqueous
09/03/10	WMIDGAC	3033529002	X	Aqueous
09/03/10	WAS	3033529003	X	Aqueous
09/03/10	WINF	3033529004	X	Aqueous
09/03/10	TB090310	3033529005	X	Aqueous

Analytical data in this report were screened to determine analytical limitations of the data based on specific quality control criteria. This screening assumes analytical results are correct as reported and merely provides an interpretation of the reported quality control results. This is a PACE level II data package; therefore, no raw data and only limit quality control data are provided for review. Due to the limited information provided in the data package, laboratory calculations could not be verified as part of this validation. Specific findings on analytical limitations are presented in this report. Annotated Form 1s or spreadsheets for samples reviewed are included after the Data Assessment Findings. Form 1s for the MS/MSD samples and spreadsheets are not annotated.

SUMMARY

The sample set for the EPT Ithaca site consists of 4 aqueous field samples and one trip blank. The samples were analyzed for the parameters as listed above.

The organic findings presented in this review of the analytical data assume that the information presented by the analytical laboratory is correct.

The VOC findings are based upon the assessment of the following:

- * ● Holding Times and sample preservation
- * ● Blanks
- * ● System Monitoring Compounds (Surrogate Spikes)
- NP ● Matrix Spike/Matrix Spike Duplicates
- Laboratory Control Sample

* Criteria were met for this evaluation item; NP – Not Performed by laboratory

This evaluation was conducted in accordance with USEPA CLP National Functional Guidelines for Organic Data Review and the analytical method. This is only a limited review of the information provide in the level II data package. Findings from this evaluation should be considered when using the analytical data. This report presents a summary of the data qualifications based on the review of the aforementioned evaluation criteria. This is followed by annotated Form 1s/ spreadsheets. Finally, the worksheets used to perform the evaluation are provided.

FINDINGS

VOLATILE ORGANIC COMPOUNDS

1. Laboratory Control Sample

For 215851 laboratory control sample, the percent recovery of methyl acetate (145%) was greater than the high control limit. For the following samples, qualify positive results of this constituent as estimated biased high “J”.

TB090310	WAS	WMIDGAC	WPOSTGAC
WINF			

NOTES

VOLATILE ORGANIC COMPOUNDS

Data Completeness

This is a limited level II data package. No raw data and only limit quality control information is presented in the data package. Only information provided was reviewed.

Matrix Spike/Matrix Spike Duplicate

No matrix spike was associated with this sample delivery group. Data are not qualified on this basis.

Compound Quantitation

The following samples were analyzed at the listed dilution for the noted parameters.

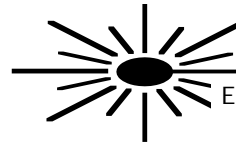
Sample ID	Parameter(s)	Dilution Factor
WINF	cis-1,2-Dichloroethene Trichloroethene	10x

Field Duplicates

No field duplicates were associated with this sample delivery group.

Data Reviewer

Date



Data Validation Report

SDG#	3034718
Validation Report Date	May 23, 2011
Validation Guidance	USEPA CLP National Functional Guidelines for Organic Data Review
Client Name	WSP Environmental Strategies Consulting, LLC
Project Name	EPT Ithaca
Laboratory	PACE Analytical Services, Inc.
Method(s) Utilized	SW 846 8260
Analytical Fraction	VOCs

Samples/Matrix:

Date Sampled	Sample ID	Laboratory ID	VOCs	Matrix
09/28/10	EXB-10	3034718001	X	Aqueous
09/28/10	MW-0910A	3034718004	X	Aqueous
09/28/10	TB092810	3034718005	X	Aqueous
09/28/10	EB092810	3034718006	X	Aqueous
09/28/10	EXB-9	3034718007	X	Aqueous
09/29/10	EXB-07	3034718008	X	Aqueous
09/29/10	EW-05-25B	3034718009	X	Aqueous
09/29/10	EW-06-60C	3034718010	X	Aqueous
09/29/10	EB092910	3034718011	X	Aqueous
09/29/10	EXB01	3034718012	X	Aqueous
09/29/10	EXB02	3034718013	X	Aqueous
09/29/10	MW-4B	3034718014	X	Aqueous
09/29/10	MW-5B	3034718015	X	Aqueous
09/29/10	MW-1B	3034718016	X	Aqueous

Analytical data in this report were screened to determine analytical limitations of the data based on specific quality control criteria. This screening assumes analytical results are correct as reported and merely provides an interpretation of the reported quality control results. Laboratory calculations have been verified as part of this validation. Specific findings on analytical limitations are presented in this report. Annotated Form 1s or spreadsheets for samples reviewed are included after the Data Assessment Findings. Form 1s for the MS/MSD samples and spreadsheets are not annotated.

SUMMARY

The sample set for the EPT Ithaca site consists of 11 aqueous field samples, 2 equipment blanks and one trip blank. The samples were analyzed for the parameters as listed above.

The organic findings presented in this review of the analytical data assume that the information presented by the analytical laboratory is correct. The VOC findings are based upon the assessment of the following:

- * ● Data Completeness
 - * ● Holding Times
 - Calibration (Initial and Continuing)
 - Blanks
 - * ● System Monitoring Compounds (Surrogate Spikes)
 - Matrix Spike/Matrix Spike Duplicates
 - Laboratory Control Sample
 - * ● Internal Standards
 - * ● Target Compound Identification
 - * ● Compound Quantification and Reported Contract Quantitation Limits
 - * ● System Performance
- * Criteria were met for this evaluation item.

This evaluation was conducted in accordance with USEPA CLP National Functional Guidelines for Organic Data Review and the analytical method. Findings from this evaluation should be considered when using the analytical data. This report presents a summary of the data qualifications based on the review of the aforementioned evaluation criteria. This is followed by annotated Form 1s/ spreadsheets. Finally, the worksheets used to perform the evaluation are provided.

FINDINGS

VOLATILE ORGANIC COMPOUNDS

1. Matrix Spike

For EXB-10 matrix spike/matrix spike duplicate, the percent recovery was greater than the high control limit for the following constituent:

Parameter	MS % Recovery	MSD % Recovery	RPD
Methyl acetate	183	203	ok

MS – Matrix Spike; MSD – Matrix Spike Duplicate; RPD – Relative Percent Difference

For this constituent, qualify positive results as estimated biased high “J” for sample EXB-10.

2. Laboratory Control Sample

For 222979 laboratory control sample, the percent recovery of methyl acetate (258%), bromomethane (187%) was greater than the high control limit. For the following samples, qualify positive results of these constituents as estimated biased high “J”.

EXB-10	EXB-9	EB092910	MW-5B
MW-0910A	EXB-07	EXB01	MW-1B
TB092810	EW-05-25B	EXB02	MW-4B
EB092810	EW-06-60C		

For 222979 laboratory control sample, the percent recovery of carbon disulfide (68%) was less than the low control limit. For the following samples, qualify positive results of this constituent as estimated biased low “J” and nondetected results as estimated biased low “UJ”.

EXB-10	EXB-9	EB092910	MW-5B
MW-0910A	EXB-07	EXB01	MW-1B
TB092810	EW-05-25B	EXB02	MW-4B
EB092810	EW-06-60C		

3. Blanks

The following compound was reported in the equipment blank, trip blank and laboratory blank at the listed maximum concentrations.

Blank	Compound	Maximum Concentration (ppb)	Action
10/7/10	toluene	0.533	SR<R; U RL SR<BLKL&>RL; BLK U

SR – Sample Result; RL – Reporting Limit; BLK - Blank

4. Calibration

For continuing calibration 10/5/10 and 10/7/10, the relative response factor (RRF) from bromomethane (0.041 and 0.049) were less than the control limit of 0.05. For the following samples, qualify positive results of this constituent as estimated “J” and reject “R” nondetected results.

EXB-10	EXB-9	EB092910	MW-5B
MW-0910A	EXB-07	EXB01	MW-1B
TB092810	EW-05-25B	EXB02	MW-4B
EB092810	EW-06-60C		

For continuing calibration 10/7/10, the relative standard deviation for dichlorodifluoromethane (42%) was greater than the control limit of 40%. For the following samples, qualify positive results of this constituent as estimated “J” and nondetected results as estimated “UJ”.

EB092910	MW-4B
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NOTES**VOLATILE ORGANIC COMPOUNDS****Matrix Spike/Matrix Spike Duplicate**

For EXB-10 matrix spike/matrix spike duplicate, as noted below the percent recovery of either the matrix spike or matrix spike duplicate was outside the control limit.

Parameter	MS % Recovery	MSD % Recovery	RPD
Bromomethane	ok	162	Ok
Carbon disulfide	68	Ok	ok

MS – Matrix Spike; MSD – Matrix Spike Duplicate; RPD – Relative Percent Difference

Because at least one percent recovery was within control limits, data are not qualified on this basis.

Compound Quantitation

The following samples were analyzed at the listed dilution for the noted parameters.

Sample ID	Parameter(s)	Dilution Factor
EXB-07	cis-1,2-Dichloroethene	20x
EXB01, EXB02	cis-1,2-Dichloroethene Trichloroethene	40x
MW-5B	cis-1,2-Dichloroethene Trichloroethene Vinyl chloride	200x 20x 20x
EW-06-60C	cis-1,2-Dichloroethene Trichloroethene	100x
EW-05-25B	cis-1,2-Dichloroethene Trichloroethene	10x

Field Duplicates

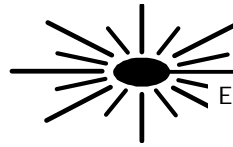
Calculate RPD for positive results only.

Sample ID	Duplicate ID	Parameter	RPD
EXB-10	MW-0910A		
16.7	18.5	cis-1,2-Dichloroethene	-10.2
10.5	ND	Methylcyclohexane	--
5.9	6.8	Vinyl chloride	-14.2

-- - RPD is not calculated because at least one sample result is not detected (ND).

 Data Reviewer

 Date



Data Validation Report

SDG#	3035181
Validation Report Date	May 20, 2011
Validation Guidance	USEPA CLP National Functional Guidelines for Organic Data Review
Client Name	WSP Environmental Strategies Consulting, LLC
Project Name	EPT Ithaca
Laboratory	PACE Analytical Services, Inc.
Method(s) Utilized	SW 846 8260
Analytical Fraction	VOCs

Samples/Matrix:

Date Sampled	Sample ID	Laboratory ID	VOCs	Matrix
10/07/10	WPOSTGAC	3035181001	X	Aqueous
10/07/10	WMIDGAC	3035181002	X	Aqueous
10/07/10	WAS	3035181003	X	Aqueous
10/07/10	WINF	3035181004	X	Aqueous
10/07/10	TB100710	3035181005	X	Aqueous

Analytical data in this report were screened to determine analytical limitations of the data based on specific quality control criteria. This screening assumes analytical results are correct as reported and merely provides an interpretation of the reported quality control results. This is a PACE level II data package; therefore, no raw data and only limit quality control data are provided for review. Due to the limited information provided in the data package, laboratory calculations could not be verified as part of this validation. Specific findings on analytical limitations are presented in this report. Annotated Form 1s or spreadsheets for samples reviewed are included after the Data Assessment Findings. Form 1s for the MS/MSD samples and spreadsheets are not annotated.

SUMMARY

The sample set for the EPT Ithaca site consists of 4 aqueous field samples and one trip blank. The samples were analyzed for the parameters as listed above.

The organic findings presented in this review of the analytical data assume that the information presented by the analytical laboratory is correct.

The VOC findings are based upon the assessment of the following:

- *
 - Holding Times and sample preservation
 - Blanks
 - *
 - System Monitoring Compounds (Surrogate Spikes)
 - Matrix Spike/Matrix Spike Duplicates
 - Laboratory Control Sample
- * Criteria were met for this evaluation item; NP – Not Performed by laboratory

This evaluation was conducted in accordance with USEPA CLP National Functional Guidelines for Organic Data Review and the analytical method. This is only a limited review of the information provide in the level II data package. Findings from this evaluation should be considered when using the analytical data. This report presents a summary of the data qualifications based on the review of the aforementioned evaluation criteria. This is followed by annotated Form 1s/ spreadsheets. Finally, the worksheets used to perform the evaluation are provided.

FINDINGS

VOLATILE ORGANIC COMPOUNDS

1. Laboratory Control Sample

For 228619 laboratory control sample, the percent recovery of methyl acetate (161%) was greater than the high control limit. For the following samples, qualify positive results of this constituent as estimated biased high “J”.

TB100710	WAS	WMIDGAC	WPOSTGAC
WINF			

2. Blanks

The following compound was reported in the trip blank at the listed maximum concentrations.

Blank	Compound	Maximum Concentration (ppb)	Action
Trip Blank	Methylene chloride	2.5	SR< RL; U RL SR<BLK&>RL; BLK U

SR – Sample Result; RL – Reporting Limit; BLK - Blank

3. Matrix Spike

For the WPOSTGAC matrix spike/matrix spike duplicate, the percent recovery for carbon disulfide (0%, 0%) was less than the low control limit and less than 20%. Please note that carbon disulfide was detected in the original sample at a concentration greater than the spike amount. For the following sample, qualify positive results of this constituent as estimated biased low "J" and nondetects as estimated "UJ".

WPOSTGAC

For the WPOSTGAC matrix spike/matrix spike duplicate, the percent recovery for methyl acetate (161%, 135%) and trichloroethene (319%, 158%) was greater than the high control limit. Also, the relative percent difference for trichloroethene (62%) was greater than the control limit. For the following sample, qualify positive results of these constituents as estimated biased high "J".

WPOSTGAC

NOTES

VOLATILE ORGANIC COMPOUNDS

Data Completeness

This is a limited level II data package. No raw data and only limit quality control information is presented in the data package. Only information provided was reviewed.

Matrix Spike/Matrix Spike Duplicate

For the WPOSTGAC matrix spike duplicate, the percent recovery of 2-butanone (64%), bromomethane (63%), chloroethane (63%), and chloromethane (56%) was outside the low control limit. The percent recovery of the matrix spike was within control limits. Data are not qualified on this basis.

For the WPOSTGAC matrix spike/matrix spike duplicate, the relative percent difference for chloroethane (41%) was greater than the control limit. Data are not qualified on this basis.

Compound Quantitation

The following samples were analyzed at the listed dilution for the noted parameters.

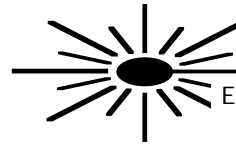
Sample ID	Parameter(s)	Dilution Factor
WINF	cis-1,2-Dichloroethene Trichloroethene	20x

Field Duplicates

No field duplicates were associated with this sample delivery group.

Data Reviewer

Date



Data Validation Report

SDG#	3035191
Validation Report Date	June 8, 2011
Validation Guidance	USEPA CLP National Functional Guidelines for Organic Data Review
Client Name	WSP Environmental Strategies Consulting, LLC
Project Name	EPT Ithaca
Laboratory	PACE Analytical Services, Inc.
Method(s) Utilized	SW 846 8260
Analytical Fraction	VOCs

Samples/Matrix:

Date Sampled	Sample ID	Laboratory ID	VOCs	Matrix
10/04/10	MW-5-40	3035191001	X	Aqueous
10/04/10	MW-5-100	3035191002	X	Aqueous
10/05/10	MW-2B	3035191003	X	Aqueous
10/05/10	MW-20B	3035191004	X	Aqueous
10/05/10	MW-21B	3035191005	X	Aqueous
10/05/10	MW-22B	3035191006	X	Aqueous
10/09/10	MW-32B	3035191007	X	Aqueous
10/09/10	MW-23B	3035191008	X	Aqueous
10/06/10	MW-7-40	3035191009	X	Aqueous
10/06/10	MW-16-100	3035191010	X	Aqueous
10/06/10	MW-17-40	3035191011	X	Aqueous
10/06/10	MW-24B	3035191012	X	Aqueous
10/07/10	MW-26A	3035191013	X	Aqueous
10/07/10	MW-25A	3035191014	X	Aqueous
10/07/10	MW-8-40	3035191015	X	Aqueous
10/05/10	MW-19A	3035191016	X	Aqueous
10/05/10	MW-3B	3035191017	X	Aqueous
10/07/10	TB	3035191018	X	Aqueous
10/07/10	MW-18A	3035191019	X	Aqueous
10/07/10	MW-1007	3035191022	X	Aqueous

Analytical data in this report were screened to determine analytical limitations of the data based on specific quality control criteria. This screening assumes analytical results are correct as reported and merely provides an interpretation of the reported quality control results. Laboratory calculations have been verified as part of this validation. Specific findings on analytical limitations are presented in this report. Annotated Form 1s or spreadsheets for samples reviewed are included after the Data Assessment Findings. Form 1s for the MS/MSD samples and spreadsheets are not annotated.

SUMMARY

The sample set for the EPT Ithaca site consists of 19 aqueous field samples and one trip blank. The samples were analyzed for the parameters as listed above.

The organic findings presented in this review of the analytical data assume that the information presented by the analytical laboratory is correct. The VOC findings are based upon the assessment of the following:

- * ● Data Completeness
 - * ● Holding Times
 - Calibration (Initial and Continuing)
 - * ● Blanks
 - * ● System Monitoring Compounds (Surrogate Spikes)
 - Matrix Spike/Matrix Spike Duplicates
 - Laboratory Control Sample
 - * ● Internal Standards
 - * ● Target Compound Identification
 - * ● Compound Quantification and Reported Contract Quantitation Limits
 - * ● System Performance
- * Criteria were met for this evaluation item.

This evaluation was conducted in accordance with USEPA CLP National Functional Guidelines for Organic Data Review and the analytical method. Findings from this evaluation should be considered when using the analytical data. This report presents a summary of the data qualifications based on the review of the aforementioned evaluation criteria. This is followed by annotated Form 1s/ spreadsheets. Finally, the worksheets used to perform the evaluation are provided.

FINDINGS

VOLATILE ORGANIC COMPOUNDS

1. Matrix Spike

For MW-20B matrix spike/matrix spike duplicate, the percent recovery was greater than the high control limit for the following constituent:

Parameter	MS % Recovery	MSD % Recovery	RPD
Methyl acetate	250	185	ok

MS – Matrix Spike; MSD – Matrix Spike Duplicate; RPD – Relative Percent Difference

For this constituent, qualify positive results as estimated biased high “J” for sample MW-20B.

For MW-18A matrix spike/matrix spike duplicate, the percent recovery was greater than the high control limit for the following constituents:

Parameter	MS % Recovery	MSD % Recovery	RPD
Methyl acetate	160	192	ok
Chloroethane	139	139	ok

MS – Matrix Spike; MSD – Matrix Spike Duplicate; RPD – Relative Percent Difference

For these constituents, qualify positive results as estimated biased high “J” for sample MW-18A.

2. Laboratory Control Sample

For 226224 and 226228 laboratory control samples, the percent recovery of methyl acetate (188% and 151%), was greater than the high control limit. For the following samples, qualify positive results of this constituents as estimated biased high “J”.

MW-5-40	MW-21B	MW-7-40	MW-26A
MW-5-100	MW-22B	MW-16-100	MW-25A
MW-2B	MW-32B	MW-17-40	MW-8-40
MW-20B	MW-23B	MW-24B	MW-19A
MW-3B	TB	MW-1007	MW-18A

For 226224 laboratory control sample, the percent recovery of chloroethane (56%) was less than the low control limit. For the following samples, qualify positive results of this constituent as estimated biased low “J” and nondetected results as estimated biased low “UJ”.

MW-5-40	MW-21B	MW-7-40	MW-26A
MW-5-100	MW-22B	MW-16-100	MW-25A
MW-2B	MW-32B	MW-17-40	MW-8-40
MW-20B	MW-23B	MW-24B	MW-19A
MW-3B	TB	MW-1007	

3. Calibration

For initial calibration 10/12/10 14:06, the relative response factor for bromomethane (0.0459) was less than the control limit of 0.05. For the following samples, qualify positive results as estimated “J” and reject “R” nondetected results.

MW-18A	MW-16-100	MW-3B	MW-2B
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NOTES

VOLATILE ORGANIC COMPOUNDS

Matrix Spike/Matrix Spike Duplicate

For MW-18A matrix spike/matrix spike duplicate, as noted below the percent recovery of either the matrix spike or matrix spike duplicate was outside the control limit.

Parameter	MS % Recovery	MSD % Recovery	RPD
2-Butanone	ok	132	ok
cis-1,2-Dichloroethene	ok	134	ok
Trichlorofluoromethane	133	ok	ok

MS – Matrix Spike; MSD – Matrix Spike Duplicate; RPD – Relative Percent Difference

Because at least one percent recovery was within control limits, data are not qualified on this basis.

For MW-20B matrix spike/matrix spike duplicate, as noted below the percent recovery of either the matrix spike or matrix spike duplicate was outside the control limit and/or the relative percent difference was outside the control limit.

Parameter	MS % Recovery	MSD % Recovery	RPD
1,1,1-Trichloroethane	131	ok	40
1,1,2,2-Tetrachloroethane	ok	ok	46
1,1,2-Trichloroethane	ok	ok	40
1,1-Dichloroethane	133	ok	41
1,1-Dichloroethene	140	ok	39
1,2,4-Trichlorobenzene	143	ok	64
1,2-Dibromo-3-chloropropane	ok	ok	47
1,2-Dibromoethane	ok	ok	41
1,2-Dichlorobenzene	ok	ok	50
1,2-Dichloroethane	131	ok	40
1,2-Dichloropropane	ok	ok	40
1,3-Dichlorobenzene	ok	ok	50
1,4-Dichlorobenzene	ok	ok	48
2-Butanone	ok	ok	34
2-Hexanone	136	ok	36
Acetone	131	ok	42
Benzene	ok	ok	37
Bromodichloromethane	ok	ok	41
Bromoform	ok	ok	43
Bromomethane	ok	ok	35
Carbon tetrachloride	ok	ok	43
Chlorobenzene	ok	ok	38
Chloroethane	134	ok	54
Chloroform	131	ok	41
Chloromethane	198	ok	ok
cis-1,2-Dichloroethene	ok	ok	57
cis-1,3-Dichloropropene	ok	ok	43
Dibromochloromethane	ok	ok	41
Dichlorodifluoromethane	133	ok	ok
Ethylbenzene	ok	ok	43
Isopropylbenzene	ok	ok	52
Methyl tert butyl ether	142	ok	ok
Methylene chloride	132	ok	36
Naphthalene	ok	ok	48

Parameter	MS % Recovery	MSD % Recovery	RPD
Stryene	ok	ok	39
Tetrachloroethene	ok	ok	46
Toluene	ok	ok	40
trans-1,2-Dichloroethene	132	ok	36
trans-1,3-Dichloropropene	ok	ok	41
Trichloroethene	141	ok	47
Trichlorofluoromethane	165	ok	ok
Vinyl chloride	138	ok	ok
Xylenes, total	132	ok	43

MS – Matrix Spike; MSD – Matrix Spike Duplicate; RPD – Relative Percent Difference

Because at least one percent recovery was within control limits, data are not qualified on this basis.

Compound Quantitation

The following samples were analyzed at the listed dilution for the noted parameters.

Sample ID	Parameter(s)	Dilution Factor
MW-5-40	cis-1,2-Dichloroethene	100x
MW-2B	cis-1,2-Dichloroethene	20x
	Trichloroethene	100x
MW-3B	cis-1,2-Dichloroethene	20x
	Trichloroethene	

Field Duplicates

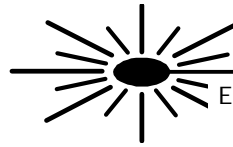
Calculate RPD for positive results only.

Sample ID	Duplicate ID	Parameter	RPD
MW-18A	MW-1007		
ND	ND	VOCs	--

-- - RPD is not calculated because at least one sample result is not detected (ND).

Data Reviewer

Date



Data Validation Report

SDG#	3037293
Validation Report Date	May 20, 2011
Validation Guidance	USEPA CLP National Functional Guidelines for Organic Data Review
Client Name	WSP Environmental Strategies Consulting, LLC
Project Name	EPT Ithaca
Laboratory	PACE Analytical Services, Inc.
Method(s) Utilized	SW 846 8260
Analytical Fraction	VOCs

Samples/Matrix:

Date Sampled	Sample ID	Laboratory ID	VOCs	Matrix
11/15/10	WPOSTGAC	3037293001	X	Aqueous
11/15/10	WMIDGAC	3037293002	X	Aqueous
11/15/10	WAS	3037293003	X	Aqueous
11/15/10	WINF	3037293004	X	Aqueous
11/15/10	TB111510	3037293005	X	Aqueous

Analytical data in this report were screened to determine analytical limitations of the data based on specific quality control criteria. This screening assumes analytical results are correct as reported and merely provides an interpretation of the reported quality control results. This is a PACE level II data package; therefore, no raw data and only limit quality control data are provided for review. Due to the limited information provided in the data package, laboratory calculations could not be verified as part of this validation. Specific findings on analytical limitations are presented in this report. Annotated Form 1s or spreadsheets for samples reviewed are included after the Data Assessment Findings. Form 1s for the MS/MSD samples and spreadsheets are not annotated.

SUMMARY

The sample set for the EPT Ithaca site consists of 4 aqueous field samples and one trip blank. The samples were analyzed for the parameters as listed above.

The organic findings presented in this review of the analytical data assume that the information presented by the analytical laboratory is correct.

The VOC findings are based upon the assessment of the following:

- *
 - Holding Times and sample preservation
 - Blanks
 - System Monitoring Compounds (Surrogate Spikes)
 - Matrix Spike/Matrix Spike Duplicates
 - Laboratory Control Sample

* Criteria were met for this evaluation item; NP – Not Performed by laboratory

This evaluation was conducted in accordance with USEPA CLP National Functional Guidelines for Organic Data Review and the analytical method. This is only a limited review of the information provide in the level II data package. Findings from this evaluation should be considered when using the analytical data. This report presents a summary of the data qualifications based on the review of the aforementioned evaluation criteria. This is followed by annotated Form 1s/ spreadsheets. Finally, the worksheets used to perform the evaluation are provided.

FINDINGS

VOLATILE ORGANIC COMPOUNDS

1. Laboratory Control Sample

For 241816 laboratory control sample, the percent recovery of methyl acetate (173%) was greater than the high control limit. For the following samples, qualify positive results of this constituent as estimated biased high “J”.

TB11510	WAS	WMIDGAC	WPOSTGAC
WINF			

For 241816 laboratory control sample, the percent recovery of dichlorodifluoromethane (56%) was less than the low control limit. For the following samples, qualify positive results of this constituent as estimated biased low “J” and nondetected results as estimated “UJ”.

TB11510	WAS	WMIDGAC	WPOSTGAC
WINF			

2. System Monitoring Compounds

For sample WMIDGAC, the percent recovery of all three surrogates was 0%. For sample WMIDGAC, qualify positive results as estimated “J” and reject “R” nondetected results.

3. Blanks

The following compound was reported in the laboratory method blank and/or trip blank at the listed maximum concentrations.

Blank	Compound	Maximum Concentration (ppb)	Action
228618	chloromethane	1.8	SR< RL; U RL SR<BLK&>RL; BLK U
Trip Blank	bromomethane	1.3	SR< RL; U RL
	chloromethane	1.3	SR<BLK&>RL; BLK U

SR – Sample Result; RL – Reporting Limit; BLK - Blank

NOTE: The detection of chloromethane in the trip blank is attributed to laboratory blank contamination.

4. Matrix Spike

For the WPOSTGAC matrix spike/matrix spike duplicate, the percent recovery for bromomethane (46%, 44%) was less than the low control limit. For the following sample, qualify positive results of this constituent as estimated biased low “J” and nondetects as estimated “UJ”.

WPOSTGAC

For the WPOSTGAC matrix spike/matrix spike duplicate, the percent recovery for methyl acetate (161%, 162%) was greater than the high control limit. For the following sample, qualify positive results of this constituent as estimated biased high “J”.

WPOSTGAC

NOTES

VOLATILE ORGANIC COMPOUNDS

Data Completeness

This is a limited level II data package. No raw data and only limit quality control information is presented in the data package. Only information provided was reviewed.

Compound Quantitation

The following samples were analyzed at the listed dilution for the noted parameters.

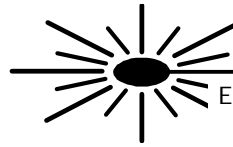
Sample ID	Parameter(s)	Dilution Factor
WINF	cis-1,2-Dichloroethene Trichloroethene	20x

Field Duplicates

No field duplicates were associated with this sample delivery group.

Data Reviewer

Date



Data Validation Report

SDG#	3038503
Validation Report Date	May 20, 2011
Validation Guidance	USEPA CLP National Functional Guidelines for Organic Data Review
Client Name	WSP Environmental Strategies Consulting, LLC
Project Name	EPT Ithaca
Laboratory	PACE Analytical Services, Inc.
Method(s) Utilized	SW 846 8260
Analytical Fraction	VOCs

Samples/Matrix:

Date Sampled	Sample ID	Laboratory ID	VOCs	Matrix
12/09/10	WPOSTGAC	3038503001	X	Aqueous
12/09/10	WMIDGAC	3038503002	X	Aqueous
12/09/10	WAS	3038503003	X	Aqueous
12/09/10	WINF	3038503004	X	Aqueous
12/09/10	TB120910	3038503005	X	Aqueous

Analytical data in this report were screened to determine analytical limitations of the data based on specific quality control criteria. This screening assumes analytical results are correct as reported and merely provides an interpretation of the reported quality control results. This is a PACE level II data package; therefore, no raw data and only limit quality control data are provided for review. Due to the limited information provided in the data package, laboratory calculations could not be verified as part of this validation. Specific findings on analytical limitations are presented in this report. Annotated Form 1s or spreadsheets for samples reviewed are included after the Data Assessment Findings. Form 1s for the MS/MSD samples and spreadsheets are not annotated.

SUMMARY

The sample set for the EPT Ithaca site consists of 4 aqueous field samples and one trip blank. The samples were analyzed for the parameters as listed above.

The organic findings presented in this review of the analytical data assume that the information presented by the analytical laboratory is correct.

The VOC findings are based upon the assessment of the following:

- * ● Holding Times and sample preservation
- * ● Blanks
- * ● System Monitoring Compounds (Surrogate Spikes)
- NP ● Matrix Spike/Matrix Spike Duplicates
- Laboratory Control Sample

* Criteria were met for this evaluation item; NP – Not Performed by laboratory

This evaluation was conducted in accordance with USEPA CLP National Functional Guidelines for Organic Data Review and the analytical method. This is only a limited review of the information provide in the level II data package. Findings from this evaluation should be considered when using the analytical data. This report presents a summary of the data qualifications based on the review of the aforementioned evaluation criteria. This is followed by annotated Form 1s/ spreadsheets. Finally, the worksheets used to perform the evaluation are provided.

FINDINGS

VOLATILE ORGANIC COMPOUNDS

1. Laboratory Control Sample

For 250786 laboratory control sample, the percent recovery of methyl acetate (173%) and bromomethane (152%) was greater than the high control limit. For the following samples, qualify positive results of these constituents as estimated biased high “J”.

TB120910	WAS	WMIDGAC	WPOSTGAC
WINF			

For 250786 laboratory control sample, the percent recovery of dichlorodifluoromethane (66%) and chloromethane (69%) was less than the low control limit. For the following samples, qualify positive results of these constituents as estimated biased low “J” and nondetected results as estimated “UJ”.

TB120910	WAS	WMIDGAC	WPOSTGAC
WINF			

NOTES

VOLATILE ORGANIC COMPOUNDS

Data Completeness

This is a limited level II data package. No raw data and only limit quality control information is presented in the data package. Only information provided was reviewed.

Matrix Spike/Matrix Spike Duplicate

The matrix spike/matrix spike duplicate associated with this sample delivery group was not a project sample. The percent recovery of several constituents was outside control limits. Data are not qualified on this basis.

Compound Quantitation

The following samples were analyzed at the listed dilution for the noted parameters.

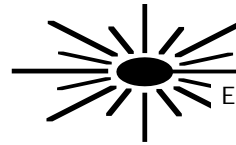
Sample ID	Parameter(s)	Dilution Factor
WINF	cis-1,2-Dichloroethene Trichloroethene	20x

Field Duplicates

No field duplicates were associated with this sample delivery group.

Data Reviewer

Date



Data Validation Report

SDG#	3039337
Validation Report Date	June 8, 2011
Validation Guidance	USEPA CLP National Functional Guidelines for Organic Data Review
Client Name	WSP Environmental Strategies Consulting, LLC
Project Name	EPT Ithaca
Laboratory	PACE Analytical Services, Inc.
Method(s) Utilized	SW 846 8260
Analytical Fraction	VOCs

Samples/Matrix:

Date Sampled	Sample ID	Laboratory ID	VOCs	Matrix
12/28/10	EXB-7	3039337001	X	Aqueous
12/28/10	EXB-9	3039337002	X	Aqueous
12/28/10	EB122810	3039337003	X	Aqueous
12/28/10	EXB-10	3039337004	X	Aqueous
12/28/10	EXB-1	3039337005	X	Aqueous
12/28/10	EXB-2	3039337006	X	Aqueous
12/29/10	MW-23B	3039337007	X	Aqueous
12/29/10	MW-32	3039337010	X	Aqueous
12/29/10	MW-1210	3039337011	X	Aqueous
12/29/10	MW-1B	3039337012	X	Aqueous
12/29/10	TB122910	3039337013	X	Aqueous
12/29/10	MW-4B	3039337014	X	Aqueous
12/29/10	MW-5B	3039337015	X	Aqueous

Analytical data in this report were screened to determine analytical limitations of the data based on specific quality control criteria. This screening assumes analytical results are correct as reported and merely provides an interpretation of the reported quality control results. Laboratory calculations have been verified as part of this validation. Specific findings on analytical limitations are presented in this report. Annotated Form 1s or spreadsheets for samples reviewed are included after the Data Assessment Findings. Form 1s for the MS/MSD samples and spreadsheets are not annotated.

SUMMARY

The sample set for the EPT Ithaca site consists of 11 aqueous field samples, one equipment blank and one trip blank. The samples were analyzed for the parameters as listed above.

The organic findings presented in this review of the analytical data assume that the information presented by the analytical laboratory is correct. The VOC findings are based upon the assessment of the following:

- * ● Data Completeness
 - * ● Holding Times
 - Calibration (Initial and Continuing)
 - Blanks
 - * ● System Monitoring Compounds (Surrogate Spikes)
 - Matrix Spike/Matrix Spike Duplicates
 - Laboratory Control Sample
 - * ● Internal Standards
 - * ● Target Compound Identification
 - * ● Compound Quantification and Reported Contract Quantitation Limits
 - * ● System Performance
- * Criteria were met for this evaluation item.

This evaluation was conducted in accordance with USEPA CLP National Functional Guidelines for Organic Data Review and the analytical method. Findings from this evaluation should be considered when using the analytical data. This report presents a summary of the data qualifications based on the review of the aforementioned evaluation criteria. This is followed by annotated Form 1s/ spreadsheets. Finally, the worksheets used to perform the evaluation are provided.

FINDINGS

VOLATILE ORGANIC COMPOUNDS

1. Matrix Spike

For MW-23B matrix spike/matrix spike duplicate, the percent recovery was greater than the high control limit for the following constituent:

Parameter	MS % Recovery	MSD % Recovery	RPD
Methyl acetate	166	169	ok

MS – Matrix Spike; MSD – Matrix Spike Duplicate; RPD – Relative Percent Difference

For this constituent, qualify positive results as estimated biased high “J” for sample MW-23B.

For MW-23B matrix spike/matrix spike duplicate, the percent recovery was less than the low control limit for the following constituent:

Parameter	MS % Recovery	MSD % Recovery	RPD
Dichlorodifluoromethane	50	48	ok

MS – Matrix Spike; MSD – Matrix Spike Duplicate; RPD – Relative Percent Difference

For this constituents, qualify positive results as estimated biased low “J” and nondetects as estimated “UJ” for sample MW-23B.

For EXB-7 matrix spike/matrix spike duplicate, the percent recovery was greater than the high control limit for the following constituent:

Parameter	MS % Recovery	MSD % Recovery	RPD
Methyl acetate	171	133	ok

MS – Matrix Spike; MSD – Matrix Spike Duplicate; RPD – Relative Percent Difference

For this constituent, qualify positive results as estimated biased high “J” for sample EXB-7.

For EXB-7 matrix spike/matrix spike duplicate, the percent recovery was less than the low control limit for the following constituents:

Parameter	MS % Recovery	MSD % Recovery	RPD
Dichlorodifluoromethane	62	52	ok
Trichloroethene	55	91	ok

MS – Matrix Spike; MSD – Matrix Spike Duplicate; RPD – Relative Percent Difference

For these constituents, qualify positive results as estimated biased low “J” and nondetects as estimated “UJ” for sample EXB-7.

2. Laboratory Control Sample

For 255019 laboratory control samples, the percent recovery of methyl acetate (175%), was greater than the high control limit. For the following samples, qualify positive results of this constituents as estimated biased high “J”.

EXB-7	EXB-10	MW-23B	MW-1B
EXB-9	EXB-1	MW-32	TB122910
EB122810	EXB-2	MW-1210	MW-4B
MW-5B			

For 255019 laboratory control sample, the percent recovery of chloromethane (69%) and dichlorodifluoromethane (60%) was less than the low control limit. For the following samples, qualify positive results of these constituents as estimated biased low “J” and nondetected results as estimated biased low “UJ”.

EXB-7	EXB-10	MW-23B	MW-1B
EXB-9	EXB-1	MW-32	TB122910
EB122810	EXB-2	MW-1210	MW-4B
MW-5B			

3. Calibration

For continuing calibration 1/5/11 6:00, the percent difference for bromomethane (36%), methylene chloride (-86%) and methyl acetate (86%) was greater than the control limit of 30%/40%. For the following samples, qualify positive results of these constituents as estimated "J" and nondetected results as estimated "UJ".

EXB-9 MW-23B EXB-7 EXB-1
EXB-2 MW-5B

4. Blanks

The following compound was reported in the laboratory method blank and/or equipment blank at the listed maximum concentrations.

Blank	Compound	Maximum Concentration (ppb)	Action
MB0002	cis-1,2-dichloroethene	0.878 J	SR< RL; U RL SR<BLK&>RL; BLK U
EB122810	carbon disulfide	1.4	SR< RL; U RL SR<BLK&>RL; BLK U

SR – Sample Result; RL – Reporting Limit; BLK - Blank

NOTES

VOLATILE ORGANIC COMPOUNDS

Matrix Spike/Matrix Spike Duplicate

For EXB-7 matrix spike/matrix spike duplicate, as noted below the percent recovery of either the matrix spike or matrix spike duplicate was outside the control limit.

Parameter	MS % Recovery	MSD % Recovery	RPD
2-Butanone	ok	69	ok
cis-1,2-Dichloroethene	3660	3500	ok
Trichloroethene	55	91	ok

MS – Matrix Spike; MSD – Matrix Spike Duplicate; RPD – Relative Percent Difference

For 2-butanone, because at least one percent recovery was within control limits, data are not qualified on this basis. For cis-1,2-dichloroethene and trichloroethene, the original sample concentration was 4x greater than the spike amount. Data are not qualified on this basis.

For MW-23B matrix spike/matrix spike duplicate, as noted below the percent recovery of either the matrix spike or matrix spike duplicate was outside the control limit and/or the relative percent difference was outside the control limit.

Parameter	MS % Recovery	MSD % Recovery	RPD
1,1,2,2-Tetrachloroethane	ok	64	ok
1,1,2-Trichloroethane	ok	66	ok
1,1-Dichloroethene	ok	67	ok
1,2-Dibromo-3-chloropropane	ok	58	ok
1,2-Dibromoethane	ok	69	ok
1,2-Dichlorobenzene	ok	67	ok
1,2-Dichloropropane	ok	69	ok
Benzene	ok	67	ok
Bromodichloromethane	ok	67	ok
Bromoform	ok	57	ok
Carbon tetrachloride	ok	68	31
Chloromethane	ok	69	ok
cis-1,2-Dichloroethene	ok	68	ok
cis-1,3-Dichloropropene	ok	67	ok
Dibromochloromethane	ok	63	ok
Naphthalene	ok	66	ok
Stryene	ok	67	ok
Tetrachloroethene	ok	69	ok
Toluene	ok	69	ok
trans-1,3-Dichloropropene	ok	65	ok
Trichloroethene	ok	65	32

MS – Matrix Spike; MSD – Matrix Spike Duplicate; RPD – Relative Percent Difference

Because at least one percent recovery was within control limits, data are not qualified on this basis.

Compound Quantitation

The following samples were analyzed at the listed dilution for the noted parameters.

Sample ID	Parameter(s)	Dilution Factor
EXB-7	cis-1,2-Dichloroethene	50x
EXB-1	cis-1,2-Dichloroethene	100x
EXB-2	cis-1,2-Dichloroethene Trichloroethene	100x
MW-5B	cis-1,2-Dichloroethene Trichloroethene Vinyl chloride	100x

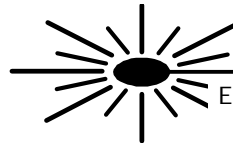
Field Duplicates

Calculate RPD for positive results only.

Sample ID	Duplicate ID	Parameter	RPD
MW-32B	MW-1210		
78.9	76.7	cis-1,2-Dichloroethene	2.8
46.4	45.8	Trichloroethene	1.3

Data Reviewer

Date



Data Validation Report

SDG#	3039955
Validation Report Date	May 20, 2011
Validation Guidance	USEPA CLP National Functional Guidelines for Organic Data Review
Client Name	WSP Environmental Strategies Consulting, LLC
Project Name	EPT Ithaca
Laboratory	PACE Analytical Services, Inc.
Method(s) Utilized	SW 846 8260
Analytical Fraction	VOCs

Samples/Matrix:

Date Sampled	Sample ID	Laboratory ID	VOCs	Matrix
01/13/11	WPOSTGAC	3039955001	X	Aqueous
01/13/11	WMIDGAC	3039955002	X	Aqueous
01/13/11	WAS	3039955003	X	Aqueous
01/13/11	WINF	3039955004	X	Aqueous
01/13/11	TB011311	3039955005	X	Aqueous

Analytical data in this report were screened to determine analytical limitations of the data based on specific quality control criteria. This screening assumes analytical results are correct as reported and merely provides an interpretation of the reported quality control results. This is a PACE level II data package; therefore, no raw data and only limit quality control data are provided for review. Due to the limited information provided in the data package, laboratory calculations could not be verified as part of this validation. Specific findings on analytical limitations are presented in this report. Annotated Form 1s or spreadsheets for samples reviewed are included after the Data Assessment Findings. Form 1s for the MS/MSD samples and spreadsheets are not annotated.

SUMMARY

The sample set for the EPT Ithaca site consists of 4 aqueous field samples and one trip blank. The samples were analyzed for the parameters as listed above.

The organic findings presented in this review of the analytical data assume that the information presented by the analytical laboratory is correct.

The VOC findings are based upon the assessment of the following:

- * ● Holding Times and sample preservation
- * ● Blanks
- * ● System Monitoring Compounds (Surrogate Spikes)
- Matrix Spike/Matrix Spike Duplicates
- Laboratory Control Sample

* Criteria were met for this evaluation item; NP – Not Performed by laboratory

This evaluation was conducted in accordance with USEPA CLP National Functional Guidelines for Organic Data Review and the analytical method. This is only a limited review of the information provide in the level II data package. Findings from this evaluation should be considered when using the analytical data. This report presents a summary of the data qualifications based on the review of the aforementioned evaluation criteria. This is followed by annotated Form 1s/ spreadsheets. Finally, the worksheets used to perform the evaluation are provided.

FINDINGS

VOLATILE ORGANIC COMPOUNDS

1. Laboratory Control Sample

For 258736 laboratory control sample, the percent recovery of methyl acetate (173%), 2-butanone (131%), acetone (159%) and bromomethane (174%) was greater than the high control limit. For the following samples, qualify positive results of these constituents as estimated biased high “J”.

TB011311	WAS	WMIDGAC	WPOSTGAC
WINF			

For 258736 laboratory control sample, the percent recovery of dichlorodifluoromethane (69%) was less than the low control limit. For the following samples, qualify positive results of this constituent as estimated biased low “J” and nondetected results as estimated “UJ”.

TB011311	WAS	WMIDGAC	WPOSTGAC
WINF			

2. Matrix Spike

For the WPOSTGAC matrix spike/matrix spike duplicate, the percent recovery for methyl acetate (193%, 192%), bromomethane (167%, 149%), trichlorofluoromethane (153%, 155%), and vinyl chloride (131%, 139%) was greater than the high control limit. For the following sample, qualify positive results of these constituents as estimated biased high “J”.

WPOSTGAC

NOTES**VOLATILE ORGANIC COMPOUNDS****Data Completeness**

This is a limited level II data package. No raw data and only limit quality control information is presented in the data package. Only information provided was reviewed.

Compound Quantitation

The following samples were analyzed at the listed dilution for the noted parameters.

Sample ID	Parameter(s)	Dilution Factor
WINF	cis-1,2-Dichloroethene Trichloroethene	40x

Field Duplicates

No field duplicates were associated with this sample delivery group.

Data Reviewer

Date