

1. Technical Holding Times

All technical holding time requirements were met.

11. Calibration

a. Initial Calibration

Initial calibration of compounds was performed as required by the method.

The percent relative standard deviations (%RSD) of calibration factors for compounds were less than **20.0%**.

b. Calibration Verification

Calibration verification was performed at required frequencies. The percent differences (%D) of amounts in continuing standard mixtures were within the 15.0% CC limits with the following exceptions:

Date	Compound	%D	Associated Samples	Flag	AorP
TPH as gasoline	15.5	09;G1 .1::4	VAS	i	P
			43MSD		

III. Blanks

Method blanks were reviewed for each matrix as applicable. No total petroleum hydrocarbons as gasoline contaminants were found in the method blanks.

IV. Accuracy and Precision Data

a. Surrogate Recovery

Although surrogates were not required by the method, surrogate analysis was performed by the laboratory. Surrogate recoveries (00R) were within CC limits.

b. 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 CC limits.

c. Laboratory Control Samples

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

V. Target Compound Identification

Raw data were not reviewed for this SDG.

VI. Compound Quantitation and CRQLs

Raw data were not reviewed for this SDG.

VII. System Performance

Raw data were not reviewed for this SDG.

VIII. Overall Assessment of Data

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

IX Field Duplicates

No field duplicates were identified in this SDG.

X. Field Blanks

Samples 097TO4643 and 097TO4542 were identified as trip blanks. No total petroleum hydrocarbons as gasoline contaminants were found in these blanks,

Salton Sea Test Base, CTO 097

Total, Petroleum Hydrocarbons as Gasoline - Data Qualification Summary - SDG K9602784

No Sample Data Qualified in this SDG

Salton Sea Test Base, CTO 097

Total Petroleum Hydrocarbons as Gasoline - Laboratory Blank Data Qualification Summary - SDG K9602784

No Sample Data Qualified in this SDG

LDC Report# 1866137

Laboratory Data Consultants, Inc. Data Validation Report

Project/Site Name: Salton Sea Test Base, CTO 097
Collection Date: May 9 through May 10, 1996
LDC Report Date: July 8, 1996
Matrix: Water
Parameters: Total Petroleum Hydrocarbons as Gasoline
Laboratory: Columbia Analytical Services, Inc.

Sample Delivery Group (SDG): K9602784

Sample Identification

097G14541
097G14643
097TO4643
097G15341
097G11442
097TO4542
097G12641
097G14542MS
097G14543MSD

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 8015 modified for Total Petroleum Hydrocarbons (TPH) as Gasoline.**

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (February 1994) as there are no current guidelines for EPA SW 846 Method 8015 modified for Total Petroleum Hydrocarbons (TPH) as Gasoline. The modifications were based on EPA SW 846 Method 8015 modified.

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

Raw data were not reviewed for this SDG. The review was based on QC data.

The following are definitions of the data qualifiers:

- U Indicates the compound or element was analyzed for but not detected at or above the stated limit.
- i 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 element 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.

Salton Sea Test Base, CTO 097

Total.Petroleum Hydrocarbons as Gasoline - Data Qualification Summary - SDG
K9602755

No Sample Data Qualified in this SDG

Salton Sea Test Base, CTO 097

Total Petroleum Hydrocarbons as Gasoline - Laboratory Blank Data Qualification
Summary - SDG K9602755

No Sample Data Qualified in this SDG

LD(

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

Project/Site Name: Salton Sea Test Base, CTO 097
Collection Date: May 13, 1996
LDC Report Date: July 8, 1996
Matrix: Water
Parameters: Total Petroleum Hydrocarbons as Gasoline
Laboratory: Columbia Analytical Services, Inc.

Sample Delivery Group (SDG): K9602884

Sample Identification

097G14842
097TO4743

Introduction

This data **review covers 2 water samples listed- on the** cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8015 modified for Total Petroleum Hydrocarbons (TPH) as Gasoline.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (February 1994) as there are no current guidelines for EPA SW 846 Method 8015 modified for Total Petroleum Hydrocarbons (TPH) as Gasoline. The modifications were based on EPA SW 846 Method 8015 modified.

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 111.

Field duplicates are summarized in Section IX.

Raw data were not reviewed for this SDG. The review was based on QC data.

The following are definitions of the data qualifiers:

- U Indicates the compound or element was analyzed for but not detected at or above the stated limit.
- i 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 element 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.

1. Technical Holding Times

All technical holding time requirements were met.

11. Calibration

a. Initial Calibration

Initial calibration of compounds was performed as required by the method.

The percent relative standard deviations (%RSD) of calibration factors for compounds were less than 20.0% .

b. Calibration Verification

Calibration verification was performed at required frequencies. The percent differences (%D) of amounts in continuing standard mixtures were within the 15.0% QC limits.

III. Blanks

Method blanks were reviewed for each matrix as applicable. No total petroleum hydrocarbons as gasoline contaminants were found in the method blanks.

IV. Accuracy and Precision Data

a. Surrogate Recovery

Although surrogates were not required by the method, surrogate analysis was performed by the laboratory. Surrogate recoveries (%R) were within QC limits.

b. 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.

c. Laboratory Control Samples

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

V. Target Compound Identification

Raw data were not reviewed for this SDG.

VI. Compound Quantitation and CRQLs

Raw data were not reviewed for this SDG.

VII. System Performance

Raw data were not reviewed for this SDG.

VIII. Overall Assessment of Data

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

IX. Field Duplicates

No field duplicates were identified in this SDG.

X. Field Blanks

Sample 097TO4743 was identified as a trip blank. No total petroleum hydrocarbons as gasoline contaminants were found in this blank with the following exceptions:

Rinsate ID	Compound	Concentration (ug/L)
097TO4743	TPH as gasoline	31
1866C7.BC3		

Salton Sea Test Base, CTO 097
Total Petroleum Hydrocarbons as Gasoline - Data Qualification Summary - SDG
K9602884

No Sample Data Qualified in this SDG

Salton Sea Test Base, CTO 097
Total Petroleum Hydrocarbons as Gasoline - Laboratory Blank Data Qualification
Summary - SDG K9602884

No Sample Data Qualified in this SDG

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 8015 modified for Total Petroleum Hydrocarbons (TPH) as Gasoline.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (February 1994) as there are no current guidelines for EPA SW 846 Method 8015 modified for Total Petroleum Hydrocarbons (TPH) as Gasoline. The modifications were based on EPA SW 846 Method 8015 modified.

A table summarizing all data qualification is provided at the end of this report. Flags are classified as P (protocol) or ~ (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 111.

Field duplicates are summarized in Section IX.

The following are definitions of the data qualifiers:

U Indicates the compound or element was analyzed for but not detected at or above the stated limit.

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 element 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.

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Laboratory Data Consultants, Inc. Data Validation Report

Project/Site Name: Salton Sea Test Base, CTO 097
Collection Date: May 15, 1996
LDC Report Date: July 8, 1996
Matrix: Water

Parameters: Total Petroleum Hydrocarbons as Gasoline
Laboratory: Columbia Analytical Services, Inc.

Sample Delivery Group (SDG): K9602917**

Sample Identification

097R12041
097TO4842
097G15442
097BO1043
097BO1141
097TO4843MS
097TO4841 MSD

** Indicates SDG underwent NFESC Level D review.

1. Technical Holding Times

All technical holding time requirements were met.

11. Calibration

a. Initial Calibration

Initial calibration of compounds was performed as required by the method.

The percent relative standard deviations (%RSD) of calibration factors for compounds were less than 20.0% .

b. Calibration Verification

Calibration verification was performed at required frequencies. The percent differences (%D) of amounts in continuing standard mixtures were within the 15.0% CC limits.

III. Blanks

Method blanks were reviewed for each matrix as applicable. No total petroleum hydrocarbons as gasoline contaminants were found in the method blanks.

IV. Accuracy and Precision Data

a. Surrogate Recovery

Although surrogates were not required by the method, surrogate analysis was performed by the laboratory. Surrogate recoveries (%R) were within CC limits.

b. 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 CC limits.

c. Laboratory Control Samples

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

V. Target Compound Identification

All target compound identifications were within validation criteria.

VI. Compound Quantitation and CRQLs

All compound quantitation and CRQLs were within validation criteria.

VIII. System Performance

The system performance was acceptable.

VIII. Overall Assessment of Data

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

IX Field Duplicates

No field duplicates were identified in this SDG.

X. Field Blanks

Samples 097BO1043 and 097BO1141 were identified as source blanks. No total petroleum hydrocarbons as gasoline contaminants were found in these blanks with the following exceptions:

Source Blank ID	Compound	Concentration (ug/L)
097SO1043	TPH as gasoline	35
097SO1141	TPH as gasoline	40

Sample 097TO4842 was identified as a trip blank. No total petroleum hydrocarbons as gasoline contaminants were found in this blank.

Sample 097R12041 was identified as a rinsate. No total petroleum hydrocarbons as gasoline contaminants were found in this blank.

Salton Sea Test Base, CTO 097

Total Petroleum Hydrocarbons as Gasoline - Data Qualification Summary - SDG K9602917**

No Sample Data Qualified in this SDG

Salton Sea Test Base, CTO 097

Total Petroleum Hydrocarbons as Gasoline - Laboratory Blank Data Qualification Summary - SDG K9602917**

No Sample Data Qualified in this SDG

LD

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

Project/Site Name: Salton Sea Test Base, CTO 097
Collection Date: May 16 through May 17, 1996
LDC Report Date: July 8, 1996
Matrix: Water
Parameters: Total Petroleum Hydrocarbons as Gasoline
Laboratory: Columbia Analytical Services, Inc.

Sample Delivery Group (SDG): K9602936

Sample Identification

097TO4241
097G15941
097G16042
097DO2542
097G15843
097G14043
097G14142
097G16142
097G16243
097G16341
097R12143
097G15242
097TO4341
097G15244MS
097G15243MSD

Introduction

This data review covers 15 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8015 modified for Total Petroleum Hydrocarbons (TPH) as Gasoline.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (February 1994) as there are no current guidelines for EPA SW 846 Method 8015 modified for Total Petroleum Hydrocarbons (TPH) as Gasoline. The modifications were based on EPA SW 846 Method 8015 modified.

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 111.

Field duplicates are summarized in Section IX.

Raw data were not reviewed for this SDG. The review was based on QC data.

The following are definitions of the data qualifiers:

U Indicates the compound or element was analyzed for but not detected at or above the stated limit.

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 element 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.

1. Technical Holding Times

All technical holding time requirements were met.

11. Calibration

a. Initial Calibration

Initial calibration of compounds was performed as required by the method.

The percent relative standard deviations (%RSD) of calibration factors for compounds were less than 20.0% .

b. Calibration Verification

Calibration verification was performed at required frequencies. The percent differences (%D) of amounts in continuing standard mixtures were within the 15.0% CC limits.

III. Blanks

Method blanks were reviewed for each matrix as applicable. No total petroleum hydrocarbons as gasoline contaminants were found in the method blanks.

IV. Accuracy and Precision Data

a. Surrogate Recovery

Although surrogates were not required by the method, surrogate analysis was performed by the laboratory. Surrogate recoveries (XOR) were within CC limits.

b. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (OXOR) and relative percent differences IRPD) were within CC limits.

c. Laboratory Control Samples

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

V. Target Compound Identification

Raw data were not reviewed for this SDG.

V1. Compound Quantitation and CRQLs

Raw data were not reviewed for this SDG.

1866E7.SC3

Vii. System Performance

Raw data were not reviewed for this SDG.

Viii. Overall Assessment of Data

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

IX Field Duplicates

Samples 097G16042 and 097DO2542 were identified as field duplicates. No total petroleum hydrocarbons as gasoline were detected in any of the samples with the following exceptions:

Compound	Concentration (ug/L)		RPD
	097G16042	097DO2542	
TPH as gasoline	ND	32	Not calculable

X. Field Blanks

Samples 097TO4241 and 097TO4341 were identified as trip blanks. No total petroleum hydrocarbons as gasoline contaminants were found in these blanks with the following exceptions:

Trip Blank ID	Compound	Concentration (u
09TT04241	TPH as gasoline	:32
097TO4341	TPH as gasoline	

Sample 097R12143 was identified as a rinsate. No total petroleum hydrocarbons as gasoline contaminants were found in this blank.

Salton Sea Test Base, CTO 097

Total Petroleum Hydrocarbons as Gasoline - Data Qualification Summary - SDG
K9602936

No Sample Data Qualified in this SDG

Salton Sea Test Base, CTO 097

Total Petroleum Hydrocarbons as Gasoline - Laboratory Blank Data Qualification
Summary - SDG K9602936

No Sample Data Qualified in this SDG

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

Project/Site Name: Salton Sea Test Base, CTO 097
Collection Date: May 7 through May 8, 1996
LDC Report Date: July 8, 1996
Matrix: Water
Parameters: Total Petroleum Hydrocarbons as Diesel
Laboratory: Columbia Analytical Services, Inc.
Sample Delivery Group (SDG): K9602755

Sample Identification

097G15755 097R12255 097G14455 097G15155 097G14255 097G15055 097G15555 097G14355
097G15655 097R12355 097G14955 097G14755 097DO2455 097G1 4456MS 097G14457IVISD

Introduction

This data review covers 15 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per *EPA SW 846 Method 8015* modified for Total Petroleum Hydrocarbons (TPH) as Diesel.

This review follows a modified outline of the *USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review* (February 1994) as there are no current guidelines for *EPA SW 846 Method 8015* modified for Total Petroleum Hydrocarbons (TPH) as Diesel. The modifications were based on *EPA SW 846 Method 8015* modified.

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.

Raw data were not reviewed for this SDG. The review was based on CC data.

The following are definitions of the data qualifiers:

- U Indicates the compound or element was analyzed for but not detected at or above the stated limit.
- i 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 element 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.

1. Technical Holding Times

All technical holding time requirements were met.

11. Calibration

a. Initial Calibration

Initial calibration of compounds was performed as required by the method.

The percent relative standard deviations (%RSD) of calibration factors for compounds were less than **20.0%** .

b. Calibration Verification

Calibration verification was performed at required frequencies. The percent differences (%D) of amounts in continuing standard mixtures were within the 15.0130 CC limits.

III. Blanks

Method blanks were reviewed for each matrix as applicable. No total petroleum hydrocarbons as diesel contaminants were found in the method blanks.

IV. Accuracy and Precision Data

a. Surrogate Recovery

Although surrogates were not required by the method, surrogate analysis was performed by the laboratory. Surrogate recoveries (%R) were within CC limits.

b. 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 CC limits.

c. Laboratory Control Samples

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

V. Target Compound Identification

Raw data were not reviewed for this SDG.

V1. Compound Quantitation and CROLS

Raw data were not reviewed for this SD-G.

Vii. System Performance

Raw data were not reviewed for this SDG.

Viii. Overall Assessment of Data

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

IX Field Duplicates

Samples 097G14755 and 097DO2455 were identified as field duplicates. No total petroleum hydrocarbons as diesel were detected in any of the samples with the following exceptions:

Compound	<u>Concentration (ug/L)</u>		FPD
	097G1475S	097DO24SS	
TPH as diesel	177	253	

X. Field Blanks

Samples 097R12255 and 097R12355 were identified as rinsates. No total petroleum hydrocarbons as diesel contaminants were found in these blanks.

Salton Sea Test Base, CTO 097

Total Petroleum Hydrocarbons as Diesel - Data Qualification Summary - SDG
K9602755

No Sample Data Qualified in this SDG

Salton Sea Test Base, CTO 097

Total Petroleum Hydrocarbons as Diesel - Laboratory Blank Data Qualification
Summary - SDG K9602755

No Sample Data Qualified in this SDG

LDC Report?? 1866BB

Laboratory Data Consultants, Inc. Data Validation Report

Project/Site Name: Salton Sea Test Base, CTO 097
Collection Date: May 9 through May 10, 1996
LDC Report Date: July 8, 1996
Matrix: Water
Parameters: Total Petroleum Hydrocarbons as Diesel
Laboratory: Columbia Analytical Services, Inc.

Sample Delivery Group (SDG): K9602784

Sample Identification

097G 14555
097G14655
097G15355
097G11455
097G 12655
097G12655MS
097G12655MSD

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 8015 modified for Total Petroleum Hydrocarbons (TPH) as Diesel.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (February 1994) as there are no current guidelines for EPA SW 846 Method 8015 modified for Total Petroleum Hydrocarbons (TPH) as Diesel. The modifications were based on EPA SW 846 Method 8015 modified.

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 111.

Field duplicates are summarized in Section IX.

Raw data were not reviewed for this SDG. The review was based on CC data.

The following are definitions of the data qualifiers:

- U Indicates the compound or element was analyzed for but not detected at or above the stated limit.
- i 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 element 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.

I. Technical Holding Times

All technical holding time requirements were met.

11. Calibration

a. Initial Calibration

Initial calibration of compounds was performed as required by the method.

The percent relative standard deviations (%RSD) of calibration factors for compounds were less than **20.0%** .

b. Calibration Verification

Calibration verification was performed at required frequencies. The percent differences (%D) of amounts in continuing standard mixtures were within the 15.00/0 CC limits.

III. Blanks

Method blanks were reviewed for each matrix as applicable. No total petroleum hydrocarbons as diesel contaminants were found in the method blanks.

IV. Accuracy and Precision Data

a. Surrogate Recovery

Although surrogates were not required by the method, surrogate analysis was performed by the laboratory. Surrogate recoveries (%R) were within CC limits.

b. 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 CC limits.

c. Laboratory Control Samples

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

V. Target Compound Identification

Raw data were not reviewed for this SDG.

VI. Compound Quantitation and CRQLs

Raw data were not reviewed for this SDG.

VII. System Performance

Raw data were not reviewed for this SDG.

VIII. Overall Assessment of Data

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

IX. Field Duplicates

No field duplicates were identified in this SDG.

X. Field Blanks

No field blanks were identified in this SDG.

Salton Sea Test Base, CTO 097

Total Petroleum Hydrocarbons as Diesel - Data Qualification Summary - SDG
K9602784

No Sample Data Qualified in this SDG

Salton Sea Test Base, CTO 097

Total Petroleum Hydrocarbons as Diesel - Laboratory Blank Data Qualification
Summary - SDG K9602784

No Sample Data Qualified in this SDG

LDC Report# 1866CS

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Salton Sea Test Base, CTO 097
Collection Date: May 13, 1996
LDC Report Date: July 8, 1996
Matrix: Water
Parameters: Total Petroleum Hydrocarbons as Diesel
Laboratory: Columbia Analytical Services, Inc.

Sample Delivery Group (SDG): K9602884

Sample Identification
097G14855

1866CS.BC3

Introduction

This data review covers one water sample listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8015 modified for Total Petroleum Hydrocarbons (TPH) as Diesel.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (February 1994) as there are no current guidelines for EPA SW 846 Method 8015 modified for Total Petroleum Hydrocarbons (TPH) as Diesel. The modifications were based on an EPA SW 846 Method 8015 modified.

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 111.

Field duplicates are summarized in Section IX.

Raw data were not reviewed for this SDG. The review was based on CC data.

The following are definitions of the data qualifiers:

- U Indicates the compound or element was analyzed for but not detected at or above the stated limit.
- i 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 element 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.

1. Technical Holding Times

All technical holding time requirements were met.

11. Calibration

a. Initial Calibration

Initial calibration of compounds was performed as required by the method.

The percent relative standard deviations (%RSD) of calibration factors for compounds were less than 20.0% .

b. Calibration Verification

Calibration verification was performed at required frequencies. The percent differences (%D) of amounts in continuing standard mixtures were within the 15.0% CC limits.

III. Blanks

Method blanks were reviewed for each matrix as applicable. No total petroleum hydrocarbons as diesel contaminants were found in the method blanks.

IV. Accuracy and Precision Data

a. Surrogate Recovery

Although surrogates were not required by the method, surrogate analysis was performed by the laboratory. Surrogate recoveries (%R) were within CC limits.

b. 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 CC limits.

c. Laboratory Control Samples

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

V. Target Compound Identification

Raw data were not reviewed for this SDG.

V1. Compound Quantitation and CRQLs

Raw data were not reviewed for this SDG.

VII. System Performance

Raw data were not reviewed for this SDG.

VIII. Overall Assessment of Data

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

IX. Field Duplicates

No field duplicates were identified in this SDG.

X. Field Blanks

No field blanks were identified in this SDG.

Salton Sea Test Base, CTO 097

Total Petroleum Hydrocarbons as Diesel - Data Qualification Summary - SDG
K9602884

No Sample Data Qualified in this SDG

Salton Sea Test Base, CTO 097

Total Petroleum Hydrocarbons as Diesel - Laboratory Blank Data Qualification
Summary - SDG K9602884

No Sample Data Qualified in this SDG

LDC Report# 1866D8

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

Project/Site Name: Salton Sea Test Base, CTO 097
Collection Date: May 15, 1996
LDC Report Date: July 8, 1996
Matrix: Water
Parameters: Total Petroleum Hydrocarbons as Diesel
Laboratory: Columbia Analytical Services, Inc.

Sample Delivery Group (SDG): K9602917**

Sample Identification

097R12055
097G15455
097BO1055
097BO1155
097R12055MS
097R12055MSD

** Indicates SDG underwent NFESC Level D review.

Introduction

This data review covers 6 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8015 modified for Total Petroleum Hydrocarbons (TPH) as Diesel.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (February 1994) as there are no current- guidelines for EPA SW 846 Method 8015 modified for Total Petroleum Hydrocarbons (TPH) as Diesel. The modifications were based on EPA SW 846 Method 8015 modified.

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 na-Lure.

Blank results are summarized in Section 111.

Field duplicates are summarized in Section IX.

The following are definitions of the data qualifiers:

- U Indicates the compound or element was analyzed for but not detected at or above the stated limit.
- i 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 element 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.

1. Technical Holding Times

All technical holding time requirements were met.

11. Calibration

a. Initial Calibration

Initial calibration of compounds was performed as required by the method.

The percent relative standard deviations (%RSD) of calibration factors for compounds were less than 20.0% .

b. Calibration Verification

Calibration verification was performed at required frequencies. The percent differences (%D) of amounts in continuing standard mixtures were within the 15.0% CC limits.

111. Blanks

Method blanks were reviewed for each matrix as applicable. No total Petroleum hydrocarbons as diesel contaminants were found in the method blanks.

IV. Accuracy and Precision Data

a. Surrogate Recovery

Although surrogates were not required by the method, surrogate analysis was Performed by the laboratory. Surrogate recoveries (%R) were within CC limits.

b. 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 (n"PD) were within CC limits.

c. Laboratory Control Samples

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

V. Target Compound Identification

All target compound identifications were within validation criteria.

VI. Compound Quantitation and CROLS

All compound quantitation and CRQLs were within validation criteriEi.

VIII. System Performance

The system performance was acceptable.

VIII. Overall Assessment of Data

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

IX Field Duplicates

No field duplicates were identified in this SDG.

X. Field Blanks

Samples 097B01055 and 097B01155 were identified as source blanks. No total petroleum hydrocarbons as diesel contaminants were found in these blanks with these exceptions:

Source Blank ID	Compound	Concentration (ug/L)
097B01055	TPH as diesel	41
097B01155	TPH as diesel	49
		--

Sample 097R12055 was identified as a rinsate. No total petroleum hydrocarbons as diesel contaminants were found in this blank with the following exceptions:

Rinsate ID	Compound	Concentration (ug/L)
097R12055	TPH as diesel	59
1 866D8.BC4		4

Ji

Salton Sea Test Base, CTO 097

Total Petroleum Hydrocarbons as Diesel - Data Qualification Summary - SDG
K9602917**

No Sample Data Qualified in this SDG

Salton Sea Test Base, CTO 097

Total Petroleum Hydrocarbons as Diesel - Laboratory Blank Data Qualification
Summary - SDG K9602917**

No Sample Data Qualified in this SDG

LDC Report# 1866ES

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

Project/Site Name: Salton Sea Test Base, CTO 097
Collection Date: May 16 through May 17, 1996
LDC Report Date: July 8, 1996
Matrix: Water
Parameters: Total Petroleum Hydrocarbons as Diesel
Laboratory: Columbia Analytical Services, Inc.

Sample Delivery Group (SDG): K9602936

Sample Identification

097G15955 097G16055 097DO2555 097G15855 097G14055 097G 14155 097G16155 097G16255 097G16355
097R12155 097G15255 097G15256MS 097G152571VISD

Introduction

This data review covers 13 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8015 modified for Total Petroleum Hydrocarbons (TPH) as Diesel.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (February 1994) as there are no current guidelines for EPA SW 846 Method 8015 modified for Total Petroleum Hydrocarbons (TPH) as Diesel. The modifications were based on EPA SW 846 Method 8015 modified.

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 111.

Field duplicates are summarized in Section IX.

Raw data were not reviewed for this SDG. The review was based on OC data.

The following are definitions of the data qualifiers:

U Indicates the compound or element was analyzed for but not detected at or above the stated limit.

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 element 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.

1. Technical Holding Times

All technical holding time requirements were met.

11. Calibration

a. Initial Calibration

Initial calibration of compounds was performed as required by the method.

The percent relative standard deviations (%RSD) of calibration factors for compounds were less than **20.0%** .

b. Calibration Verification

Calibration verification was performed at required frequencies. The percent differences (%D) of amounts in continuing standard mixtures were within the 15.001,0' CC limits.

III. Blanks

Method blanks were reviewed for each matrix as applicable. No total petroleum hydrocarbons as diesel contaminants were found in the method blanks.

IV. Accuracy and Precision Data

a. Surrogate Recovery

Although surrogates were not required by the method, surrogate analysis was performed by the laboratory. Surrogate recoveries (%R) were within CC limits.

b. 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 (RFD) were within CC limits.

c. Laboratory Control Samples

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

V. Target Compound Identification

Raw data were not reviewed for this SDG.

VI. Compound Quantitation and CRQLs

Raw data were not reviewed for this SDG.

Vil. System Performance

Raw data were not reviewed for this SDG.

VIII. Overall Assessment of Data

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

IX Field Duplicates

Samples 097G16055 and 097DO2555 were identified as field duplicates. No total petroleum hydrocarbons as diesel were detected in any of the samples with the following exceptions:

Compound	Concentration (ug/L)		
	097GIS055	097D02555	RPD
TPH as diesel	302	560	60

X. Field Blanks

Sample 097R12155 was identified as a rinsate. No total petroleum hydrocarbons as diesel contaminants were found in this blank.

1856E8.BC3

Salton Sea Test Base, CTO 097

Total Petroleum Hydrocarbons as Diesel - Data Qualification Summary - SDG
K9602936

No Sample Data Qualified in this SDG

Salton Sea Test Base, CTO 097

Total Petroleum Hydrocarbons as Diesel - Laboratory Blank Data Qualification
Summary - SDG K9602936

No Sample Data Qualified in this SDG

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Salton Sea Test Base, CTO 097
Collection Date: May 13 through May 14, 1996
LDC Report Date: July 9, 1996
Matrix: Water
Parameters: Total Recoverable Petroleum Hydrocarbons
Laboratory: Columbia Analytical Services, Inc.

Sample Delivery Group (SDG): K9602884

Sample Identification

097G13051 097G13251 097DO2051 097R11151 097G 13151 097G11351 097G11251 097G11051 097G1
1951 097G11851 097R11051 097G1 1352MS 097G1 1352MSD

Introduction

This data review covers 13 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA Method 418.1 for Total Recoverable Petroleum Hydrocarbons (TRPH).

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 EPA Method 418.1. The modifications were based on EPA Method 418.1.

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 a specified protocol or is of technical advisory nature.

Blanks results are summarized in Section 111.

Field duplicates are summarized in Section VII.

Raw data were not reviewed for this SDG. The review was based on QC data.

The following are definitions of the data qualifiers:

- U Indicates the compound or element was analyzed for but not detected at or above the stated limit.
- i 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 element 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.

1. Technical Holding Times

All technical holding time **requirements were met.**

11. Calibration

a. Initial Calibration

All criteria for the initial calibration were met.

b.- Calibration Verification

Calibration verification frequency and analysis criteria were met.

111. Blanks

Method blanks were reviewed for each matrix as applicable. No total recoverable petroleum hydrocarbon contaminants were found in the method blanks.

IV. Accuracy and Precision Data

a. Surrogate Recovery

Not applicable to this method.

b. 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 CC limits.

c. Laboratory Control Samples

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries were within CC limits.

V. Sample Result Verification

Raw data were not reviewed for this SDG.

V1. Overall Assessment of Data

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

V11. Field Duplicates

Samples 097G13251 and 097DO2051 were identified as field duplicates. No total recoverable petroleum hydrocarbons were detected in any of the samples.

VIII. Field Blanks

Samples 097R1 1151 and 097R1 1051 were identified as dnstates. No total recoverable petroleum hydrocarbon contaminants were found in these blanks.

Salton Sea Test Base, CTO 097

Total Recoverable Petroleum Hydrocarbons - Data Qualification Summary - SDG
K9602884

No Sample Data Qualified in this SDG

Salton Sea Test Base, CTO 097

Total Recoverable Petroleum Hydrocarbons - Laboratory Blank Data Qualification
Summary - SDG K9602884

No Sample Data Qualified in this SDG

LDC

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

Project/Site Name: Salton Sea Test Base, CTO 097
Collection Date: May 15, 1996
LDC Report Date: July 9, 1996
Matrix: Water
Parameters: Total Recoverable Petroleum Hydrocarbons
Laboratory: Columbia Analytical Services, Inc.

Sample Delivery Group (SDG): K9602917**

Sample Identification

097BO1051
097BOI 151

** Indicates SDG underwent NFESC Level D review.

Introduction

This data review covers 2 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses -were per EPA Method 418.1 for Total Recoverable Petroleum Hydrocarbons (TRPH).

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 EPA Method 418.1. The modifications were based on EPA Method 418.1.

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 a specified protocol or is of technical advisory nature.

Blanks results are summarized in Section III.

Field duplicates are summarized in Section VII.

The following are definitions of the data qualifiers:

U Indicates the compound or element was analyzed for but not detected at or above the stated limit.

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 element 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 protocolcontractual deviation

1. Technical Holding Times

All technical holding time requirements were met.

11. Calibration

a. Initial Calibration

All criteria for the initial calibration were met.

b. Calibration Verification

Calibration verification frequency and analysis criteria were met.

111. Blanks

Method blanks were reviewed for each matrix as applicable. No total recoverable petroleum hydrocarbon contaminants were found in the method blanks.

IV. Accuracy and Precision Data

a. Surrogate Recovery

Not applicable to this method.

b. Matrix Spike/(Matrix Spike) Duplicates

The laboratory has indicated that there was insufficient sample volume for analysis of the matrix spike and matrix spike duplicate.

c. Laboratory Control Samples

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

V. Sample Result Verification

Raw data were not reviewed for this SDG.

VI. Overall Assessment of Data

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

Vii. Field Duplicates

No field duplicates were identified in this SDG.

Vill. Field Blanks

Sample 0971111951 was identified as a rinsate. No total recoverable petroleum hydrocarbon contaminants were found in this blank.

1

1866P-1 I.BC3

Salton Sea Test Base, CTO 097

Total Recoverable Petroleum Hydrocarbons - Data Qualification Summary - SDG K9602936

No Sample Data Qualified in this SDG

Salton Sea Test Base, CTO 097

Total Recoverable Petroleum Hydrocarbons - Laboratory Blank Data Qualification Summary - SDG K9602936

No Sample Data Qualified in this SDG

Introduction

This data review covers 17 water samples listed- on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8020 for Aromatic Volatile Organics which include Benzene, Toluene, Ethylbenzene and Xylenes (BTEX).

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (February 1994) as there are no current guidelines for EPA SW 846 Method 8020. The modifications were based on EPA SW 846 Method 8020.

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 111.

Field duplicates are summarized in Section IX.

Raw data were not reviewed for this SDG. The review was based on CC data.

The following are definitions of the data qualifiers:

- U Indicates the compound or element was analyzed for but not detected at or above the stated limit.
- i 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 element 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.

Laboratory Data Consultants, Inc.
Data Validatidn Report

Project/Site Name: Salton Sea Test Base, CTO 097
Collection Date: May 7 through May 8, 1996
LDC Report Date: July 8, 1996
Matrix: Water
Parameters: Aromatic Volatile Organics (BTEX)
Laboratory: Columbia Analytical Services, Inc.
Sample Delivery Group (SDG): K9602755

Sample Identification

097G15741
097TO4342
097R12242
097G14446
097G15143
097G14242
097G15043
097G15543
097G14341
097G15641
097R12342
097TO4442
097G14943
097G14743
097DO2442
097G14444MS
097G14444MSD

1. Technical Holding Times

All technical holding time requirements were met.

11. Calibration

a. Initial Calibration

Initial calibration of compounds was performed as required by the method.

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

b. Calibration Verification

Calibration verification was performed at required frequencies. The percent differences (%D) of amounts in continuing standard mixtures were within the 15.0% CC limits.

III. Blanks

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

IV. Accuracy and Precision Data

a. Surrogate Recovery

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

b. 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 difference-s (RPD) were within CC limits.

c. Laboratory Control Samples

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

V. Target Compound Identification

Raw data were not reviewed for this SDG.

VI. Compound Quantitation and CROLS

Raw data were not reviewed for this SDG.

VII. System Performance

Raw data were not reviewed for this SDG.

VIII. Overall Assessment of Data

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

IX. Field Duplicates

Samples 097G14743 and 097DO2442 were identified as field duplicates. No aromatic volatile organics were detected in any of the samples.

X. Field Blanks

Samples 097TO4342 and 097TO4442 were identified as trip blanks. No aromatic volatile organic contaminants were found in these blanks.

Samples 097R12242 and 097R12342 were identified as rinsates. No aromatic volatile organic contaminants were found in these blanks with the following exceptions:

Rinsate ID	Compound	Concentration (u
097R12342	Tolue-ne	0.3
186SA32.BC3	4	

Salton Sea Test Base, CTO 097
Aromatic Volatile Organics (BTEX) - Data Qualification Summary - SDG K9602755

No Sample Data Qualified in this SDG

Salton Sea Test Base, CTO 097
Aromatic Volatile Organics (BTEX) - Laboratory Blank Data Qualification
Summary - SDG K9602755

No Sample Data Qualified in this SDG

LDC

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Salton Sea Test Base, CTO 097
Collection Date: May 9 through May 10, 1996
LDC Report Date: July 8, 1996
Matrix: Water
Parameters: Aromatic Volatile Organics (BTEX)
Laboratory: Columbia Analytical Services, Inc.

Sample Delivery Group (SDG): K9602784

Sample Identification

097G1 4541
097G14643
097TO4643
097G15341
097G11442
097TO4542
097G12641
097G1 1443MS
097G 11441 M S D

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 8020 for Aromatic Volatile Organics which include Benzene, Toluene, Ethylbenzene and Xylenes (BTEX).

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (February 1994) as there are no current guidelines for EPA SW 846 Method 8020. The modifications were based on EPA SW 846 Method 8020.

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 111.

Field duplicates are summarized in Section IX.

Raw data were not reviewed for this SDG. The review was based on CC data.

The following are definitions of the data qualifiers:

U Indicates the compound or element was analyzed for but not detected at or above the stated limit.

i Indicates an estimated value.

R Quality control indicates the data is not usable.

N Presumptive evidence of presence of the constituent.

Indicates the compound or element 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.

1. Technical Holding Times

All technical holding time requirements were met.

III. Calibration

a. Initial Calibration

Initial calibration of compounds was performed as required by the method.

The percent relative standard deviations (%RSD) of calibration factors for all compounds were less than 20.0%.

b. Calibration Verification

Calibration verification was performed at required frequencies. The percent differences (%D) of amounts in continuing standard mixtures were within the 15.0% QC limits.

III. Blanks

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

IV. Accuracy and Precision Data

a. Surrogate Recovery

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

b. Matrix Spike/Matrix Spike Duplicates

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

c. Laboratory Control Samples

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

V. Target Compound Identification

Raw data were not reviewed for this SDG.

VI. Compound Quantitation and CRQLs

Raw data were not reviewed for this SDG.

Vil. System Performance

Raw data were not reviewed for this SDG.

Vill. Overall Assessment of Data

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

IX Field.Duplicates

No field duplicates were identified in this SDG.

X. Field Blanks

Samples 097T04643 and 097T04542 were identified as trip blanks. No aromatic volatile organic contaminants were found in these blanks.

Salton Sea Test Base, CTO 097

Aromatic Volatile Organics (BTEX) - Data Qualification Summary - SDG K9602784

No Sample Data Qualified in this SDG

Salton Sea Test Base, CTO 097

Aromatic Volatile Organics (BTEX) - Laboratory Blank Data Qualification
Summary - SDG K9602784

No Sample Data Qualified in this SDG

Laboratory Data Consultants, Inc.
Data Validation -Report

Project/Site Name: Salton Sea Test Base, CTO 097
Collection Date: May 13, 1996
LDC Report Date: July 8, 1996
Matrix: Water
Parameters: Aromatic Volatile Organics (BTEX)
Laboratory: Columbia Analytical Services, Inc.

Sample Delivery Group (SOG): K9602884

Sample Identification

097G 14842
097TO4743

Introduction

This data review covers 2 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8020 for Aromatic Volatile Organics which include Benzene, Toluene, Ethylbenzene and Xylenes (BTEX).

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (February 1994) as there are no current guidelines for EPA SW 846 Method 8020. The modifications were based on EPA SW 846 Method 8020.

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 flao is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Blank results are summarized in Section 111.

Field duplicates are summarized in Section IX.

Raw data were not reviewed for this SDG. The review was based on CC data.

The following are definitions of the data qualifiers:

- U Indicates the compound or element was analyzed for but not detected at or above the stated limit.
- i 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 element 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.

1. Technical Holding Times

All technical holding time requirements were met.

11. Calibration

a. Initial Calibration

Initial calibration of compounds was performed as required by the method.

The percent relative standard deviations (%RSD) of calibration factors for all compounds were less than **20.0%**.

b. Calibration Verification

Calibration verification was performed at required frequencies. The percent differences (%D) of amounts in continuing standard mixtures were within the 15.00/0' CC limits.

111. Blanks

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

IV. Accuracy and Precision Data

a. Surrogate Recovery

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (0/,O'R) were within CC limits.

b. Matrix Spike/Matrix Spike Duplicates

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

c..Laboratory Control Samples

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

V. Target Compound Identification

Raw data were not reviewed for this SDG.

VI. Compound Quantitation and CRQLs

Raw data were not reviewed for this SDG.

VII. System Performance

Raw data were not reviewed for this SDG.

VIII. Overall Assessment of Data

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

IX Field Duplicates

No field duplicates were identified in this SDG.

X. Field Blanks

Sample 097TO4743 was identified as a trip blank. No aromatic volatile organic contaminants were found in this blank.

Salton Sea Test Base, CTO 097
Aromatic Volatile Organics (BTEX) - Data Qualification Summary - SDG K9602884

No Sample Data Qualified in this SDG

Salton Sea Test Base, CTO 097
Aromatic Volatile Organics (BTEX) - Laboratory Blank Data Qualification
Summary - SDG K9602884

No Sample Data Qualified in this SDG

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Salton Sea Test Base, CTO 097
Collection Date: May 15, 1996
LDC Report Date: July 8, 1996
Matrix: Water
Parameters: Aromatic Volatile Organics (BTEX)
Laboratory: Columbia Analytical Services, Inc.

Sample Delivery Group (SDG): K9602917**

Sample Identification

097R12041
097TO4842
097G15442
097BO1043
097BO1141
097R12043MS
097R12042MSD

** Indicates SDG underwent NFESC Level D review.

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 8020 for Aromatic Volatile Organics which include Benzene, Toluene, Ethylbenzene and Xylenes (BTEX).

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (February 1994) as there are no current guidelines for EPA SW 846 Method 8020. The modifications were based on EPA SW 846 Method 8020.

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 element was analyzed for but not detected at or above the stated limit.
- i 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 element 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.

1. Technical Holding Times

All technical holding time requirements were met.

11. Calibration

a. Initial Calibration

Initial calibration of compounds was performed as required by the method.

The evaluation of the initial calibration data was based upon a laboratory resubmittal. The original raw data did not confirm the response factors listed on the calibration summary forms. Additionally, the original compound areas reported did not confirm the resubmitted data. The laboratory could not clearly explain this change. Although data qualification was not considered necessary for this finding, the data end user should consider this in the overall use of the data.

Retention time windows were evaluated and considered technically acceptable.

The percent relative standard deviations (%RSD) of calibration factors for all compounds were less than 20.0% .

b. Calibration Verification

Calibration verification was performed at required frequencies. The percent differences (%D) of amounts in continuing standard mixtures were within the 15.0% CC limits.

Retention times (RT) of all compounds in the calibration standards were within CC limits.

III. Blanks

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

IV. Accuracy and Precision Data

a. Surrogate Recovery

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

b. 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 CC limits.

c. Laboratory Control Samples

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

V. Target Compound Identification

All target compound identifications were within validation criteria.

VI. Compound Quantitation and CRQLs

All compound quantitation and CRQLs were within validation criteria.

Positive detects were verified by recalculation for all samples. Recalculated results confirm the reported results with the following exceptions:

Sample	Compound	Reported Concentration	Recalculated Concentration	Flag
097R120411	Xylenes (total)	0.6 ug/L	0.7 ug/L	
097BOI 043	Xylenes (total)	0.5 ug/L	0.9 ug/L	i P

VII. System Performance

The system performance was acceptable.

VIII. Overall Assessment of Data

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

IX. Field Duplicates

No field duplicates were identified in this SDG.

X. Field Blanks

Sample 097TO4842 was identified as a trip blank. No aromatic volatile organic contaminants were found in this blank.

Sample 097R12041 was identified as a rinsate. No aromatic volatile organic contaminants were found in this blank with the following exceptions:

Rinsate ID	Compound	concentration (ug/L)
097R12041	Toluene	0.6
	Xylenes (total)	0.6

Samples 097BO1043 and 097BO1141 were identified as source blanks. No aromatic volatile organic contaminants were found in these blanks with the following exceptions:

Source Blank ID	Compound	Concentration (ug/L)
097601043	Toluene	0.8
	Xylenes (total)	0.8
097501141	Benzene	0.4
1866D32.BC4	5	

Salton Sea Test Base, CTO 097

Aromatic Volatile Organics (BTEX) - Data Qualification Summary - SDG K9602917**

SDG	Sample	Compound	Flag	A or P	Re .. n
K9602917					Compound quantitation C RCLS
	0971R12041	Xylenes (total)			T,,od
	097SO1043		-T		

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Aromatic Volatile Organics (BTEX) - Laboratory Blank Data Qualification Summary -
SDG K9602917**

No Sample Data Qualified in this SDG

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

Project/Site Name: Salton Sea Test Base, CTO 097
Collection Date: May 16 through May 17, 1996
LDC Report Date: July 10, 1996
M atrix: Water
Parameters: Aromatic Volatile Organics (BTEX)
Laboratory: Columbia Analytical Services, Inc.

Sample Delivery Group (SDG): K9602936

Sample Identification

097TO4241
097G15941
097G16041
097DO2543
097G15843
097G 14041
097G 14143
097G16142
097G16243
097G16341
097R12143
097G15242
097TO4,341
097G15241MS
097G15241MSD

Introduction

This data review covers 15 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8020 for Aromatic Volatile Organics which include Benzene, Toluene, Ethylbenzene and Xylenes (BTEX).

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (February 1994) as there are no current guidelines for EPA SW 846 Method 8020. The modifications were based on EPA SW 846 Method 8020.

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 111.

Field duplicates are summarized in Section IX.

Raw data were not reviewed for this SDG. The review was based on CC data.

The following are definitions of the data qualifiers:

- U Indicates the compound or element was analyzed for but not detected at or above the stated limit.
- i 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 element 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.

1. Technical Holding Times

All technical holding time requirements were met.

I. Calibration

a. Initial Calibration

Initial calibration of compounds was performed as required by the method,

The percent relative standard deviations (%RSD) of calibration factors for all compounds were less than 20.0%.

b. Calibration Verification

Calibration verification was performed at required frequencies. The percent differences (%D) of amounts in continuing standard mixtures were within the 15.0% CC limits.

111. Blanks

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

IV. Accuracy and Precision Data

a. Surrogate Recovery

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (*XOR) were within CC limits.

b. Matrix Spike/Matrix Spike Duplicates

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

c. Laboratory Control Samples

Laboratory control samples were reviewed for each matrix as applicable with the following exceptions:

Sample	Compound	Finding	Criteria	Flag	I A or P I
097TO4241 097GI5941 097G15843 097GI5142 097G16243 097G16341 097RI2143 097G15242 097TO4341 K960529-MB	All TCL compounds	No LCS analyzed.	LCS analysis required.	None	P

Percent recoveries (%R) were within QC limits.

V. Target Compound Identification

Raw data were not reviewed for this SDG.

VI. Compound Quantitation and CROLS

Raw data were not reviewed for this SDG.

VII. System Performance

Raw data were not reviewed for this SDG.

VIII. Overall Assessment of Data

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

IX Field Duplicates

Samples 097G16041 and 097DO2543 were identified as field duplicates. No aromatic volatile organics were detected in any of the samples with the following exceptions:

Compound	097G16041	097DC2543	RPD
Toluene	0.3	0.3	0

X Field Blanks

Samples 097TO4241 and 097TO4341 were identified as trip blanks. No aromatic volatile organic contaminants were found in these blanks with the following exceptions-

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SOG	Sample	Compound	Flag	Ao.P	Fl...s
K9602936	097TO4241 097G15941 097G15843 097G 16142 097G16243 097GI6341 097RI2143 097G15242 097TO4341	All TCL compounds	None	P	Laboratory cant

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Aromatic Volatile Organics (BTEX) - Laboratory Blank Data Qualification Summary - SDG K9602936

No Sample Data Qualified in this SDG

Trip Blank ID	Compound	Concentration (ug/L)
097TO4341	Toluene	0.6

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Sample O97R12143 was identified as a rinsate. No aromatic volatile organic contaminants were found in this blank.

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