

**Laboratory Data Consultants, Inc.
Data Validation Report**

Project/Site Name: JPL, 00HW019
Collection Date: July 6, 2001
LDC Report Date: August 14, 2001
Matrix: Water
Parameters: Volatiles
Validation Level: EPA Level IV
Laboratory: Applied P & Ch Laboratory

Sample Delivery Group (SDG): 01-4565

Sample Identification

ER-17
MW-17-2
MW-17-3
MW-17-4
MW-17-5
Trip Blank
ER-17MS
ER-17MSD

Introduction

This data review covers 8 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA Method 524.2 for Volatiles.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (October 1999) as there are no current guidelines for the method stated above.

A table summarizing all data qualification is provided at the end of this report. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Blank results are summarized in Section V.

Field duplicates are summarized in Section XVI.

The following are definitions of the data qualifiers:

- U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.
- J Indicates an estimated value.
- R Quality control indicates the data is not usable.
- N Presumptive evidence of presence of the constituent.
- UU Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.
- A Indicates the finding is based upon technical validation criteria.
- P Indicates the finding is related to a protocol/contractual deviation.
- None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. GC/MS Instrument Performance Check

Instrument performance was checked at 12 hour intervals. All ion abundance requirements were met.

III. Initial Calibration

Initial calibration was performed using required standard concentrations.

Percent relative standard deviations (%RSD) were less than or equal to 20.0% for selected compounds.

A curve fit, based on the initial calibration, was established for quantitation for selected compounds. The coefficient of determination (r^2) was greater than or equal to 0.990.

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

All of the continuing calibration percent differences (%D) between the initial calibration RRF and the continuing calibration RRF were less than or equal to 30.0% with the following exceptions:

Date	Compound	%D	Associated Samples	Flag	A or P
7/10/01	Bromomethane	32.58	All samples in SDG 01-4565	J (all detects)	P
	Naphthalene	38.71		UJ (all non-detects) J (all detects) UJ (all non-detects)	

V. Blanks

Method blanks were reviewed for each matrix as applicable. No volatile contaminants were found in the method blanks.

Sample ER-17 was identified as an equipment rinsate. No volatile contaminants were found in this blank.

Sample "TRIP BLANK" was identified as a trip blank. No volatile contaminants were found in this blank with the following exceptions:

Trip Blank	Sampling Date	Compound	Concentration	Associated Samples
Trip Blank	7/6/01	Methylene chloride	2 ug/L	ER-17 MW-17-2 MW-17-3 MW-17-4 MW-17-5

Sample concentrations were compared to concentrations detected in the field blanks. The sample concentrations were either not detected or were significantly greater (>10X for common contaminants, >5X for other contaminants) than the concentrations found in the associated field blanks.

VI. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VII. Matrix Spike/Matrix Spike Duplicates

Although matrix spike (MS) and matrix spike duplicate (MSD) samples were not required by the method, MS and MSD samples were reported by the laboratory. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Internal Standards

All internal standard areas and retention times were within QC limits.

XI. Target Compound Identifications

All target compound identifications were within validation criteria.

XII. Compound Quantitation and CRQLs

All compound quantitation and CRQLs were within validation criteria.

XIII. Tentatively Identified Compounds (TICs)

Tentatively identified compounds were not reported by the laboratory.

XIV. System Performance

The system performance was acceptable.

XV. Overall Assessment of Data

Data flags have been summarized at the end of the report.

XVI. Field Duplicates

No field duplicates were identified in this SDG.

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Volatiles - Data Qualification Summary - SDG 01-4565

SDG	Sample	Compound	Flag	A or P	Reason
01-4565	ER-17 MW-17-2 MW-17-3 MW-17-4 MW-17-5 Trip Blank	Bromomethane Naphthalene	J (all detects) UJ (all non-detects) J (all detects) UJ (all non-detects)	P	Continuing calibration (%D)

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Volatiles - Laboratory Blank Data Qualification Summary - SDG 01-4565

No Sample Data Qualified in this SDG

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Volatiles - Field Blank Data Qualification Summary - SDG 01-4565

No Sample Data Qualified in this SDG

**Laboratory Data Consultants, Inc.
Data Validation Report**

Project/Site Name: JPL, 00HW019
Collection Date: July 9, 2001
LDC Report Date: August 14, 2001
Matrix: Water
Parameters: Volatiles
Validation Level: EPA Level IV
Laboratory: Applied P & Ch Laboratory
Sample Delivery Group (SDG): 01-4599

Sample Identification

ER-21
MW-21-1
MW-21-2
MW-21-3
MW-21-4
MW-21-5
Trip Blank
ER-21MS
ER-21MSD

Introduction

This data review covers 9 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA Method 524.2 for Volatiles.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (October 1999) as there are no current guidelines for the method stated above.

A table summarizing all data qualification is provided at the end of this report. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Blank results are summarized in Section V.

Field duplicates are summarized in Section XVI.

The following are definitions of the data qualifiers:

- U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.
- J Indicates an estimated value.
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- A Indicates the finding is based upon technical validation criteria.
- P Indicates the finding is related to a protocol/contractual deviation.
- None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. GC/MS Instrument Performance Check

Instrument performance was checked at 12 hour intervals. All ion abundance requirements were met.

III. Initial Calibration

Initial calibration was performed using required standard concentrations.

Percent relative standard deviations (%RSD) were less than or equal to 20.0% for selected compounds.

A curve fit, based on the initial calibration, was established for quantitation for selected compounds. The coefficient of determination (r^2) was greater than or equal to 0.990.

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

All of the continuing calibration percent differences (%D) between the initial calibration RRF and the continuing calibration RRF were less than or equal to 30.0% with the following exceptions:

Date	Compound	%D	Associated Samples	Flag	A or P
7/11/01	1,2,4-Trichlorobenzene	31.40	All samples in SDG 01-4599	J (all detects)	P
	Naphthalene	42.01		UJ (all non-detects) J (all detects) UJ (all non-detects)	

V. Blanks

Method blanks were reviewed for each matrix as applicable. No volatile contaminants were found in the method blanks.

Sample ER-21 was identified as an equipment rinsate. No volatile contaminants were found in this blank with the following exceptions:

Equipment Rinsate	Sampling Date	Compound	Concentration	Associated Samples
ER-21	7/9/01	Methylene chloride	1 ug/L	MW-21-1 MW-21-2 MW-21-3 MW-21-4 MW-21-5

Sample "TRIP BLANK" was identified as a trip blank. No volatile contaminants were found in this blank with the following exceptions:

Trip Blank	Sampling Date	Compound	Concentration	Associated Samples
Trip Blank	7/9/01	Methylene chloride	2 ug/L	ER-21 MW-21-1 MW-21-2 MW-21-3 MW-21-4 MW-21-5

Sample concentrations were compared to concentrations detected in the field blanks. The sample concentrations were either not detected or were significantly greater ($>10X$ for common contaminants, $>5X$ for other contaminants) than the concentrations found in the associated field blanks with the following exceptions:

Sample	Compound TIC (RT in minutes)	Reported Concentration	Modified Final Concentration
ER-21	Methylene chloride	1 ug/L	1U ug/L

VI. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VII. Matrix Spike/Matrix Spike Duplicates

Although matrix spike (MS) and matrix spike duplicate (MSD) samples were not required by the method, MS and MSD samples were reported by the laboratory. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Internal Standards

All internal standard areas and retention times were within QC limits.

XI. Target Compound Identifications

All target compound identifications were within validation criteria.

XII. Compound Quantitation and CRQLs

All compound quantitation and CRQLs were within validation criteria.

XIII. Tentatively Identified Compounds (TICs)

Tentatively identified compounds were not reported by the laboratory.

XIV. System Performance

The system performance was acceptable.

XV. Overall Assessment of Data

Data flags have been summarized at the end of the report.

XVI. Field Duplicates

No field duplicates were identified in this SDG.

JPL, 00HW019

Volatiles - Data Qualification Summary - SDG 01-4599

SDG	Sample	Compound	Flag	A or P	Reason
01-4599	ER-21 MW-21-1 MW-21-2 MW-21-3 MW-21-4 MW-21-5 Trip Blank	1,2,4-Trichlorobenzene Naphthalene	J (all detects) UJ (all non-detects) J (all detects) UJ (all non-detects)	P	Continuing calibration (%D)

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Volatiles - Laboratory Blank Data Qualification Summary - SDG 01-4599

No Sample Data Qualified in this SDG

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Volatiles - Field Blank Data Qualification Summary - SDG 01-4599

SDG	Sample	Compound TIC (RT in minutes)	Modified Final Concentration	A or P
01-4599	ER-21	Methylene chloride	1U ug/L	A

**Laboratory Data Consultants, Inc.
Data Validation Report**

Project/Site Name: JPL, 00HW019
Collection Date: July 11, 2001
LDC Report Date: August 14, 2001
Matrix: Water
Parameters: Volatiles
Validation Level: EPA Level IV
Laboratory: Applied P & Ch Laboratory
Sample Delivery Group (SDG): 01-4650

Sample Identification

MW-6
MW-10
MW-13
MW-10-D
MW-20-5
Trip Blank
MW-6MS
MW-6MSD
MW-13MS
MW-13MSD

Introduction

This data review covers 10 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA Method 524.2 for Volatiles.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (October 1999) as there are no current guidelines for the method stated above.

A table summarizing all data qualification is provided at the end of this report. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Blank results are summarized in Section V.

Field duplicates are summarized in Section XVI.

The following are definitions of the data qualifiers:

- U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.
- J Indicates an estimated value.
- R Quality control indicates the data is not usable.
- N Presumptive evidence of presence of the constituent.
- UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.
- A Indicates the finding is based upon technical validation criteria.
- P Indicates the finding is related to a protocol/contractual deviation.
- None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. GC/MS Instrument Performance Check

Instrument performance was checked at 12 hour intervals. All ion abundance requirements were met.

III. Initial Calibration

Initial calibration was performed using required standard concentrations.

Percent relative standard deviations (%RSD) were less than or equal to 20.0% for selected compounds.

A curve fit, based on the initial calibration, was established for quantitation for selected compounds. The coefficient of determination (r^2) was greater than or equal to 0.990.

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

All of the continuing calibration percent differences (%D) between the initial calibration RRF and the continuing calibration RRF were less than or equal to 30.0% with the following exceptions:

Date	Compound	%D	Associated Samples	Flag	A or P
7/16/01	Naphthalene	33.34	MW-13 MW-13MS MW-13MSD 01G3555MB01	J (all detects) UJ (all non-detects)	P

V. Blanks

Method blanks were reviewed for each matrix as applicable. No volatile contaminants were found in the method blanks.

Sample "TRIP BLANK" was identified as a trip blank. No volatile contaminants were found in this blank with the following exceptions:

Trip Blank	Sampling Date	Compound	Concentration	Associated Samples
Trip Blank	7/11/01	Methylene chloride	2.6 ug/L	MW-6 MW-10 MW-13 MW-10-D MW-20-5

Sample concentrations were compared to concentrations detected in the field blanks. The sample concentrations were either not detected or were significantly greater (>10X for common contaminants, >5X for other contaminants) than the concentrations found in the associated field blanks.

VI. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VII. Matrix Spike/Matrix Spike Duplicates

Although matrix spike (MS) and matrix spike duplicate (MSD) samples were not required by the method, MS and MSD samples were reported by the laboratory. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits with the following exceptions:

Spike ID (Associated Samples)	Compound	MS (%R) (Limits)	MSD (%R) (Limits)	RPD (Limits)	Flag	A or P
MW-13MS/MSD (MW-6 MW-10 MW-13 MW-10-D MW-20-5 Trip Blank)	Trichloroethene	-	-	40 (≤30)	J (all detects) UJ (all non-detects)	A

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Internal Standards

All internal standard areas and retention times were within QC limits.

XI. Target Compound Identifications

All target compound identifications were within validation criteria.

XII. Compound Quantitation and CRQLs

All compound quantitation and CRQLs were within validation criteria.

XIII. Tentatively Identified Compounds (TICs)

Tentatively identified compounds were not reported by the laboratory.

XIV. System Performance

The system performance was acceptable.

XV. Overall Assessment of Data

Data flags have been summarized at the end of the report.

XVI. Field Duplicates

Samples MW-10 and MW-10-D were identified as field duplicates. No volatiles were detected in any of the samples with the following exceptions:

Compound	Concentration (ug/L)		RPD
	MW-10	MW-10-D	
Carbon tetrachloride	0.4	0.4	0
Chloroform	0.8	0.9	12
Tetrachloroethene	0.4	0.4	0
Trichloroethene	11.9	12.6	6

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Volatiles - Data Qualification Summary - SDG 01-4650

SDG	Sample	Compound	Flag	A or P	Reason
01-4650	MW-13	Naphthalene	J (all detects) UJ (all non-detects)	P	Continuing calibration (%D)
01-4650	MW-6 MW-10 MW-13 MW-10-D MW-20-5 Trip Blank	Trichloroethene	J (all detects) UJ (all non-detects)	A	Matrix spike/Matrix spike duplicates (RPD)

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Volatiles - Laboratory Blank Data Qualification Summary - SDG 01-4650

No Sample Data Qualified in this SDG

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Volatiles - Field Blank Data Qualification Summary - SDG 01-4650

No Sample Data Qualified in this SDG

**Laboratory Data Consultants, Inc.
Data Validation Report**

Project/Site Name: JPL, 00HW019
Collection Date: July 12, 2001
LDC Report Date: August 14, 2001
Matrix: Water
Parameters: Volatiles
Validation Level: EPA Level IV
Laboratory: Applied P & Ch Laboratory
Sample Delivery Group (SDG): 01-4684

Sample Identification

MW-5
MW-16
MW-5-D
MW-16-D
Trip Blank
MW-5MS
MW-5MSD

Introduction

This data review covers 7 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA Method 524.2 for Volatiles.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (October 1999) as there are no current guidelines for the method stated above.

A table summarizing all data qualification is provided at the end of this report. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Blank results are summarized in Section V.

Field duplicates are summarized in Section XVI.

The following are definitions of the data qualifiers:

- U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.
- J Indicates an estimated value.
- R Quality control indicates the data is not usable.
- N Presumptive evidence of presence of the constituent.
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- A Indicates the finding is based upon technical validation criteria.
- P Indicates the finding is related to a protocol/contractual deviation.
- None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. GC/MS Instrument Performance Check

Instrument performance was checked at 12 hour intervals. All ion abundance requirements were met.

III. Initial Calibration

Initial calibration was performed using required standard concentrations.

Percent relative standard deviations (%RSD) were less than or equal to 20.0% for selected compounds.

A curve fit, based on the initial calibration, was established for quantitation for selected compounds. The coefficient of determination (r^2) was greater than or equal to 0.990.

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

All of the continuing calibration percent differences (%D) between the initial calibration RRF and the continuing calibration RRF were less than or equal to 30.0% with the following exceptions:

Date	Compound	%D	Associated Samples	Flag	A or P
7/16/01	Naphthalene	39.63	All samples in SDG 01-4684	J (all detects) UJ (all non-detects)	P

V. Blanks

Method blanks were reviewed for each matrix as applicable. No volatile contaminants were found in the method blanks.

Sample "TRIP BLANK" was identified as a trip blank. No volatile contaminants were found in this blank with the following exceptions:

Trip Blank	Sampling Date	Compound	Concentration	Associated Samples
Trip Blank	7/12/01	Methylene chloride	2 ug/L	MW-5 MW-16 MW-5-D MW-16-D

Sample concentrations were compared to concentrations detected in the field blanks. The sample concentrations were either not detected or were significantly greater (>10X for common contaminants, >5X for other contaminants) than the concentrations found in the associated field blanks.

VI. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VII. Matrix Spike/Matrix Spike Duplicates

Although matrix spike (MS) and matrix spike duplicate (MSD) samples were not required by the method, MS and MSD samples were reported by the laboratory. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Internal Standards

All internal standard areas and retention times were within QC limits.

XI. Target Compound Identifications

All target compound identifications were within validation criteria.

XII. Compound Quantitation and CRQLs

All compound quantitation and CRQLs were within validation criteria.

XIII. Tentatively Identified Compounds (TICs)

Tentatively identified compounds were not reported by the laboratory.

XIV. System Performance

The system performance was acceptable.

XV. Overall Assessment of Data

Data flags have been summarized at the end of the report.

XVI. Field Duplicates

Samples MW-5 and MW-5-D, and samples MW-16 and MW-16-D were identified as field duplicates. No volatiles were detected in any of the samples with the following exceptions:

Compound	Concentration (ug/L)		RPD
	MW-5	MW-5-D	
Methyl-tert-butyl ether	1U	0.4	200

Compound	Concentration (ug/L)		RPD
	MW-16	MW-16-D	
Carbon tetrachloride	7.8	7.8	0
Chloroform	6.9	7.1	3
1,2-Dichloroethane	0.4	0.5	22
1,1-Dichloroethene	0.5	0.5U	200
Trichloroethene	5.6	5.6	0

JPL, 00HW019

Volatiles - Data Qualification Summary - SDG 01-4684

SDG	Sample	Compound	Flag	A or P	Reason
01-4684	MW-5 MW-16 MW-5-D MW-16-D Trip Blank	Naphthalene	J (all detects) UJ (all non-detects)	P	Continuing calibration (%D)

JPL, 00HW019

Volatiles - Laboratory Blank Data Qualification Summary - SDG 01-4684

No Sample Data Qualified in this SDG

JPL, 00HW019

Volatiles - Field Blank Data Qualification Summary - SDG 01-4684

No Sample Data Qualified in this SDG

**Laboratory Data Consultants, Inc.
Data Validation Report**

Project/Site Name: JPL, 00HW019
Collection Date: July 13, 2001
LDC Report Date: August 14, 2001
Matrix: Water
Parameters: Volatiles
Validation Level: EPA Level IV
Laboratory: Applied P & Ch Laboratory
Sample Delivery Group (SDG): 01-4685

Sample Identification

ER-3
MW-3-2
MW-3-3
MW-3-4
Trip Blank

Introduction

This data review covers 5 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA Method 524.2 for Volatiles.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (October 1999) as there are no current guidelines for the method stated above.

A table summarizing all data qualification is provided at the end of this report. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Blank results are summarized in Section V.

Field duplicates are summarized in Section XVI.

The following are definitions of the data qualifiers:

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- J Indicates an estimated value.
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- A Indicates the finding is based upon technical validation criteria.
- P Indicates the finding is related to a protocol/contractual deviation.
- None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. GC/MS Instrument Performance Check

Instrument performance was checked at 12 hour intervals. All ion abundance requirements were met.

III. Initial Calibration

Initial calibration was performed using required standard concentrations.

Percent relative standard deviations (%RSD) were less than or equal to 20.0% for selected compounds.

A curve fit, based on the initial calibration, was established for quantitation for selected compounds. The coefficient of determination (r^2) was greater than or equal to 0.990 with the following exceptions:

Date	Compound	r^2	Associated Samples	Flag	A or P
7/19/01	Chloromethane	0.9897	Trip Blank 01G3721MB01	J (all detects) UJ (all non-detects)	P

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

All of the continuing calibration percent differences (%D) between the initial calibration RRF and the continuing calibration RRF were less than or equal to 30.0% with the following exceptions:

Date	Compound	%D	Associated Samples	Flag	A or P
7/16/01	Naphthalene	39.63	ER-3 MW-3-2 MW-3-3 MW-3-4 01G3580MB01	J (all detects) UJ (all non-detects)	P

V. Blanks

Method blanks were reviewed for each matrix as applicable. No volatile contaminants were found in the method blanks.

Sample ER-3 was identified as an equipment rinsate. No volatile contaminants were found in this blank with the following exceptions:

Equipment Rinsate	Sampling Date	Compound	Concentration	Associated Samples
ER-3	7/13/01	Toluene	0.4 ug/L	MW-3-2 MW-3-3 MW-3-4

Sample "TRIP BLANK" was identified as a trip blank. No volatile contaminants were found in this blank with the following exceptions:

Trip Blank	Sampling Date	Compound	Concentration	Associated Samples
Trip Blank	7/13/01	Methylene chloride	2 ug/L	ER-3 MW-3-2 MW-3-3 MW-3-4

Sample concentrations were compared to concentrations detected in the field blanks. The sample concentrations were either not detected or were significantly greater ($>10X$ for common contaminants, $>5X$ for other contaminants) than the concentrations found in the associated field blanks.

VI. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VII. Matrix Spike/Matrix Spike Duplicates

Although matrix spike (MS) and matrix spike duplicate (MSD) samples were not required by the method, MS and MSD samples were reported by the laboratory. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Internal Standards

All internal standard areas and retention times were within QC limits.

XI. Target Compound Identifications

All target compound identifications were within validation criteria.

XII. Compound Quantitation and CRQLs

All compound quantitation and CRQLs were within validation criteria.

XIII. Tentatively Identified Compounds (TICs)

Tentatively identified compounds were not reported by the laboratory.

XIV. System Performance

The system performance was acceptable.

XV. Overall Assessment of Data

Data flags have been summarized at the end of the report.

XVI. Field Duplicates

No field duplicates were identified in this SDG.

JPL, 00HW019

Volatiles - Data Qualification Summary - SDG 01-4685

SDG	Sample	Compound	Flag	A or P	Reason
01-4685	Trip Blank	Chloromethane	J (all detects) UJ (all non-detects)	P	Initial calibration (r^2)
01-4685	ER-3 MW-3-2 MW-3-3 MW-3-4	Naphthalene	J (all detects) UJ (all non-detects)	P	Continuing calibration (%D)

JPL, 00HW019

Volatiles - Laboratory Blank Data Qualification Summary - SDG 01-4685

No Sample Data Qualified in this SDG

JPL, 00HW019

Volatiles - Field Blank Data Qualification Summary - SDG 01-4685

No Sample Data Qualified in this SDG

**Laboratory Data Consultants, Inc.
Data Validation Report**

Project/Site Name: JPL, 00HW019
Collection Date: July 16, 2001
LDC Report Date: August 14, 2001
Matrix: Water
Parameters: Volatiles
Validation Level: EPA Level IV
Laboratory: Applied P & Ch Laboratory
Sample Delivery Group (SDG): 01-4729

Sample Identification

ER-20
MW-20-1
MW-20-2
MW-20-3
MW-20-4
Trip Blank

Introduction

This data review covers 6 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA Method 524.2 for Volatiles.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (October 1999) as there are no current guidelines for the method stated above.

A table summarizing all data qualification is provided at the end of this report. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Blank results are summarized in Section V.

Field duplicates are summarized in Section XVI.

The following are definitions of the data qualifiers:

- U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.
- J Indicates an estimated value.
- R Quality control indicates the data is not usable.
- N Presumptive evidence of presence of the constituent.
- UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.
- A Indicates the finding is based upon technical validation criteria.
- P Indicates the finding is related to a protocol/contractual deviation.
- None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. GC/MS Instrument Performance Check

Instrument performance was checked at 12 hour intervals. All ion abundance requirements were met.

III. Initial Calibration

Initial calibration was performed using required standard concentrations.

Percent relative standard deviations (%RSD) were less than or equal to 20.0% for selected compounds.

A curve fit, based on the initial calibration, was established for quantitation for selected compounds. The coefficient of determination (r^2) was greater than or equal to 0.990.

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

All of the continuing calibration percent differences (%D) between the initial calibration RRF and the continuing calibration RRF were less than or equal to 30.0%.

V. Blanks

Method blanks were reviewed for each matrix as applicable. No volatile contaminants were found in the method blanks.

Sample ER-20 was identified as an equipment rinsate. No volatile contaminants were found in this blank.

Sample "TRIP BLANK" was identified as a trip blank. No volatile contaminants were found in this blank.

VI. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VII. Matrix Spike/Matrix Spike Duplicates

Although matrix spike (MS) and matrix spike duplicate (MSD) samples were not required by the method, MS and MSD samples were reported by the laboratory. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Internal Standards

All internal standard areas and retention times were within QC limits.

XI. Target Compound Identifications

All target compound identifications were within validation criteria.

XII. Compound Quantitation and CRQLs

All compound quantitation and CRQLs were within validation criteria.

XIII. Tentatively Identified Compounds (TICs)

Tentatively identified compounds were not reported by the laboratory.

XIV. System Performance

The system performance was acceptable.

XV. Overall Assessment of Data

Data flags have been summarized at the end of the report.

XVI. Field Duplicates

No field duplicates were identified in this SDG.

JPL, 00HW019

Volatiles - Data Qualification Summary - SDG 01-4729

No Sample Data Qualified in this SDG

JPL, 00HW019

Volatiles - Laboratory Blank Data Qualification Summary - SDG 01-4729

No Sample Data Qualified in this SDG

JPL, 00HW019

Volatiles - Field Blank Data Qualification Summary - SDG 01-4729

No Sample Data Qualified in this SDG

**Laboratory Data Consultants, Inc.
Data Validation Report**

Project/Site Name: JPL, 00HW019
Collection Date: July 18, 2001
LDC Report Date: August 14, 2001
Matrix: Water
Parameters: Volatiles
Validation Level: EPA Level IV
Laboratory: Applied P & Ch Laboratory
Sample Delivery Group (SDG): 01-4770

Sample Identification

ER-19
MW-19-5
MW-19-4
MW-19-1
MW-19-3
MW-19-2
MW-19-2D
Trip Blank
MW-19-3MS
MW-19-3MSD

Introduction

This data review covers 10 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA Method 524.2 for Volatiles.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (October 1999) as there are no current guidelines for the method stated above.

A table summarizing all data qualification is provided at the end of this report. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Blank results are summarized in Section V.

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- A Indicates the finding is based upon technical validation criteria.
- P Indicates the finding is related to a protocol/contractual deviation.
- None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. GC/MS Instrument Performance Check

Instrument performance was checked at 12 hour intervals. All ion abundance requirements were met.

III. Initial Calibration

Initial calibration was performed using required standard concentrations.

Percent relative standard deviations (%RSD) were less than or equal to 20.0% for selected compounds.

A curve fit, based on the initial calibration, was established for quantitation for selected compounds. The coefficient of determination (r^2) was greater than or equal to 0.990.

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

All of the continuing calibration percent differences (%D) between the initial calibration RRF and the continuing calibration RRF were less than or equal to 30.0%.

V. Blanks

Method blanks were reviewed for each matrix as applicable. No volatile contaminants were found in the method blanks.

Sample ER-19 was identified as an equipment rinsate. No volatile contaminants were found in this blank with the following exceptions:

Equipment Rinsate	Sampling Date	Compound	Concentration	Associated Samples
ER-19	7/18/01	Methylene chloride Chloroform	0.9 ug/L 0.4 ug/L	MW-19-5 MW-19-4 MW-19-1 MW-19-3 MW-19-2 MW-19-2D

Sample "TRIP BLANK" was identified as a trip blank. No volatile contaminants were found in this blank with the following exceptions:

Trip Blank	Sampling Date	Compound	Concentration	Associated Samples
Trip Blank	7/18/01	Methylene chloride	0.8 ug/L	ER-19 MW-19-5 MW-19-4 MW-19-1 MW-19-3 MW-19-2 MW-19-2D

Sample concentrations were compared to concentrations detected in the field blanks. The sample concentrations were either not detected or were significantly greater ($>10X$ for common contaminants, $>5X$ for other contaminants) than the concentrations found in the associated field blanks with the following exceptions:

Sample	Compound	Reported Concentration	Modified Final Concentration
MW-19-5	Chloroform	0.5 ug/L	0.5U ug/L
MW-19-3	Chloroform	0.5 ug/L	0.5U ug/L
MW-19-2	Chloroform	0.5 ug/L	0.5U ug/L
MW-19-2D	Chloroform	1.1 ug/L	1.1U ug/L

VI. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VII. Matrix Spike/Matrix Spike Duplicates

Although matrix spike (MS) and matrix spike duplicate (MSD) samples were not required by the method, MS and MSD samples were reported by the laboratory. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Internal Standards

All internal standard areas and retention times were within QC limits.

XI. Target Compound Identifications

All target compound identifications were within validation criteria.

XII. Compound Quantitation and CRQLs

All compound quantitation and CRQLs were within validation criteria.

XIII. Tentatively Identified Compounds (TICs)

Tentatively identified compounds were not reported by the laboratory.

XIV. System Performance

The system performance was acceptable.

XV. Overall Assessment of Data

Data flags have been summarized at the end of the report.

XVI. Field Duplicates

Samples MW-19-2 and MW-19-2D were identified as field duplicates. No volatiles were detected in any of the samples with the following exceptions:

Compound	Concentration (ug/L)		RPD
	MW-19-2	MW-19-2D	
Chloroform	0.5	1.1	75
Tetrachloroethene	0.5	0.8	46
Trichloroethene	1.2	1.6	28

JPL, 00HW019

Volatiles - Data Qualification Summary - SDG 01-4770

No Sample Data Qualified in this SDG

JPL, 00HW019

Volatiles - Laboratory Blank Data Qualification Summary - SDG 01-4770

No Sample Data Qualified in this SDG

JPL, 00HW019

Volatiles - Field Blank Data Qualification Summary - SDG 01-4770

SDG	Sample	Compound	Modified Final Concentration	A or P
01-4770	MW-19-5	Chloroform	0.5U ug/L	A
01-4770	MW-19-3	Chloroform	0.5U ug/L	A
01-4770	MW-19-2	Chloroform	0.5U ug/L	A
01-4770	MW-19-2D	Chloroform	1.1U ug/L	A