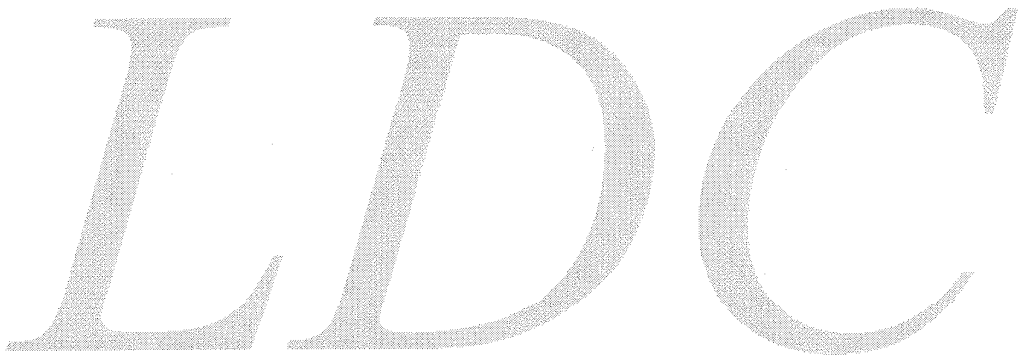
JPL, 00HW019
Data Validation Reports
LDC# 9504

Wet Chemistry



Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: JPL, 00HW019

Collection Date: October 22, 2002

LDC Report Date: December 17, 2002

Matrix: Water

Parameters: Wet Chemistry

Validation Level: EPA Level IV

Laboratory: Applied P & Ch Laboratory

Sample Delivery Group (SDG): 02-5613

Sample Identification

ER-23
MW-23-1
MW-23-2
MW-23-3
MW-23-4
MW-23-5
MW-23-3D
MW-23-4MS
MW-23-4MSD

Introduction

This data review covers 9 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 7196A for Hexavalent Chromium and EPA Method 314.0 for Perchlorate.

The review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review (February 1994) as there are no current guidelines for the methods 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 III.

Field duplicates are summarized in Section IX.

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. Calibration

a. Initial Calibration

All criteria for the initial calibration were met.

b. Calibration Verification

Calibration verification frequency and analysis criteria were met for each method when applicable.

III. Blanks

Method blanks were reviewed for each matrix as applicable. No contaminant concentrations were found in the method blanks.

Sample ER-23 was identified as an equipment rinsate. No contaminant concentrations were found in this blank.

IV. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) analyses were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

V. Duplicates

Duplicate (DUP) sample analyses were reviewed for each matrix as applicable.

VI. Laboratory Control Samples

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

VII. Sample Result Verification

All sample result verifications were within validation criteria.

VIII. Overall Assessment of Data

Data flags are summarized at the end of this report.

IX. Field Duplicates

Samples MW-23-3 and MW-23-3D were identified as field duplicates. No contaminant concentrations were detected in any of the samples.

JPL, 00HW019
Wet Chemistry - Data Qualification Summary - SDG 02-5613

No Sample Data Qualified in this SDG

JPL, 00HW019
Wet Chemistry - Laboratory Blank Data Qualification Summary - SDG 02-5613

No Sample Data Qualified in this SDG

JPL, 00HW019
Wet Chemistry - Field Blank Data Qualification Summary - SDG 02-5613

No Sample Data Qualified in this SDG

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: JPL, 00HW019

Collection Date: October 23, 2002

LDC Report Date: December 17, 2002

Matrix: Water

Parameters: Wet Chemistry

Validation Level: EPA Level IV

Laboratory: Applied P & Ch Laboratory

Sample Delivery Group (SDG): 02-5667

Sample Identification

ER-22
MW-22-1
MW-22-2
MW-22-3
MW-22-4
ER-22MS
ER-22MSD

Introduction

This data review covers 7 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 7196A for Hexavalent Chromium and EPA Method 314.0 for Perchlorate.

The review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review (February 1994) as there are no current guidelines for the methods 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 III.

Field duplicates are summarized in Section IX.

The following are definitions of the data qualifiers:

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J Indicates an estimated value.

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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. Calibration

a. Initial Calibration

All criteria for the initial calibration were met.

b. Calibration Verification

Calibration verification frequency and analysis criteria were met for each method when applicable.

III. Blanks

Method blanks were reviewed for each matrix as applicable. No contaminant concentrations were found in the method blanks.

Sample ER-22 was identified as an equipment rinsate. No contaminant concentrations were found in this blank.

IV. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) analyses were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

V. Duplicates

Duplicate (DUP) sample analyses were reviewed for each matrix as applicable.

VI. Laboratory Control Samples

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

VII. Sample Result Verification

All sample result verifications were within validation criteria.

VIII. Overall Assessment of Data

Data flags are summarized at the end of this report.

IX. Field Duplicates

No field duplicates were identified in this SDG.

JPL, 00HW019
Wet Chemistry - Data Qualification Summary - SDG 02-5667

No Sample Data Qualified in this SDG

JPL, 00HW019
Wet Chemistry - Laboratory Blank Data Qualification Summary - SDG 02-5667

No Sample Data Qualified in this SDG

JPL, 00HW019
Wet Chemistry - Field Blank Data Qualification Summary - SDG 02-5667

No Sample Data Qualified in this SDG

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: JPL, 00HW019

Collection Date: October 24, 2002

LDC Report Date: December 17, 2002

Matrix: Water

Parameters: Wet Chemistry

Validation Level: EPA Level IV

Laboratory: Applied P & Ch Laboratory

Sample Delivery Group (SDG): 02-5689

Sample Identification

MW-6
MW-13
MW-6MS
MW-6MSD

Introduction

This data review covers 4 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 7196A for Hexavalent Chromium and EPA Method 314.0 for Perchlorate.

The review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review (February 1994) as there are no current guidelines for the methods 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 III.

Field duplicates are summarized in Section IX.

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. Calibration

a. Initial Calibration

All criteria for the initial calibration were met.

b. Calibration Verification

Calibration verification frequency and analysis criteria were met for each method when applicable.

III. Blanks

Method blanks were reviewed for each matrix as applicable. No contaminant concentrations were found in the method blanks.

No field blanks were identified in this SDG.

IV. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits with the following exceptions:

Spike ID (Associated Samples)	Analyte	MS (%R) (Limits)	MSD (%R) (Limits)	RPD (Limits)	Flag	A or P
MW-6MS/MSD (All samples in SDG 02-5689)	Hexavalent chromium	116 (78-115)	117 (78-115)	-	J (all detects)	A

V. Duplicates

Duplicate (DUP) sample analyses were reviewed for each matrix as applicable.

VI. Laboratory Control Samples

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

VII. Sample Result Verification

All sample result verifications were within validation criteria.

VIII. Overall Assessment of Data

Data flags are summarized at the end of this report.

IX. Field Duplicates

No field duplicates were identified in this SDG.

JPL, 00HW019
Wet Chemistry - Data Qualification Summary - SDG 02-5689

SDG	Sample	Analyte	Flag	A or P	Reason
02-5689	MW-6 MW-13	Hexavalent chromium	J (all detects)	A	Matrix spike/Matrix spike duplicates (%R)

JPL, 00HW019
Wet Chemistry - Laboratory Blank Data Qualification Summary - SDG 02-5689

No Sample Data Qualified in this SDG

JPL, 00HW019
Wet Chemistry - Field Blank Data Qualification Summary - SDG 02-5689

No Sample Data Qualified in this SDG

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: JPL, 00HW019

Collection Date: October 25, 2002

LDC Report Date: December 17, 2002

Matrix: Water

Parameters: Wet Chemistry

Validation Level: EPA Level IV

Laboratory: Applied P & Ch Laboratory

Sample Delivery Group (SDG): 02-5691

Sample Identification

MW-5
MW-5MS
MW-5MSD

Introduction

This data review covers 3 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 7196A for Hexavalent Chromium and EPA Method 314.0 for Perchlorate.

The review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review (February 1994) as there are no current guidelines for the methods 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 III.

Field duplicates are summarized in Section IX.

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. Calibration

a. Initial Calibration

All criteria for the initial calibration were met.

b. Calibration Verification

Calibration verification frequency and analysis criteria were met for each method when applicable.

III. Blanks

Method blanks were reviewed for each matrix as applicable. No contaminant concentrations were found in the method blanks.

No field blanks were identified in this SDG.

IV. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) analyses were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

V. Duplicates

Duplicate (DUP) sample analyses were reviewed for each matrix as applicable.

VI. Laboratory Control Samples

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

VII. Sample Result Verification

All sample result verifications were within validation criteria.

VIII. Overall Assessment of Data

Data flags are summarized at the end of this report.

IX. Field Duplicates

No field duplicates were identified in this SDG.

JPL, 00HW019
Wet Chemistry - Data Qualification Summary - SDG 02-5691

No Sample Data Qualified in this SDG

JPL, 00HW019
Wet Chemistry - Laboratory Blank Data Qualification Summary - SDG 02-5691

No Sample Data Qualified in this SDG

JPL, 00HW019
Wet Chemistry - Field Blank Data Qualification Summary - SDG 02-5691

No Sample Data Qualified in this SDG

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: JPL, 00HW019

Collection Date: October 28, 2002

LDC Report Date: December 17, 2002

Matrix: Water

Parameters: Wet Chemistry

Validation Level: EPA Level IV

Laboratory: Applied P & Ch Laboratory

Sample Delivery Group (SDG): 02-5733

Sample Identification

ER-3
MW-3-2
MW-3-3
MW-3-4
MW-3-5
MW-3-4D
MW-3-3MS
MW-3-3MSD

Introduction

This data review covers 8 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 7196A for Hexavalent Chromium and EPA Method 314.0 for Perchlorate.

The review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review (February 1994) as there are no current guidelines for the methods 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 III.

Field duplicates are summarized in Section IX.

The following are definitions of the data qualifiers:

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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. Calibration

a. Initial Calibration

All criteria for the initial calibration were met.

b. Calibration Verification

Calibration verification frequency and analysis criteria were met for each method when applicable.

III. Blanks

Method blanks were reviewed for each matrix as applicable. No contaminant concentrations were found in the method blanks.

Sample ER-3 was identified as an equipment rinsate. No contaminant concentrations were found in this blank.

IV. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) analyses were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

V. Duplicates

Duplicate (DUP) sample analyses were reviewed for each matrix as applicable.

VI. Laboratory Control Samples

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

VII. Sample Result Verification

All sample result verifications were within validation criteria.

VIII. Overall Assessment of Data

Data flags are summarized at the end of this report.

IX. Field Duplicates

Samples MW-3-4 and MW-3-4D were identified as field duplicates. No contaminant concentrations were detected in any of the samples.

JPL, 00HW019
Wet Chemistry - Data Qualification Summary - SDG 02-5733

No Sample Data Qualified in this SDG

JPL, 00HW019
Wet Chemistry - Laboratory Blank Data Qualification Summary - SDG 02-5733

No Sample Data Qualified in this SDG

JPL, 00HW019
Wet Chemistry - Field Blank Data Qualification Summary - SDG 02-5733

No Sample Data Qualified in this SDG

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: JPL, 00HW019

Collection Date: October 29, 2002

LDC Report Date: December 17, 2002

Matrix: Water

Parameters: Wet Chemistry

Validation Level: EPA Level IV

Laboratory: Applied P & Ch Laboratory

Sample Delivery Group (SDG): 02-5742

Sample Identification

ER-24
MW-24-1
MW-24-2
MW-24-3
MW-24-4
MW-24-1MS
MW-24-1MSD

Introduction

This data review covers 7 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 7196A for Hexavalent Chromium and EPA Method 314.0 for Perchlorate.

The review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review (February 1994) as there are no current guidelines for the methods 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 III.

Field duplicates are summarized in Section IX.

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. Calibration

a. Initial Calibration

All criteria for the initial calibration were met.

b. Calibration Verification

Calibration verification frequency and analysis criteria were met for each method when applicable.

III. Blanks

Method blanks were reviewed for each matrix as applicable. No contaminant concentrations were found in the method blanks.

Sample ER-24 was identified as an equipment rinsate. No contaminant concentrations were found in this blank.

IV. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) analyses were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

V. Duplicates

Duplicate (DUP) sample analyses were reviewed for each matrix as applicable.

VI. Laboratory Control Samples

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

VII. Sample Result Verification

All sample result verifications were within validation criteria.

VIII. Overall Assessment of Data

Data flags are summarized at the end of this report.

IX. Field Duplicates

No field duplicates were identified in this SDG.

JPL, 00HW019
Wet Chemistry - Data Qualification Summary - SDG 02-5742

No Sample Data Qualified in this SDG

JPL, 00HW019
Wet Chemistry - Laboratory Blank Data Qualification Summary - SDG 02-5742

No Sample Data Qualified in this SDG

JPL, 00HW019
Wet Chemistry - Field Blank Data Qualification Summary - SDG 02-5742

No Sample Data Qualified in this SDG

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: JPL, 00HW019

Collection Date: October 30, 2002

LDC Report Date: December 17, 2002

Matrix: Water

Parameters: Wet Chemistry

Validation Level: EPA Level IV

Laboratory: Applied P & Ch Laboratory

Sample Delivery Group (SDG): 02-5779

Sample Identification

ER-4
MW-4-1
MW-4-2
MW-4-3
MW-4-4
MW-4-5
MW-4-2D
MW-4-3MS
MW-4-3MSD

Introduction

This data review covers 9 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 7196A for Hexavalent Chromium and EPA Method 314.0 for Perchlorate.

The review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review (February 1994) as there are no current guidelines for the methods 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 III.

Field duplicates are summarized in Section IX.

The following are definitions of the data qualifiers:

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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. Calibration

a. Initial Calibration

All criteria for the initial calibration were met.

b. Calibration Verification

Calibration verification frequency and analysis criteria were met for each method when applicable.

III. Blanks

Method blanks were reviewed for each matrix as applicable. No contaminant concentrations were found in the method blanks.

Sample ER-4 was identified as an equipment rinsate. No contaminant concentrations were found in this blank.

IV. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) analyses were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

V. Duplicates

Duplicate (DUP) sample analyses were reviewed for each matrix as applicable.

VI. Laboratory Control Samples

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

VII. Sample Result Verification

All sample result verifications were within validation criteria.

VIII. Overall Assessment of Data

Data flags are summarized at the end of this report.

IX. Field Duplicates

Samples MW-4-2 and MW-4-2D were identified as field duplicates. No contaminant concentrations were detected in any of the samples.

JPL, 00HW019
Wet Chemistry - Data Qualification Summary - SDG 02-5779

No Sample Data Qualified in this SDG

JPL, 00HW019
Wet Chemistry - Laboratory Blank Data Qualification Summary - SDG 02-5779

No Sample Data Qualified in this SDG

JPL, 00HW019
Wet Chemistry - Field Blank Data Qualification Summary - SDG 02-5779

No Sample Data Qualified in this SDG

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: JPL, 00HW019

Collection Date: October 31, 2002

LDC Report Date: December 17, 2002

Matrix: Water

Parameters: Wet Chemistry

Validation Level: EPA Level IV

Laboratory: Applied P & Ch Laboratory

Sample Delivery Group (SDG): 02-5826

Sample Identification

ER-14
MW-14-1
MW-14-2
MW-14-3
MW-14-4
MW-14-5
MW-14-1MS
MW-14-1MSD

Introduction

This data review covers 8 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 7196A for Hexavalent Chromium and EPA Method 314.0 for Perchlorate.

The review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review (February 1994) as there are no current guidelines for the methods 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 III.

Field duplicates are summarized in Section IX.

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. Calibration

a. Initial Calibration

All criteria for the initial calibration were met.

b. Calibration Verification

Calibration verification frequency and analysis criteria were met for each method when applicable.

III. Blanks

Method blanks were reviewed for each matrix as applicable. No contaminant concentrations were found in the method blanks.

Sample ER-14 was identified as an equipment rinsate. No contaminant concentrations were found in this blank.

IV. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) analyses were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

V. Duplicates

Duplicate (DUP) sample analyses were reviewed for each matrix as applicable.

VI. Laboratory Control Samples

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

VII. Sample Result Verification

All sample result verifications were within validation criteria.

VIII. Overall Assessment of Data

Data flags are summarized at the end of this report.

IX. Field Duplicates

No field duplicates were identified in this SDG.

JPL, 00HW019
Wet Chemistry - Data Qualification Summary - SDG 02-5826

No Sample Data Qualified in this SDG

JPL, 00HW019
Wet Chemistry - Laboratory Blank Data Qualification Summary - SDG 02-5826

No Sample Data Qualified in this SDG

JPL, 00HW019
Wet Chemistry - Field Blank Data Qualification Summary - SDG 02-5826

No Sample Data Qualified in this SDG

LABORATORY DATA CONSULTANTS, INC.
7750 El Camino Real, Suite 2L Carlsbad, CA 92009 Phone: 760/634-0437 Fax: 760/634-0439

SOTA Environmental
16835 W. Bernardo, Drive, Suite 212
San Diego, CA 92127-1813
ATTN: Ms. Yu Zeng

January 13, 2003

SUBJECT: JPL, 00HW019, Data Validation

Dear Ms. Zeng,

Enclosed is the revised data validation report for the fraction listed below. Please replace the previously submitted report with the enclosed revised report. We apologize for any inconvenience these oversights may have caused.

SDG#	LDC#	Fraction
02-5823	9563A4	Metals

Please feel free to contact us if you have any questions.

Sincerely,

for

Stacey A. Mavrakos
Operations Manager/Senior Chemist

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: JPL, 00HW019

Collection Date: October 23 through November 1, 2002

LDC Report Date: January 10, 2003

Matrix: Water

Parameters: Chromium

Validation Level: EPA Level IV

Laboratory: Advanced Technology Laboratories

Sample Delivery Group (SDG): 02-5823

Sample Identification

MW-22-2	MW-4-2
MW-22-1	MW-4-2D
ER-22	MW-4-1
MW-6	ER-14
MW-13	MW-14-4
MW-5	MW-14-3
MW-3-4	MW-14-2
MW-3-4D	MW-14-1
MW-3-3	MW-17-4
MW-3-2	MW-17-3
ER-3	MW-17-2
ER-24	ER-17
MW-24-4	MW-3-3DUP
MW-24-3	MW-4-3MS
MW-24-2	MW-4-3MSD
MW-24-1	MW-4-3DUP
ER-4	MW-17-4MS
MW-4-5	MW-17-4MSD
MW-4-4	MW-17-4DUP
MW-4-3	ER-17DUP

Introduction

This data review covers 40 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA Method 200.8 for Chromium.

The review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review (February 1994) as there are no current guidelines for the methods stated above.

A table summarizing all data qualification flags 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 specified protocols or is of technical advisory nature.

Blanks are summarized in Section III.

Field duplicates are summarized in Section XIII.

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. Calibration

An initial calibration was performed.

The frequency and analysis criteria of the initial calibration verification (ICV) and continuing calibration verification (CCV) were met.

*III. Blanks

Method blanks were reviewed for each matrix as applicable.

Data qualification by the initial, continuing and preparation blanks (ICB/CCB/PBs) was based on the maximum contaminant concentration in the ICB/CCB/PBs in the analysis of each analyte. No contaminant concentrations were found in the initial, continuing and preparation blanks with the following exceptions:

Method Blank ID	Analyte	Maximum Concentration	Associated Samples
ICB/CCB	Chromium	0.589 ug/L	All samples in SDG 02-5823

Sample concentrations were compared to the maximum contaminant concentrations detected in the ICB/CCB/PBs. The sample concentrations were either not detected or were significantly greater (>5X blank contaminants) than the concentrations found in the associated method blanks with the following exceptions:

Sample	Analyte	Reported Concentration	Modified Final Concentration
MW-3-4	Chromium	1.5 ug/L	1.5U ug/L
MW-3-4D	Chromium	1.5 ug/L	1.5U ug/L
MW-3-3	Chromium	1.3 ug/L	1.3U ug/L
MW-3-2	Chromium	1.3 ug/L	1.3U ug/L
MW-24-3	Chromium	2.5 ug/L	2.5U ug/L

Sample	Analyte	Reported Concentration	Modified Final Concentration
MW-24-2	Chromium	2.2 ug/L	2.2U ug/L
MW-4-5	Chromium	2.9 ug/L	2.9U ug/L
MW-4-3	Chromium	2.9 ug/L	2.9U ug/L
ER-22	Chromium	2.3 ug/L	2.3U ug/L
MW-5	Chromium	2.0 ug/L	2.0U ug/L
*MW-17-4	Chromium	1.6 ug/L	1.6U ug/L
*MW-17-3	Chromium	2.0 ug/L	2.0U ug/L
*MW-17-2	Chromium	1.1 ug/L	1.1U ug/L

Samples ER-22, ER-3, ER-4, ER-14 and ER-17 were identified as equipment rinsates. No chromium contaminants were found in these blanks.

IV. ICP Interference Check Sample (ICS) Analysis

ICP interference check sample analysis was not required by the method.

V. Matrix Spike Analysis

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

VI. Duplicate Sample Analysis

Duplicate (DUP) sample analyses were reviewed for each matrix as applicable. Results were within QC limits.

VII. Laboratory Control Samples (LCS)

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

VIII. Internal Standard (ICP-MS)

All internal standard percent recoveries (%R) were within QC limits.

IX. Furnace Atomic Absorption QC

Graphite furnace atomic absorption was not utilized in this SDG.

X. ICP Serial Dilution

ICP serial dilution was not required by the method.

XI. Sample Result Verification

All sample result verifications met validation criteria.

XII. Overall Assessment of Data

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

XIII. Field Duplicates

Samples MW-3-4 and MW-3-4D, and samples MW-4-2 and MW-4-2D were identified as field duplicates. No chromium contaminants were detected in any of the samples with the following exceptions:

Analyte	Concentration (ug/L)		RPD
	MW-3-4	MW-3-4D	
Chromium	1.5	1.5	0

Analyte	Concentration (ug/L)		RPD
	MW-4-2	MW-4-2D	
Chromium	6.1	5.5	10

JPL, 00HW019
Chromium - Data Qualification Summary - SDG 02-5823

No Sample Data Qualified in this SDG

***JPL, 00HW019**
Chromium - Laboratory Blank Data Qualification Summary - SDG 02-5823

SDG	Sample	Analyte	Modified Final Concentration	A or P
02-5823	MW-3-4	Chromium	1.5U ug/L	A
02-5823	MW-3-4D	Chromium	1.5U ug/L	A
02-5823	MW-3-3	Chromium	1.3U ug/L	A
02-5823	MW-3-2	Chromium	1.3U ug/L	A
02-5823	MW-24-3	Chromium	2.5U ug/L	A
02-5823	MW-24-2	Chromium	2.2U ug/L	A
02-5823	MW-4-5	Chromium	2.9U ug/L	A
02-5823	MW-4-3	Chromium	2.9U ug/L	A
02-5823	ER-22	Chromium	2.3U ug/L	A
02-5823	MW-5	Chromium	2.0U ug/L	A
*02-5823	MW-17-4	Chromium	1.6U ug/L	A
*02-5823	MW-17-3	Chromium	2.0U ug/L	A
*02-5823	MW-17-2	Chromium	1.1U ug/L	A

JPL, 00HW019
Chromium - Field Blank Data Qualification Summary - SDG 02-5823

No Sample Data Qualified in this SDG

LABORATORY DATA CONSULTANTS, INC.
7750 El Camino Real, Suite 2L Carlsbad, CA 92009 Phone: 760/634-0437 Fax: 760/634-0439

SOTA Environmental
16835 W. Bernardo, Drive. Suite 212
San Diego, CA 92127-1813
ATTN: Ms. Yu Zeng

February 3, 2003

SUBJECT: JPL. 00HW019. Data Validation

Dear Ms. Zeng,

Enclosed is the final validation report for the fraction listed below. This SDG was received on January 31, 2003. Attachment 1 is a summary of the samples that were reviewed for each analysis.

LDC Project # 9768:

SDG #	Fraction
02-5612	Chromium

The data validation was performed under EPA Level IV guidelines. The analyses were validated using the following documents, as applicable to each method:

- USEPA, Contract Laboratory Program National Functional Guidelines for Inorganic Data Review, February 1994

Please feel free to contact us if you have any questions.

Sincerely,

Stacey A. Mavrakos
Operations Manager/Senior Chemist

LDC #9768 (Sota Environmental-San Diego / JPL, 00HW019)

LDC	SDG#	DATE REC'D	DATE DUE	Cr (200.8)																													
Matrix: Water/Soil				W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S
A	02-5612	1-31-03	ASAP	28	0																												
Total	B			28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Shaded cells indicate Level IV validation (all other cells are Level III validation)

JPL, 00HW019
Data Validation Reports
LDC# 9768

Chromium

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: JPL, 00HW019

Collection Date: October 15 through October 22, 2002

LDC Report Date: February 3, 2003

Matrix: Water

Parameters: Chromium

Validation Level: EPA Level IV

Laboratory: Advanced Technology Laboratories

Sample Delivery Group (SDG): 02-5612

Sample Identification

MW-12-3	MW-11-3D
MW-12-2	MW-23-4MS
MW-12-1	MW-23-4MSD
ER-12	MW-11-3DMS
MW-11-3	MW-11-3DMSD
MW-11-2	MW-23-4DUP
MW-11-1	MW-11-3DDUP
MW-20-5	MW-20-3DUP
MW-20-4	
MW-20-3	
MW-20-2	
MW-20-1	
ER-20	
ER-11	
MW-23-4	
MW-23-3	
MW-23-3D	
MW-23-2	
MW-23-1	
ER-23	

Introduction

This data review covers 28 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA Method 200.8 for Chromium.

The review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review (February 1994) as there are no current guidelines for the methods stated above.

A table summarizing all data qualification flags 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 specified protocols or is of technical advisory nature.

Blanks are summarized in Section III.

Field duplicates are summarized in Section XIII.

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.

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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. Calibration

An initial calibration was performed.

The frequency and analysis criteria of the initial calibration verification (ICV) and continuing calibration verification (CCV) were met.

III. Blanks

Method blanks were reviewed for each matrix as applicable.

Data qualification by the initial, continuing and preparation blanks (ICB/CCB/PBs) was based on the maximum contaminant concentration in the ICB/CCB/PBs in the analysis of each analyte. No contaminant concentrations were found in the initial, continuing and preparation blanks with the following exceptions:

Method Blank ID	Analyte	Maximum Concentration	Associated Samples
PB (prep blank)	Chromium	0.466 ug/L	All samples in SDG 02-5612
ICB/CCB	Chromium	0.446 ug/L	All samples in SDG 02-5612

Sample concentrations were compared to the maximum contaminant concentrations detected in the ICB/CCB/PBs. The sample concentrations were either not detected or were significantly greater (>5X blank contaminants) than the concentrations found in the associated method blanks with the following exceptions:

Sample	Analyte	Reported Concentration	Modified Final Concentration
MW-11-3	Chromium	2.0 ug/L	2.0U ug/L
MW-11-2	Chromium	1.9 ug/L	1.9U ug/L
MW-20-5	Chromium	1.5 ug/L	1.5U ug/L
MW-20-4	Chromium	1.3 ug/L	1.3U ug/L

Sample	Analyte	Reported Concentration	Modified Final Concentration
MW-20-2	Chromium	1.6 ug/L	1.6U ug/L
MW-11-3D	Chromium	1.7 ug/L	1.7U ug/L

Samples ER-12, ER-20, ER-11, and ER-23 were identified as equipment rinsates. No chromium contaminants were found in these blanks.

IV. ICP Interference Check Sample (ICS) Analysis

ICP interference check sample analysis was not required by the method.

V. Matrix Spike Analysis

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits with the following exceptions:

Spike ID (Associated Samples)	Analyte	MS (%R) (Limits)	MSD (%R) (Limits)	RPD (Limits)	Flag	A or P
MW-23-4MS/MSD (MW-12-3 MW-12-2 MW-12-1 ER-12 MW-11-3 MW-11-2 MW-11-1 MW-20-5 MW-20-4 MW-20-3 MW-20-2 MW-20-1 ER-20 ER-11 MW-23-4 MW-23-3 MW-23-3D MW-23-2 MW-23-1 ER-23)	Chromium	-	79.2 (80-120)	-	J (all detects) UJ (all non-detects)	A

VI. Duplicate Sample Analysis

Duplicate (DUP) sample analyses were reviewed for each matrix as applicable. Results were within QC limits.

VII. Laboratory Control Samples (LCS)

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

VIII. Internal Standard (ICP-MS)

All internal standard percent recoveries (%R) were within QC limits.

IX. Furnace Atomic Absorption QC

Graphite furnace atomic absorption was not utilized in this SDG.

X. ICP Serial Dilution

ICP serial dilution was not required by the method.

XI. Sample Result Verification

All sample result verifications met validation criteria.

XII. Overall Assessment of Data

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

XIII. Field Duplicates

Samples MW-23-3 and MW-23-3D and samples MW-11-3 and MW-11-3D were identified as field duplicates. No chromium contaminants were detected in any of the samples with the following exceptions:

Analyte	Concentration (ug/L)		RPD
	MW-23-3	MW-23-3D	
Chromium	4.1	3.9	5

Analyte	Concentration (ug/L)		RPD
	MW-11-3	MW-11-3D	
Chromium	2.0	1.7	16

JPL, 00HW019
Chromium - Data Qualification Summary - SDG 02-5612

SDG	Sample	Analyte	Flag	A or P	Reason
02-5612	MW-12-3 MW-12-2 MW-12-1 ER-12 MW-11-3 MW-11-2 MW-11-1 MW-20-5 MW-20-4 MW-20-3 MW-20-2 MW-20-1 ER-20 ER-11 MW-23-4 MW-23-3 MW-23-3D MW-23-2 MW-23-1 ER-23	Chromium	J (all detects) UJ (all non-detects)	A	Matrix spike/Matrix spike duplicates (%R)

JPL, 00HW019
Chromium - Laboratory Blank Data Qualification Summary - SDG 02-5612

SDG	Sample	Analyte	Modified Final Concentration	A or P
02-5612	MW-11-3	Chromium	2.0U ug/L	A
02-5612	MW-11-2	Chromium	1.9U ug/L	A
02-5612	MW-20-5	Chromium	1.5U ug/L	A
02-5612	MW-20-4	Chromium	1.3U ug/L	A
02-5612	MW-20-2	Chromium	1.6U ug/L	A
02-5612	MW-11-3D	Chromium	1.7U ug/L	A

JPL, 00HW019
Chromium - Field Blank Data Qualification Summary - SDG 02-5612

No Sample Data Qualified in this SDG

LABORATORY DATA CONSULTANTS, INC.
7750 El Camino Real, Suite 2L Carlsbad, CA 92009 Phone: 760/634-0437 Fax: 760/634-0439

SOTA Environmental
16835 W. Bernardo, Drive, Suite 212
San Diego, CA 92127-1813
ATTN: Ms. Yu Zeng

January 29, 2003

SUBJECT: JPL, 00HW019, Data Validation

Dear Ms. Zeng,

Enclosed is the final validation report for the fraction listed below. This SDG was received on December 19, 2002. Attachment 1 is a summary of the samples that were reviewed for each analysis.

LDC Project # 9754:

SDG #	Fraction
02-6052	Chromium

The data validation was performed under EPA Level IV guidelines. The analyses were validated using the following documents, as applicable to each method:

- USEPA, Contract Laboratory Program National Functional Guidelines for Inorganic Data Review, February 1994

Please feel free to contact us if you have any questions.

Sincerely,

Stacey A. Mavrakos
Operations Manager/Senior Chemist

Attachment 1

LDC #9754 (Sota Environmental-San Diego / JPL, 00HW019)

LDC	SDG#	DATE REC'D	DATE DUE	Cr (200.8)																													
Matrix: Water/Soil				W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S
A	02-6052	12-19-02	ASAP	12	0																												
Total	TH			12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Shaded cells indicate Level IV validation (all other cells are Level III validation)

JPL, 00HW019
Data Validation Reports
LDC# 9754

Chromium

LDC

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: JPL, 00HW019

Collection Date: November 4 through November 6, 2002

LDC Report Date: January 28, 2003

Matrix: Water

Parameters: Chromium

Validation Level: EPA Level IV

Laboratory: Advanced Technology Laboratories

Sample Delivery Group (SDG): 02-6052

Sample Identification

ER-18
MW-7
MW-8
MW-10
MW-16
MW-16D
MW-18-2
MW-18-3
MW-18-4
MW-10MS
MW-10MSD
MW-10DUP

Introduction

This data review covers 12 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA Method 200.8 for Chromium.

The review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review (February 1994) as there are no current guidelines for the methods stated above.

A table summarizing all data qualification flags 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 specified protocols or is of technical advisory nature.

Blanks are summarized in Section III.

Field duplicates are summarized in Section XIII.

The following are definitions of the data qualifiers:

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R Quality control indicates the data is not usable.

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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. Calibration

An initial calibration was performed.

The frequency and analysis criteria of the initial calibration verification (ICV) and continuing calibration verification (CCV) were met.

III. Blanks

Method blanks were reviewed for each matrix as applicable.

Data qualification by the initial, continuing and preparation blanks (ICB/CCB/PBs) was based on the maximum contaminant concentration in the ICB/CCB/PBs in the analysis of each analyte. No contaminant concentrations were found in the initial, continuing and preparation blanks with the following exceptions:

Method Blank ID	Analyte	Maximum Concentration	Associated Samples
PB (prep blank)	Chromium	0.386 ug/L	All samples in SDG 02-6052
ICB/CCB	Chromium	0.589 ug/L	All samples in SDG 02-6052

Sample concentrations were compared to the maximum contaminant concentrations detected in the ICB/CCB/PBs. The sample concentrations were either not detected or were significantly greater (>5X blank contaminants) than the concentrations found in the associated method blanks with the following exceptions:

Sample	Analyte	Reported Concentration	Modified Final Concentration
MW-18-2	Chromium	2.0 ug/L	2.0U ug/L

Sample ER-18 was identified as an equipment rinsate. No chromium contaminants were found in this blank.

IV. ICP Interference Check Sample (ICS) Analysis

ICP interference check sample analysis was not required by the method.

V. Matrix Spike Analysis

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

VI. Duplicate Sample Analysis

Duplicate (DUP) sample analyses were reviewed for each matrix as applicable. Results were within QC limits.

VII. Laboratory Control Samples (LCS)

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

VIII. Internal Standard (ICP-MS)

All internal standard percent recoveries (%R) were within QC limits.

IX. Furnace Atomic Absorption QC

Graphite furnace atomic absorption was not utilized in this SDG.

X. ICP Serial Dilution

ICP serial dilution was not required by the method.

XI. Sample Result Verification

All sample result verifications met validation criteria.

XII. Overall Assessment of Data

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

XIII. Field Duplicates

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

Analyte	Concentration (ug/L)		RPD
	MW-16	MW-16D	
Chromium	11	8.8	22

JPL, 00HW019
Chromium - Data Qualification Summary - SDG 02-6052

No Sample Data Qualified in this SDG

JPL, 00HW019
Chromium - Laboratory Blank Data Qualification Summary - SDG 02-6052

SDG	Sample	Analyte	Modified Final Concentration	A or P
02-6052	MW-18-2	Chromium	2.0U ug/L	A

JPL, 00HW019
Chromium - Field Blank Data Qualification Summary - SDG 02-6052

No Sample Data Qualified in this SDG