X. Internal Standards

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

XI. **Target Compound Identifications**

Raw data were not reviewed for this SDG.

XII. **Compound Quantitation and CRQLs**

Raw data were not reviewed for this SDG.

XIII. Tentatively Identified Compounds (TICs)

Raw data were not reviewed for this SDG.

XIV. **System Performance**

Raw data were not reviewed for this SDG.

XV. **Overall Assessment**

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

XVI. **Field Duplicates**

Samples 097GO6282 and 097DO1 082 were identified as field duplicates. No semivolatiles were detected in any of the samples with the following exceptions:

	Concentration (ug/L)		
Compound	097DO1082	097GO6282	RPD
8is(2-ethylhexyQphthalate	2	2	0
Phenol	10	8	SO

XVIL Field Blanks

Samples 097RO6281 and 097RO6182 were identified as r.insates. No semivolatile contaminants were found in these blanks.

Salton Sea Test Base, CTO 097
Semivolatiles - Data Qualification Summary - SDG K9600786

SDG	Sample	Compound	Flag -FA	or P	Reason
K9600786	097RO6281 097GO6381 097GO6981 097GO6681 097GO6582 097GO6882 097RO6182 097GO6282 097DO1082 097GO5782 097GO5881 097GO7081 097GO6481 097GO6181	4-Nitrophenol	J (all detects)	A	Matrix spike/Matrix spike duplicates (RPD)

Salton Sea Test Base, CTO 097
Semivolatiles - Laboratory Blank Data Qualification Summary - SDG K9600786

SDG	Sample	Compound T1C (RT In minutes)	odifled Final oncentration	A or 7P
K9600786	097RO6281	Unknown hydrocarbon (5.82)	2U ug/L	A
K9600786	097GO6981	Unknown hydrocarbon (5.82)	2U ug/L	A
K9600786	097GO6582	Unknown hydrocarbon (5.82)	2U ug/L	A
K9600786	097GO6882	Unknown hydrocarbon (5.a3)	2U ug/L	A
K9600786	097RO6182	Unknown hydrocarbon (5.a3)	2U ug/L	A
K9600786	097GO5782	Unknown hydrocarbon (5.B3)	2U ug/L	A
K9600786	097GO7081	Unknown hydrocarbon (5.83)	2U ug/L	A
K9600786	097GO6481	Unknown hydrocarbon (5.83)	SU ug/L	A
		Unknown hydrocarbon (5.88)	12U ug/L	

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Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name:	Salton Sea Test Base, CTO 097
Collection Date:	February 12, 1996
LDC Report Date:	April 8, 1996
Matrix:	Water
Parameters:	Sem vo at es
Laboratory:	Columbia Analytical Services
Sample De ry p	

Sample Identification

097GO7781
097RO6382
097GO71 81
097GO7662
097GO7386
097GO7282

Introduction

This data review covers 6 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA Contract Laboratory Program Statement of Work OLM02.1 for Semivolatiles. The data validation review was based on EPA Contract Laboratory Program Statement of Work OLM02.0 for Sernivolatiles.

This review follows USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (February 1994); the following subsections correlate to the above guidelines.

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 labdratory deviation from a specified protocol or is of technical advisory nature.

Blank results are summarized in Section V.

Field duplicates are summarized in Section X\A.

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.

1. Technical Holding Times

All technical holding time requirements were met.

11. **GC/MS Instrument Performance Check**

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

III. **Initial Calibration**

Initial calibration was performed using required standard concentrations.

Percent relative standard deviations (%RSD) were less than or equal to 30.0% for all compounds.

Average relative response factors (RRF) for all semivolatile target compounds and system monitoring compounds were greater than or equal to 0.05 as required.

IV. **Continuing Calibration**

Continuing calibration was performed at the required frequencies.

All of the continuing calibration percent differences (%D) between the initial calibration RRF and the continuing calibration RRF were less than or equal to 25.0% with the following exceptions:

Date	Compound	%D	As Fsociated Samples	Flag	A.,P]
F-s/96	**Di-n-butyiphthalate**	34.9	1 **All samples in SDG K9600837**	1	1-71

All of the continuing calibration RRF values were greater than or equal to 0.05 .

V. Blanks

Method blanks were reviewed for each matrix a!5 applicable. No sernivolatile contaminants were found in the method blanks with the following exceptions:

Method Blank ID	Extraction **Date**	**Compound** TIC (RT In minutes)	**Concentration** J	**Associated Samples**
SBLX01	2/19/96	**Bis(2-ethylhexyl)phthalate**	1 ug/L	**All samples in SDG**
		Unknown (5.97)	**3 ug/L**	**~K~9600837**

Sample concentrations were compared to concentrations detected in the method blanks.
The sample concentrations were either not detected or were sighificantly greater (> 1 OX

1804D2.BC3

for common contaminants, >5X for other contaminants) than the concentrations found in the associated method blanks with the following exceptions:

Sample	Compound TIC (RT In minutes)	Reported Concentration	Modified Final Concentration
097GO7781	Bis(2-ethy1hexyl)phtha1ate	5 ug/L	IOU ug/L
	Unknown (5.96)	2 ug/L	21.1 ug/L
097ROS382	Bis(2-ethyihexAphthalate	I ug/L	1 OU ug/L
	Unknown (5.96)	2 ug/L	2U ugtL
097GO7181	Bis(2-ethyihexyQphthalat9	2 ug/L	1 OU ug/L
	Unknown (5.96)	2 ug/L	2U ug/L
097GO7682	Bis(2-ethy1hexy1)phtha1ate	1 ug/L	1 OU ug/L
	Unknown (5.95)	3 ug/L	3U ug/L
097GO7386	Unknown (5.95)	3 ug/L	3U ug/L

VI. **Surrogate Spikes**

Surrogates were added to all samples and blanks as required by the SOW. All surrogate recoveries were within validation criteria.

VII. **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.

Vill. Laboratory Control Samples (LCS)

Not applicable to multi-media samples.

IX Regional Quality Assurance and Quality Control

Not applicable.

X. Internal Standards

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

XI. **Target Compound Identifications**

Raw data were not reviewed for this SDG.

XII. **Compound Quantitation and CRQLs**

Raw data were not reviewed for this SDG.

XIII. **Tentatively Identified Compounds (TICs)**

Raw data were not reviewed for this SDG.

XIV. **System Performance**

Raw data were not reviewed for this SDG.

XV. **Overall Assessment**

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

XVI. **Field Duplicates**

No field duplicates were identified in this SDG.

XVIL Field Blanks

Sample 097RO6382 was identified as a rinsate. No semivolatile contaminants were found in this blank with the following exceptions:

Rinsate ID	**Compound**	**Concentratlon** (.ug/L)
[;;7ROB382	**8is(2-ethy1hexyQphtha1ate**	

Salton Sea Test Base, CTO 097
Semivolatiles - Data Qualification Summary - SDG K9600837

SDG	Sample	Compound	Flag	Aorl?	Reason
K9600837	097GOT781	Di-n-butylphthalate		A	Continuing calibration (%D)
	097ROS382				
	097GO7181				
	O97GO76a2				
	097GO7386				
	097GO7282				

Salton Sea Test Base, CTO 097
Semivolatiles - Laboratory Blank Data Qualification Summary - SDG K9600837

SDG	Sample	TIC (RT In minutes) Compound	--TCM	odified Final **oncentration**	A or P
K9600837	097GO7781	Bis(2-ethyiherAphthalate		IOU ug/L	A
		Unknown (5.96)		2U ug/L	
K9600837	097RO6382	Bis(2-ethylhexyl)phthalate		IOU ug/L	A
		Unknown (5.96)		2U ug/L	
K9600837	097GO7181	Bis(2-ethylhexyl)phthalate		1 OU ug/L	A
		Unknown (5.96)		2U ug/L	
K9600a37	097GO7682	Bis(2-ethylhexyl)phthalate		IOU ug/L	A
		Unknown (5.95)		3U ug/L	
K9600837	097GO7386	Unknown (5.95)		3U ug/L	A

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Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name:	Salton Sea Test Base, CTO 097
Collection Date:	February 13, 1996
LDC Report Date:	April 5, 1996
Matrix:	Water
Parameters:	Semivolatiles
Laboratory:	Columbia Analytical Services

Sample Delivery Group (SDG): K9600872

Sample Identification

097RO7862
097GO7882
097GO8081
097GO7982
097DO1181
097GOB 181

Introduction

This data review covers 6 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA Contract Laboratory Program Statement of Work OLM02.1 for Semivolatiles. The data validation review was based on EPA Contract Laboratory Program Statement of Work OLM02.0 for Semivolatiles.

This review follows USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (February 1994); the following subsections correlate to the above guidelines.

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

Blank results are summarized in Section V.

Field duplicates are summarized in Section XVI.

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.

1. Technical Holding Times

All technical holding time requirements were met.

11. **GC/MS Instrument Performance Check**

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

Ill. **Initial Calibration**

Initial calibration was performed using required standard concentrations.

Percent relative standard deviations (%RSD) were less than or equal to 30.0% for all compounds.

Average relative response factors (RRF) for all semivolatile target compounds and system monitoring compounds were greater than or equal to 0.05 as required.

IV. **Continuing Calibration**

Continuing calibration was performed at the required frequencies.

All of the continuing calibration percent differences (%D) between the initial calibration RRF and the continuing calibration RRF were less than or equal to 25.0% with the following exceptions:

Date	Compound	%D	**Associated Samples**	Flag	
2/27/96	**N-Nftroso-di-n-propylamine**	25.1	**All samples in SDG K9600872**	i	A
	Di-n-butyip!lhalate			36.2	1

All of the continuing calibration RRF values were greater than or equal to 0.05 .

V. Blanks

Method blanks were reviewed for each matrix as applicable. No semivolatile contaminants were found in the method blanks with the followhg exceptions:

Method Blank ID	**Extraction Data**	**Compound** TIC (RT in **minutes)**	Concentration	**Associated** Samples
SBLK01	**2/17/96**	**Bis(2-ethylhexyl)phthaiate**	**1 ug/L**	**All samples in SDG**
		Unknown (5.96)	**3 ug/L**	**K9600872**

Sample concentrations were compared to concentrations detected in the method blanks.

The sample concentrations were either not detected or were significantly greater (> 1 OX for common contaminants, >5X for other contaminants) than the concentrations found in the associated method blanks with the following exceptions:

S ampl-T	TIC (RT In minutes) Compound	Ropoded T ConcentraUon	Modified Final Concentration
097RO7882	Bis(2-ethylhexy1)phthala1e	1 ug/L	IOU ug/L
	Unknown (5.96)	3 ug/L	3U ug/L
097GO7882	Bis(2-ethylhexy1)phtha1ate	8 ug/L	1 OU ug/L
	Unknown (5.92)	4 ug/L	4U ug/L
097GO8081	Unknown (5.91)	3 ug/L	3U ug/L
097GO7982	Unknown (5.96)	2 ug/L	2U ug/L
097DO1 181	Unknown (5.96)	2 ug/L	2U ug/L
097GO8181	Bis(2-ethy1hexyl)phtha1ate	5 ug/L	1 OU ug/L

VI. **Surrogate Spikes**

Surrogates were added to all samples and blanks as required by the SOW. All surrogate recoveries were within validation criteria.

V1111. **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.

Vill. Laboratory Control Samples (LCS)

Not applicable to multi-media samples. Laboratory control samples were reported by the laboratory. Percent recoveries (%R) and relative percent differences (RPD) were within validation criteria.

IX Regional Quality Assurance and Quality Control

Not applicable.

X. Internal Standards

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

XI. **Target Compound Identifications**

Raw data were not reviewed for this SDG-

XII. **Compound Quantitation and CRQLs**

Raw data were not reviewed for this SDG.

XIII. Tentatively Identified Compounds (TICs)

Raw data were not reviewed for this SDG.

XIV. **System Performance**

Raw data were not reviewed for this SDG.

XV. **Overall Assessment**

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

XVI. **Field Duplicates**

Samples 097GO7982 and 097DO1 181 were identified as field duplicates. No semivolatiles were detected in any of the samples with the following exceptions:

	Concentration (ug/L)		
Compound	097DO1 181	097GO7982	RPD
Phenol	19	101.1	Not calculable
Bis(2-ethyihexyQphthalate	19	27	35

XVIL Field Blanks

Sample 097RO7882 was identified as a rinsate. No sernivolatile contaminants were found in this blank with the following exceptions:

Rinsate ID	Compound	Concentration (ug/L)
097RO7882	Phenol Bis(2-ethylhexyl) phthalate	2

Salton Sea Test Base, CTO 097
Semivolatiles - Data Qualification Summary - SDG K9600872

SIDG	Sample	Compound	Flag	Aorl?	Reason
K9600872	097RO7882	N-Nftroso-di-n-propylamine	i	A	Continuing calibration
	097GO7882	Di-n-butylphthalate			(%D)
	097GO8081				
	097GO7982				
	0971301181				
	097GO8181				

Salton Sea Test Base, CTO 097
Semivolatiles - Laboratory Blank Data Qualification Summary - SDG K9600872

SDG	Sample	Compound TIC (FIT In minutes)	Modified Final Concentration	AorP
K9600872	097RO7882	Bis(2-ethylhexyl)phthalate	1 OU ug/L	A
		Unknown (5.96)	3U ug/L	
K9600872	097GO7882	Bis(2-ethylhexyl)phthalate	1 OU ug/L	A
		Unknown (5.92)	4U ug/L	
K9600872	097GO8081	Unknown (5.91)	3U ug/L	A
K9600872	097GO7982	Unknown (5.96)	2U ug/L	A
K9600872	097DO1181	Unknown (5.96)	2U ug/L	A
K9600872	097GO81 81	1 Bis(2-ethyihexyl)phthalate	1 OU ug/L	F 7A,

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LD

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name:	Salton Sea Test Base, CTO 097
Collection Date:	February 14, 1996
LDC Report Date:	April 5, 1996
Matrix:	Water
Parameters:	Sernivolatiles
Laboratory:	Columbia Analytical Services

Sample Delivery Group (SDG): K9600898

Sample Identification

097RO5582
097GO5581
097GO6781

Introduction

This data **review covers 3 water** samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA Contract Laboratory Program Statement of Work OLM02.1 for Semivolatiles. The data validation review was based on EPA Contract Laboratory Program Statement of Work OLM02.0 for Semivolatiles.

This review follows USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (February 1994); the following subsections correlate to the above guidelines.

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

Blank results are summarized in Section V.

Field duplicates are summarized in Section XVI.

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 sampledetection limit is an estimated value.

I. Technical Holding Times

All technical holding time requirements were met.

11. **GCIMS Instrument Performance Check**

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

111. **Initial Calibration**

Initial calibration was performed using required standard concentrations.

Percent relative standard deviations (%RSD) were less than or equal to 30.0% for all compounds.

Average relative response factors (RRF) for all sernivolatile target compounds and system monitoring compounds were greater than or equal to 0.05 as required.

IV. **Continuing Calibration**

Continuing calibration was performed at the required frequencies.

All of the continuing calibration percent differences (%D) between the initial calibration RRF and the continuing calibration RRF were less than or equal to 25.0% with the following exceptions:

Date	Compound	%D	**Associated Samples**	**Flag**	**A or P**
2/27/96	**N-Nitroso-di-n-propylamine**	28.1	**All sampies in SDG K9600898**		**A**
	Di-n-butylphthalate	38.2			

All of the continuing calibration RRF values were greater than or equal to 0.05 .

V. Blanks

Method blanks were reviewed for each matrix as applicable. No sernivolatile contaminants were found in the method blanks with the following exceptions:

Method Blank ID	**Extraction Date**	**Compound** TIC (FIT In minutes)	**Concentration**	**Associated Samples**
SBLK01	**2/17196**	**Bis(2-ethylhexyQphtha1ata**	**1 ugtL**	**All samples in SDG**
		Unknown (5.92)	**2 ugtL**	**K9600898**
		Unknown (5.96)	**3 ugtL**	

Sample concentrations were compared to concentrations detected in the method blanks.

The sample concentrations were either not detected or were significantly greater (> 1 OX for common contaminants, >5X for other contaminants) than the concentrations found in the associated method blanks with the following exceptions:

Sample	Compound TIC (RT In minutes)	Reported Concentration	Modified Final Concentration
097ROSS82	Bls(2-ethyIhexy1)phthalat9	3 ug/L	1 OU ug/L
	Unknown (5.95)	3 ug/L	3U ug/L
097GO5581	Bis(2-ethy1hexyl)phtha1ate	3 ug/L	IOU ug/L
	Unknown (5.96)	3 ug/L	3U ug/L
097GO6781	Bis(2-ethylhexyl)phthalate6 ug/L	IOU ug/L	
	Unknown (5.96)	3 ug/L	3U ug/L

VI. **Surrogate Spikes**

Surrogates were added to all samples and blanks as required by the SOW. All surrogate recoveries were within validation criteria.

VII. **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.

Vill. Laboratory Control Samples (LCS)

Not applicable to multi-media samples. Laboratory control samples were reported by the laboratory. Percent recoveries (%R) and relative percent differences (RPD) were within validation criteria.

IX. **Regional Quality Assurance and Quality Control**

Not applicable.

X. Internal Standards

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

XI. **Target Compound Identifications**

Raw data were not reviewed for this SDG.

XII. **Compound Quantitation and CRQLs**

Raw data were not reviewed for this SDG.

XIII. **Tentatively Identified Compounds (TICs)**

Raw data were not reviewed for this SDG.

XIV. **System Performance**

Raw data were not reviewed for this SDG.

XV. **Overall Assessment**

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

XVI. **Field Duplicates**

No field duplicates were identified in this SDG.

XVIL **Field Blanks**

Sample 097RO5582 was identified as a rinsate. No semivolatile contaminants were found in this blank with the following exceptions:

Rinsato ID	Compound	**Concentration** (ug/L)
097ROS582	**Bis(2-ethylhexyl)phtha1ate**	**3**
2	**Phenol**	
1804F2.BC3	5	

Salton Sea Test Base, CTO 097
Semivolatiles - Data Qualification Summary - SDG K-9600898

SIDG	Sample	Compound	Flog	AorP	Reason
K9600898	097RO5582	N-Nitroso-di-n-propylamine	i	A	Continuing calibration
	097GO5581	DI-n-butylphthalate			(%D)
	097GO6781				

SaltonSea Test Base, CTO 097
Semivolatiles - Laboratory Blank Data Qualification Summary - SDG K9600898

SIDG	Sample	Compound TIC (RT in minutes)	Modified Final Concentration	
K9600898	097RO5582	l3is(2-ethylhexyi)phthalate	I OU ug/L	A
		Unknown (5.95)	3U ug/L	
K9600898	097GO5581	Bis(2-ethylhexyl)phthalate	1 OU ug/L	A
		Unknown (5.96)	3U ug/L	
K9600898	097GO6781	Bis(2-ethylhexyl)phthalate	1 OU uGVL	A
		Unknown (5.96)	3U ug/L	

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LD

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name:	Salton Sea Test Base, CTO 097
Collection Date:	February 20, 1996
LDC Report Date:	April 9, 1996
Matrix:	Water
Parameters:	Semivolatiles
Laboratory:	Columbia Analytical Services, Inc.

Sample Delivery Group (SDG): K9601003

Sample Identification
097GO7581

Introduction

This data review covers one water sample listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA Contract Laboratory Program Statement of Work OLM02.1 for Sernivolatiles. The data validation review was based on EPA Contract Laboratory Program Statement of Work OLM02.0 for Sernivolatiles.

This review follows USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (February 1994); the following subsections correlate to the above guidelines.

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

Blank results are summarized in Section V.

Field duplicates are summarized in Section X\A.

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.

1. Technical Holding Times

All technical holding time requirements were met.

11. **GC/MS Instrument Performance Check** -

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

111. **Initial Calibration**

Initial calibration was performed using required standard concentrations.

Percent relative standard deviations (%RSD) were less than or equal to 30.0% for all compounds.

Average relative response factors (RRF) for all semivolatile target compounds and system monitoring compounds were greater than or equal to 0.05 as required.

IV. **Continuing Calibration**

Continuing calibration was performed at the required frequencies.

All of the continuing calibration percent differences (%D) between the initial calibration RRIF and the continuing calibration RRF were less than or equal to 25.0% with the following exceptions:

Date	Compound	%D	**Associated** Samples	Flag	**AcrP**
2/29196	**4-Nitrophenol**	30.8	**All samples in SDG** K96;;;0~3	1	-71

All of the continuing calibration RRF values were greater than or equal to 0.05 .

V. Blanks

Method blanks were reviewed for each matrix as- applicable. No semivolatile contaminants were found in the method blanks with the following exceptions:

Method Blank ID	**Extraction Date**	**Compound TIC** (RT In minutes)	FCncentra*tion	**Associated Samples**
SBLK01	**2/27/96**	**Bis(2-ethylhexyl) phthalate**	**1 ug/L**	**All samples in SDG**
		Unknown (5.95)	**3 ugtL**	**K9601003**
		Unknown chlorinated compound (6.01)	**2 ug/L**	

Sample concentrations were compared to concentrations detected in the method blanks.

The sample concentrations were either not detected or were significantly greater (> 1 OX for common contaminants, >5X for other contaminants) than the concentrations found in the associated method blanks with the following exceptions:

Sample	Compound TIC (RT In minutes)	Reported Concentration	Modified Final Concentration
[;;GO7581	**N9(2-eth~lhexyl)phthalate**		**I ug/L1 OU Ug/L**

VI. **Surrogate Spikes**

Surrogates were added to all samples and blanks as required by the SOW. All surrogate recoveries were within validation criteria.

Vill. **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.

Vill. Laboratory Control Samples (LCS)

Not applicable to multi-media samples. Laboratory control samples were reported by the laboratory. Percent recoveries were within laboratory control limits.

IX Regional Quality Assurance and Quality Control

Not applicable.

X. Internal Standards

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

XI. **Target Compound Identifications**

Raw data were not reviewed for this SDG.

XII. **Compound Quantitation and CROLs**

Raw data were not reviewed for this SDG.

XIII. Tentatively Identified Compounds (TICs)

Raw data were not reviewed for this SDG.

XIV. **System Performance**

Raw data were not reviewed for this SDG.

XV. Overall Assessment
Data flags have been summarized at the end of the report.
XVI. Field Duplicates
No field duplicates were identified in this SDG.
XVIL Field Blanks
No field blanks were identified in this SDG.

Salton Sea Test Base, CTO 097
Semivolatiles - Data Qualification Summary - SDG K9601003

SDG	Sample		Compound	Flag	AorP	Reason
K9601003	097607581	T-Nrtrophenol	i	A	Continuing calibration r(%D)	

Salton Sea Test Base, CTO 097
Semivolatiles - Laboratory Blank Data Qualification Summary - SDG K9601003

SDG	Sample	Compound	TIC (RT In minutes)	Modified Final Fconcentration		A or P
~, I	097GO7581	Bis(2-ethylhexyl)phthalate	I	IOU	ug/L	A

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LDC Report# 18041<2

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Salton Sea Test Base, CTO 097
Collection Date: February 21, 1996

LDC Report Date: April 5, 1996

Matrix: Water
Parameters: Semivolatiles
Laboratory: Columbia Analytical Services

Sample Delivery Group (SDG): K9601039

Sample Identification

097RO5481
097GO5481
097GO5281
097DO1282
097GO8282
097BOO882
097SO0982
097GO8281 MS
097GO8286MSD

Introduction

This data review covers -9 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA Contract Laboratory Program Statement of Work OLM02.1 for Semivolatiles. The data validation review was based on EPA Contract Laboratory Program Statement of Work OLM02.0 for Semivolatiles.

This review follows USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (February 1994); the following subsections correlate to the above guidelines.

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

Blank results are summarized in Section V.

Field duplicates are summarized in Section X\A.

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.

Technical Holding Times

1.

All technical holding time requirements were met.

11. **GC/MS Instrument Performance Check**

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

Ill. **Initial Calibration**

Initial calibration was performed using required standard concentrations.

Percent relative standard deviations (%RSD) were less than or equal to 30.0% for all compounds.

Average relative response factors (RRF) for all semivolatile target compounds and system monitoring compounds were greater than or equal to 0.05 as required.

IV. **Continuing Calibration**

Continuing calibration was performed at the required frequencies.

All of the continuing calibration percent differences (%D) between the initial calibration RRF and the continuing calibration RRF were less than or equal to 25.0% with the following exceptions:

Date	Compound	%D	Associated Samples	Flag	AorP
	4-Ndrophenol	30.8	All samples in SDG K9601039	i	A

F/96

All of the continuing calibration RRF values were greater than or equal to 0.05 .

V. Blanks

Method blanks were reviewed for each matrix as- applicable. No semivolatile contaminants were found in the method blanks with the following exceptions:

Method Blank ID	Extraction Date	Compound TIC (RT in minutes)	Concentration	Associated
SBLK01	2/28/96	4-Hydroxy-4-methyl-2-pentanone (4.75)	3 ug/L	All samples in SDG
		Unknown (5.92)	6 ug/L	K9601039
		Unknown (6.02)	6 ug/L	

Sample concentrations were compared to concentrations detected in the method blanks.

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

Sample	Compound TIC (RT In minutes)	Reported Concentration	Modified Final Concentration
097RO5481	Unknown (5.95)	3 ug/L	3U ug/L
097GO5481	Unknown (5.91)	3 ug/L	3U ug/L
	Unknown (6.00)	3 ug/L	3U ug/L
097GO5281	4-Hydroxy-4-methyl-2-pentanone (4.73)	3 ug/L	3U ug/L
	Unknown (5.91)	3 ug/L	3U ug/L
	Unknown (6.01)	6 ug/L	6U ug/L
097001252	4-Hydroxy-4-methyl-2-perrtanone (4.70)	3 ug/L	3U ug/L
	Unknown (6.01)	5 ug/L	5U ug/L
097BOO882	Unknown (5.90)	4 ug/L	4U ug/L
	Unknown (6.00)	4 ug/L	4U ug/L
097 OM82	4-Hydroxy-4-methyl-2-pentanone (4.73)	3 ug/L	3U ug/L

VI. **Surrogate Spikes**

Surrogates were added to all samples and blanks as required by the SOW. All surrogate recoveries were within validation criteria.

VII. **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.

VIII. Laboratory Control Samples (LCS)

Not applicable to multi-media samples. Laboratory control samples were reported by the laboratory. Percent recoveries were within laboratory control limits.

IX. **Regional Quality Assurance and Quality Control**

Not applicable.

X. Internal Standards

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

XI. **Target Compound Identifications**

Raw data were not reviewed for this SDG.

XII. **Compound Quantitation and CRQLs**

Raw data were not reviewed for this SDG.

XIII. Tentatively Identified Compounds (TICs)

Raw data were not reviewed for this SDG.

XIV. **System Performance**

Raw data were not reviewed for this SDG.

XV. **Overall Assessment**

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

XVI. **Field Duplicates**

Samples 097GO5281 and 097DO1 282 were identified as field duplicates. No sernivolatiles; were detected in any of the samples with the following exceptions:

	Concentration (ug/Kg)		
Compound	**097GO5281**	**097DO1282**	**RPD**
Bis(2-ethy1hexyQphtha1ate		2	67

XVIL Field Blanks

Sample 097RO5481 was identified as a rinsate. No sernivolatile contaminants were found in- this blank with the following exceptions:

Rinsate ID	Compound	**Concentration (ug/L)**
F7RO5481	**Bis(2-ethy1hexy1)phtha1ate**	

Samples 097BOO882 and 097BOO982 were identified as source blanks. No sernivolatile contaminants were found in these blanks.

Salton Sea Test Base, CTO 097
Semivolatiles - Data Qualification Summary - SDG K9601039

SOG	Sample	Compound
K9601039	097RO5481	4-Nitrophenol
	097GO5481	
	097GO5281	
	097DO1282	
	097GO8282	
	097BOON2	
	097BOO982	

Salton Sea Test Base, CTO 097
Semivolatiles - Laboratory Blank Data Qualification Summary - SDG K9601039

	Sample	Compound TIC (RT In minutes)	Modified Final Concentration
K9601039	097RO5481	Unknown (5.95)	3U ug/L
K9601039	097GO5281	4-Hydroxy-4-methyl-2-pentanons (4,73)	
		Unknown (5.91)	
		Unknown (6.01)	
K9601039	097DO1282	4-Hydroxy-4-methyl-2-pentanone (4.70)	
		Unknown (6.01)	
K9601039	097BOO882	Unknown (5.90)	
		Unknown (6.00)	
601039	097BOO982	4-Hydroxy-4-methyl-2-pentanone (4.73)	

Salton Sea Test Base, CTO 097
Data Validation Reports
LDC# 1804

Chlorinated Pesticides & PCBs

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Salton Sea Test Base, CTO 097
Collection Date: February 6, 1996
LDC Report Date: April 8, 1996

Matrix:

Parameters: Chlorinated Pesticides & PCBs

Laboratory:

Sample Delivery Group (SDG): K9600753**

Sample Identification

097BOO685
097G05186
097GO7485
097RO6085
097GO6086
097GO7485MS
097GO7485MSD

** Indicates SDG underwent NEESA 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 Contract Laboratory Program Statement of Work (SOW) OLM02.0 for Chlorinated Pesticides and PCBs.

This review follows the USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (February 1994); the following subsections correlate to the above guidelines.

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.

Blank results are summarized in Section V.

Field duplicates are summarized in Section XIV.

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.

1. **Technical Holding Times**

w * All technical holding time requirements were met.

11. **GC/ECD Instrument Performance Check**

A Resolution check mixture was analyzed at the beginning of the initial calibration sequence on each GC column. The analyte resolution between adjacent peaks Of required compounds was greater than or equal to 60% .

Performance evaluation mixtures (PEM) were analyzed at the proper frequency. The resolution between adjacent peaks was 90% on both GC: columns. The absolute retention times for the initial and continuing PEMs were within the calculated retention time windows based on the three-point initial calibration.

The individual 4,4'-DDT and Endrin breakdowns were less than 20.0% and the combined breakdowns were less than 30.0% .

The relative percent difference (RPD) of amount in PEMs were within 25.0% QC limits.

Ill. **Initial Calibration**

Initial calibration sequence was followed as required.

Initial calibration of single and multicomponent analytes were performed for both columns at proper frequencies.

The retention time windows were established according to the method,

The percent relative standard deviations (%RSD) of calibration factors for single component analytes were within the 20.0% QC limits.

All required peaks for multicomponent analytes were present.

IV. **Continuing Calibration**

Continuing calibration sequence was followed as required. No more than 12 hours elapsed between continuing calibration analyses in an analytical sequence.

The retention times (RT) of all compounds in Individual. Mix and multicomponent standards were within OC limits.

The relative percent differences (RPD) of amount in Individual Mix standards were within the 25.0% QC limits.

V. Blanks

Method blanks were reviewed for each matrix as applicable. No chlorinated pesticide or

PCB contaminants were found in the method blanks.

Instrument blank analyses were performed at the required frequencies. No chlorinated pesticide or PCB contaminants were found in the instrument blanks above one-half the CRQL.

VI. **Surrogate Spikes**

Surrogates were added to all samples, standards and blanks as required by the SOW. The retention times for surrogates were within QC limits.

All surrogate recoveries were within OC limits of 30-150% .

VII. **Matrix Spike/Matrix Spike Duplicates**

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

VIII. Laboratory Control Samples (LCS)

Not applicable to multi-media samples. Laboratory control samples were reported by the laboratory. Percent recoveries were within laboratory control limits.

IX. **Regional Quality Assurance and Quality Control**

Not applicable.

X. Pesticide Cleanup Checks

a. Florisil Cartridge Check

Florisil cartridge checks were performed at the required fr~quency and all compounds were within the 80-120% recovery QC criteria.

b. GPC Calibration

GPC cleanup is not required for water samples and was not performed.

XI. **Target Compound Identification**

All target compound identifications were within validation criteria.

XII. **Compound Quantitation and Reported CRQLs**

All compound quantitation and reported CRQLs were within validation criteria with the following exceptions:

Sample	Compound	%D (Umtt)	Flag	AorP
097GO7485 SaM5	**H"ehlor**	**37.5** (:s25.0)		A

97GO7485

~ F=-o -1

X111. **Overall Assessment of Data**

Data flags are summarized at the end of this report.

XIV. **Field Duplicates**

No field duplicates were identified in this SDG.

XV. **Field Blanks**

Sample 097BOO685 was identified as a source blank. No chlorinated pesticide or PCB contaminants were found in this blank.

Sample 097RO6085 was identified as a rinsate. No chlorinated pesticide or PCB contaminants were found in this blank.

Salton Sea Test Base, CTO 097
Chlorinated Pesticides & PCBs - Data Qualification Summary - SDG K9600753**

SOG	Sample	Compound	Flag	AarP	Reason
K9600753	097GO7485	Hapta Nor	i	A	Compound quantftation

and CROLz (%D)

Salton Sea Test Base, CTO 097
Chlorinated Pesticides & PCBs - Laboratory Blank Data Qualification Summary - SDG K9600753**

No Sample Data Qualified in this SDG

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Laboratory Data Consultants, Inc
Data Validation Report

Project/Site Name:	Salton Sea Test Base, CTO 097
Collection Date:	February 7, 1996
LDC Report Date:	April 9, 1996
Matrix:	Water
Parameters:	Chlorinated Pesticides & PCBs
Laboratory:	Columbia Analytical Services

Sample Delivery Group (SDG): K9600765

Sample Identification

097GO5385
097GO5685
097GO5985
097BOO786

Introduction

This data review covers 4 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA Contract Laboratory Program Statement of Work (SOW) OLM02.0 for Chlorinated Pesticides and PCBs.

This review follows the USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (February 1994); the following subsections correlate to the above guidelines.

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.

Blank results are summarized in Section V.

Field duplicates are summarized in Section XIV.

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.

1. **Technical Holding Times**

All technical holding time requirements were met.

11. **GC/ECD Instrument Performance Check**

A Resolution check mixture was analyzed at the beginning of the initial calibration sequence on each GC column. The analyte resolution between adjacent peaks of required compounds was greater than or equal to 60% .

Performance evaluation mixtures (PEM) were analyzed at the proper frequency. The resolution between adjacent peaks was 90% on both GC columns. The absolute retention times for the initial and continuing PEMs were within the calculated retention time windows based on the three-point initial calibration.

The individual 4,4'-DDT and Endrin breakdowns were less than 20.0% and the combined breakdowns were less than 30.0% .

The relative percent difference (RPD) of amount in PEMs were within 25.0% QC limits.

Ill. **Initial Calibration**

Initial calibration sequence was followed as required.

Initial calibration of single and multicomponent analytes were performed for both columns at proper frequencies.

The retention time windows were established according to the method.

The percent relative standard deviations (%RSD) of calibration factors for single component analytes were within the 20.0% QC limits.

All required peaks for multicomponent analytes were present.

IV. **Continuing Calibration**

Continuing calibration sequence was followed as reqL4ired. No more than 12 hours elapsed between continuing calibration analyses in an analytical sequence.

The retention times (RT) of all compounds in Individual Mix and multicomponent standards were within QC limits.

The relative percent differences (RPD) of amount in Individual Mix standards were within the 25.0% QC limits.

V. Blanks

Method blanks were reviewed for each matrix as applicable. No chlorinated pesticide or PCB contaminants were found in the method blanks.

Instrument blank analyses were performed at the required frequencies. No chlorinated pesticide or PCB contaminants were found in the instrument blanks above one-half the CRQL.

V1. **Surrogate Spikes**

Surrogates were added to all samples, standards and blanks as required by the SOW. All surrogate recoveries were within QC limits of 30-150% .

VIL 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.

V111. Laboratory Control Samples (LCS)

Not applicable to multi-media samples. Laboratory control samples were reported by the laboratory. Percent recoveries were within laboratory control limits.

IX. **Regional Quality Assurance and Quality Control**

Not applicable.

X. Pesticide Cleanup Checks

a. Florisil Cartridge Check

Florisil cartridge checks were performed at the required frequency and all compounds were within the 80-120% recovery QC criteria.

b. GPC Calibration

GPC cleanup is not required for the water samples and was not performed.

X11. **Target Compound Identification**

Raw data were not reviewed for this SDG.

X111. **Compound Quantitation and Reported CRQLs**

Raw data were not reviewed for this SDG.

X111. **Overall Assessment of Data**

Data flags are summarized at the end of this report.

XIV. **Field Duplicates**

No field duplicates were identified in this SDG.

XV. Field Blanks

Sample 097BOO786 was identified as a source blank. No chlorinated pesticide or PCB contaminants were found in this blank.

Salton Sea Test Base, CTO 097
Chlorinated Pesticides & PCBs - Data Qualification Summary - SDG K9600765

No Sample Data Qualified in this SDG

Salton Sea Test Base, CTO 097
Chlorinated Pesticides & PCBs; - Laboratory Blank Data Qualification Summary - SDG K9600765

No Sample Data Qualified in this SDG

LDC Report# 1804C3

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Salton Sea Test Base, CTO 097

Collection Date: February 9, 1996

LDC Report Date: April 9, 1996

Matrix: Water

Parameters: Chlorinated Pesticides & PCBs

Laboratory: Columbia Analytical Services

Sample Delivery Group (SDG): K9600786

Sample Identification

097RO6286 097GO6385 097GO6986 097GO6685 097GO6586 097GO6885 097RO6186 097GO6186 097GO6285 097DO1086 097GO5786 097GO5886 097GO7086 097GO6485 097GO6885MS 097GO6885MSD

Introduction

This data review covers 16 water samples listed on the cover sheet including dilutions and reanalysis as applicable. **The analyses were** per EPA Contract Laboratory Program Statement of Work (SOW) OLM02.0 for Chlorinated Pesticides and PCBs.

This review follows the USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (February 1994); the following subsections correlate to the above guidelines.

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.

Blank results are summarized in Section V.

Field duplicates are summarized in Section XIV.

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.

1. Technical Holding Times

All technical holding time requirements were met.

11. **GC/ECD Instrument Performance Check** -

A Resolution check mixture was analyzed at the beginning of the initial calibration sequence on each GC column. The analyte resolution between adjacent peaks of required compounds was greater than or equal to 60% .

Performance evaluation mixtures (PEM) were analyzed at the proper frequency. The resolution between adjacent peaks was 90% on both GC columns. The absolute retention times for the initial and continuing PEMs were within the calculated retention time windows based on the three-point initial calibration.

The individual 4,4'-DDT and Endrin breakdowns were less than 20.0% and the combined breakdowns were less than 30.0% .

The relative percent difference (RPD) of amount in PEMs were within 25.0% QC limits.

111. **Initial Calibration**

Initial calibration sequence was followed as required.

Initial calibration of single and multicomponent analytes were performed for both columns at proper frequencies.

The retention time windows were established according to the method.

The percent relative standard deviations (%RSD) of calibration factors for single component analytes were within the 20.0% QC limits.

All required peaks for multicomponent analytes were present.

IV. **Continuing Calibration**

Continuing calibration sequence was followed as required. No more than 12 hours elapsed between continuing calibration analyses in an analytical sequence.

The retention times (RT) of all compounds in Individual. Mix and multicomponent standards were within OC limits.

The relative percent differences (RPD) of amount in Individual Mix standards were within the 25.0% QC limits.

V. Blanks

Method blanks were reviewed for each matrix as applicable. No chlorinated pesticide or PCB contaminants were found in the method blanks.

Instrument blank analyses were performed at the required frequencies. No chlorinated pesticide or PCB contaminants were found in the instrument blanks above one-half the CRQL.

V1. **Surrogate Spikes**

Surrogates were added to all samples, standards and blanks as required by the SOW. All surrogate recoveries were within QC limits of 30-150% with the following exceptions:

TA 7.,P

Sample	Column	Surrogate	%R	Compound	Flag	
097FtO6286	**RTX-1 5**	**Decachlorobiphenyl**	26	**All TCL compounds**	i	**A**
	RTX-1 701	**Decachlorobiphenyl**	21			
097 06986	**RTX-1 5**	**Tetrachloro-m-xylene**	367	**All TCL compounds**	**J (all detects)**	A

Vil. **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.

Vill. Laboratory Control Samples (LCS)

Not applicable to multi-media samples. Laboratory control samples were reported by the laboratory. Percent recoveries were within laboratory control limits.

IX Regional Quality Assurance and Quality Control

Not applicable.

X. Pesticide Cleanup Checks

a. Florisil Cartridge Check

Florisil cartridge checks were performed at the required frequency and all compounds were within the 80-120% recovery QC criteria.

b. GPC Calibration

GPC cleanup is not required for the water samples and was not performed.

XI. **Target Compound Identification**

v Raw data were not reviewed for this SDG.

XII. **Compound Quantitation and Reported CRQLs**

Raw data were not reviewed for this SDG.

XIII. **Overall Assessment of Data**

Data flags are summarized at the end of this report.

XIV. **Field Duplicates**

Samples 097GO6285 and 097DO1086 were identified as field duplicates. No chlorinated pesticides or PCBs were detected in any of the samples.

XV. **Field Blanks**

Samples 097RO6286 and 097GO6186 were identified as rinsates. No chlorinated pesticide or PCB contaminants were found in these blanks.

Salton Sea Test Base, CTO 097
Chlorinated Pesticides ik PCBs - Data Qualification Summary - SDG K9600786

SDG	Sample	Compound	Flag	A or P	Reason
K9600786	097RO6286	All TCL compounds		A	Surrogate spikes (%R)
K9600786	097GO6986	All TCL compounds	J (all detects)	A	Surrogate spikes (%R)

Salton Sea Test Base, CTO 097
Chlorinated Pesticides & PCBs - Laboratory Blank Data Qualification Summary
SDG K9600786

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:	February 12, 1996
LDC Report Date:	April 9, 1996
Matrix:	Water
Parameters:	Chlorinated Pesticides & PCBs
Laboratory:	Columbia Analytical Services

Sample Delivery Group (SDG): K9600837

Sample Identification

097GO7786
097RO6385
097GO7186
097GO7685
097GO7386
097GO7285
097GO7386MS
097GO7386MSD

Introduction

This data review covers 8 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA Contract Laboratory Program Statement of Work (SOW) OLM02.0 for Chlorinated Pesticides and PCBs.

This review follows the USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (February 1994); the following subsections correlate to the above guidelines.

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.

Blank results are summarized in Section V.

Field duplicates are summarized in Section XIV.

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.

1. **Technical Holding Times**

All technical holding time requirements were met.

II. **GC/ECD Instrument Performance Check**

A Resolution check mixture was analyzed at the beginning of the initial calibration sequence on each GC column. The analyte resolution between adjacent peaks of required compounds was greater than or equal to 60% .

Performance evaluation mixtures (PEM) were analyzed at the proper frequency. The resolution between adjacent peaks was 90% on both GC columns. The absolute retention times for the initial and continuing PEMs were within the calculated retention time windows based on the three-point initial calibration.

The individual 4,4'-DDT and Endrin breakdowns were less than 20.0% and the combined breakdowns were less than 30.0% .

The relative percent difference (RPD) of amount in PEMs were within 25.0% OC limits.

Ill. **Initial Calibration**

Initial calibration sequence was followed as required.

Initial calibration of single and multicomponent analytes were performed for both columns at proper frequencies.

The retention time windows were established according to the method.

The percent relative standard deviations (%RSD) of calibration factors for single component analytes were within the 20.0% QC limits.

All required peaks for multicomponent analytes were present.

IV. **Continuing Calibration**

Continuing calibration sequence was followed as required. No more than 12 hours elapsed between continuing calibration analyses in an analytical sequence,

The retention times (RT) of all compounds in Individual Mix and multicomponent standards were within QC limits.

The relative percent differences (RPD) of amount in Individual Mix standards were within the 25.0% QC limits.

V. Blanks

Method blanks were reviewed for each matrix as applicable. No chlorinated pesticide or PCB contaminants were found in the method blanks.

Instrument blank analyses were performed at the required frequencies. No chlorinated pesticide or PCB contaminants were found in the instrument blanks above one-half the CRQL.

V1. **Surrogate Spikes**

Surrogates were added to all samples, standards and blanks as required by the SOW. All surrogate recoveries were within QC limits of 30-150% with the following exceptions:

Sample	**Column**	Surrogate	%R	**Compound**	Flag	Aor PI
FG07285	RTX-5	Tetrachloro-m-xylene	244	**All TCL** compounds	J (all detects)	A7]

VII. **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:

Sample	**Compound**	**MS (%R)** (Umits)	**MSD (%R)** (Umits)	**RPD** (Umfts)	Flag		
(All samples in SDG 097GO7386MS/MSD K9600837)				**Gamma-BHC**		**20(s15)**	**A**

V1111. **Laboratory Control Samples (LCS)**

Not applicable to multi-media samples. Laboratory control samples were reported by the laboratory. Percent recoveries were within laboratory control limits.

IX Regional Quality Assurance and Quality Control

Not applicable.

X. Pesticide Cleanup Checks

a. Florisil Cartridge Check

Florisil cartridge checks were performed at the required frequency and all compounds were within the 80-120% recovery QC criteria.

b. GPC **Calibration**

GPG cleanup is not required for the water samples and was not performed.

XI. **Target Compound Identification**

Raw data were not reviewed for this SDG.

XII. **Compound Quantitation and Reported CRQLs**

Raw data were not reviewed for this SDG.

Xill. **Overall Assessment of Data**

Data flags are summarized at the end of this report.

XIV. Field Duplicates

No field duplicates were identified in this SDG.

XV. **Field Blanks**

Sample 097RO6385 was identified as a rinsate. No chlorinated pesticide or PCB contaminants were found in this blank.

Salton Sea Test Base, CTO 097
Chlorinated Pesticides & PCBs - Data Qualification Summary - SDG K9600837

SDG	Samplo	Compound	Flag	A or P	Roason
K9600837	097GO7285	All TCL compounds	J (all detects)	A	Surrogate spikes (%R)
K9500837	097GO7786	Gamma-BHC	i	A	Matrix spike/Matrix spike dupficates (RPD)
	097RO6385				
	097GO7186				
	097GO7685				
	097GO7386				
	097GO7285				

Salton Sea Test Base, CTO 097
Chlorinated Pesticides & PCBs - Laboratory Blank Data Qualification Summary - SDG K9600837

No Sample Data Qualified in this SDG

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Laboratory Data Consultants, Inc.
Data Validatl.on Report

Project/Site Name: Salton Sea Test Base, CTO 097
Collection Date: February 13, 1996
LDC Report Date: April 9, 1996

Matrix:

Parameters:

Laboratory:

Sample Deli

Sample Identification

097RO7886
097GO7886
097GO8085
097GO7986
097DO1185
097GO81 85
097GO8185R

Introduction

This data review covers 7 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA Contract Laboratory Program Statement of Work (SO" OLM02.0 for Chlorinated Pesticides and PCBs.

This review follows the USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (February 1994); the following subsections correlate to the above guidelines.

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.

Blank results are summarized in Section V.

Field duplicates are summarized in Section XIV.

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.

Indicates the compound or element was analyzed for but not detected, The sample detection limit is an estimated value.

1. Technical Holding Times

All technical holding time requirements were met.

11. **GC/ECD Instrument Performance Check**

A Resolution check mixture was analyzed at the beginning of the initial calibration sequence on each GC column. The analyte resolution between adjacent peaks of required compounds was greater than or equal to 60% .

Performance evaluation mixtures (PEM) were analyzed at the proper frequency. The resolution between adjacent peaks was 90% on both GC columns. The absolute retention times for the initial and continuing PEMs were within the calculated retention time windows based on the three-point initial calibration.

Th6 individual 4,4'-DDT and Endrin breakdowns were less than 20.0% and the combined breakdowns were less than 30.0% .

The relative percent difference (RPD) of amount in PEMs were within 25.0% QC limits.

111. **Initial Calibration**

Initial calibration sequence was followed as required.

Initial calibration of single and multicomponent analytes were performed for both columns at proper frequencies.

The retention time windows were established according to the method.

The percent relative standard deviations (%RSD) of calibration factors for single component analytes were within the 20.0% QC limits.

All required peaks for multicomponent analytes were present.

IV. **Continuing Calibration**

Continuing calibration sequence was followed as reqt4ired. No more than 12 hours elapsed between continuing calibration analyses in an analytical sequence.

The retention times (RT) of all compounds in Individual Mix and multicomponent standards were within QC limits.

The relative percent differences (RPD) of amount in Individual Mix standards were within the 25.0% QC limits.

V. Blanks

Method blanks were reviewed for each matrix as applicable. No chlorinated pesticide or PCB contaminants were found in the method blanks.

Instrument blank analyses were performed at the required frequencies. No chlorinated pesticide or PCB contaminants were found in the instrument blanks above one-half the CRQL.

V1. **Surrogate Spikes**

Surrogates were added to all samples, standards and blanks as required by the SOW. All surrogate recoveries were within QC limits of 30-150% .

V11. **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:

Sample (Associated Samples)	**Compound**	MS (%R) (Umits)	MSD (%R) **(Umits)**	**RPD (Limits) 20(s15)**	Flag	AorP
097GO7386MS/MSD (All samples in SDG K96W872)	**Gamma-8HC**				**i**	**A**

V111. Laboratory Control Samples (LCS)

Not applicable to multi-media samples. Laboratory control samples were reported by the laboratory. Percent recoveries were within laboratory control limits.

IX. **Regional Quality Assurance and Quality Control**

Not applicable.

X. Pesticide Cleanup Checks

a. Florisil Cartridge Check

Florisil cartridge checks were performed at the required frequency and all compounds were within the 80-120% recovery QC criteria.

b. GPC Calibration

GPC cleanup is not required for the water samples and was not performed.

XI. **Target Compound Identification**

Raw data were not reviewed for this SDG.

XII. **Compound Quantitation and Reported CROLs**

Raw data were not reviewed for this SDG.

XIII. **Overall Assessment of Data**

Data flags are summarized at the end of this report.

XIV. **Field Duplicates**

Samples 097GO7986 and 097DO1 185 were identified as field duplicates. No chlorinated pesticides or PCBs were detected in any of the samples.

XV. **Field Blanks**

Sample 097RO7886 was identified as a rinsate. No chlorinated pesticide or PCB contaminants were found in this blank.

Salton Sea Test Base, CTO 097
Chlorinated Pesticides & PCBs - Data Qualification Summary - SDG K9600872

SDG	Sample	Compound	Flag	ArP	Reason
K9600872	097RO7886 097GO7586 097GO8085 097GO7986 097DO1Ia5 097GO8185 097GO8185R	Gamma-BHC	i	A	Matrix spike/Matrix spike duplicates (RPD)

Salton Sea Test Base, CTO 097
Chlorinated Pesticides & PCBs - Laboratory Blank Data Qualification Summary
SDG K9600872

No Sample Data Qualified in this SDG

1804E3.BC3

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name:	Salton Sea Test Base, CTO 097
Collection Date:	February 14, 1996
LDC Report Date:	April 9, 1996
Matrix:	Water
Parameters:	Chlorinated Pesticides & PCBs
Laboratory:	Columbia Analytical Services, Inc.

Sample Delivery Group (SDG): K9600898

Sample Identification

097RO5585
097GO5585
097GO6785

Introduction

This data review covers 3 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA Contract Laboratory Program Statement of Work (SO" OLM02.0 for Chlorinated Pesticides and PCBs.

This review follows the USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (February 1994); the following subsections correlate to the above guidelines.

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.

Blank results are summarized in Section V.

Field duplicates are summarized in Section XIV.

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.

1. Technical Holding Times

All technical holding time requirements were met.

fl. GC/ECD Instrument Performance Check

A Resolution check mixture was analyzed at the beginning of the initial calibration sequence on each GC column. The analyte resolution between adjacent peaks of required compounds was greater than or equal to 60% .

Performance evaluation mixtures (PEM) were analyzed at the proper frequency. The resolution between adjacent peaks was 90% on both GC columns. The absolute retention times for the initial and continuing PEMs were within the calculated retention time windows based on the three-point initial calibration.

The individual 4,4'-DDT and Endrin breakdowns were less than 20.0% and the combined breakdowns were less than 30.0% .

The relative percent difference (RPD) of amount in PEMs were within 25.0% QC limits.

111. **Initial Calibration**

Initial calibration sequence was followed as required.

Initial calibration of single and multicomponent analytes were performed for both columns at proper frequencies.

The retention time windows were established according to the method.

The percent relative standard deviations (%RSD) of calibration factors for single component analytes were within the 20.0% QC limits.

All required peaks for multicomponent analytes were present.

IV. **Continuing Calibration**

Continuing calibration sequence was followed as reqLjred. No more than 12 hours elapsed between continuing calibration analyses in an analytical sequence.

The retention times (RT) of all compounds in Individual Mix and multicomponent standards were within OC limits.

The relative percent differences (RPD) of amount in Individual Mix standards were within the 25.0% QC limits.

V. Blanks

Method blanks were reviewed for each matrix as applicable. No chlorinated pesticide or PCB contaminants were found in the method blanks.

Instrument blank analyses were performed at the required frequencies. No chlorinated pesticide or PCB contaminants were found in the instrument blanks above one-half the CRQL.

V1. **Surrogate Spikes**

Surrogates were added to all samples, standards and blanks as required by the SOW. All surrogate recoveries were within QC limits of 30-150% with the following exceptions:

Sample	Column	Surrogate	%R	Compound	**Flag**	**A or P**
097RO5585	**RTX-5**	**Decachlorobiphenyl**	28	**All TCL compounds**		**A**
	RTX-1 701	**Docachlorabiphanyi**	28			

V11. **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:

Semple (Associated Samples)	Compound	MS (%R) (Umits)	MSD (%R) (Limits)	**RPD** (Limits)	Flag	A **or P**
097GO7386MSIMSD (All samples in SDG K9600898)	**Gamma-SHC**			**20 (:s15)**		**A**

Vill. **Laboratory Control Samples (LCS)**

Not applicable to multi-media samples. Laboratory control samples were reported by the laboratory. Percent recoveries were within laboratory control limits.

IX Regional Quality Assurance and Quality Control

Not applicable.

X. Pesticide Cleanup Checks

a. Florisil Cartridge Check

Florisil cartridge checks were performed at the required frequency and all compounds

were within the 80-120% recovery QC criteria.

b. GPC **Calibration**

GPC cleanup is not required for the water samples and was not performed.

X1. **Target Compound Identification**

Raw data were not reviewed for this SDG.

XII. **Compound Quantitation and Reported CRQLs**

Raw data were not reviewed for this SDG.

XIII. **Overall Assessment of Data**

Data flags are summarized at the end of this report.

XIV. **Field Duplicates**

No field duplicates were identified in this SDG.

XV. Field Blanks

Sample 097RO5585 was identified as a rinsate. No chlorinated pesticide or PCB contaminants were found in this blank.

Salton Sea Test Base, CTO 097
Chlorinated Pesticides & PCBs - Data Qualification Summary - SDG K9600898

SDG	Sample	Compound	Flag	AorP	Reason
K9600898	097RO55a5	All TCL compounds	i	A	Surrogate spikes (%R)
K9600898	097ROSS85 097GO5585 097GO6785	Gamma-BHC	i	A	Matrix spike/Matrix spike duplicates (RPD)

Salton Sea Test Base, CTO 097
Chlorinated Pesticides & PCBs - Laboratory Blank Data Qualification Summary - SDG K9600898

No Sample Data Qualified in this SDG

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Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name:	Salton Sea Test Base, CTO 097
Collection Date:	February 20, 1996
LDC Report Date:	April 9, 1996
Matrix:	Water
Parameters:	Chlorinated Pesticides & PCBs
Laboratory:	Columbia Analytical Services, Inc.

Sample Delivery Group (SDG): K9601003

Sample Identification
097GO7586

Introduction

This data review covers one water sample listed on the cover sheet including dilutions and reanalysis as applicable. **The analyses were** per EPA Contract Laboratory Program Statement of Work (SO" OLM02.0 for Chlorinated Pesticides and PCBs.

This review follows the USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (February 1994); the following subsections correlate to the above guidelines.

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.

Blank results are summarized in Section V.

Field duplicates are summarized in Section XIV.

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.

1. Technical Holding Times

All technical holding time requirements were met.

II. **GC/ECD Instrument Performance Check**

A Resolution check mixture was analyzed at the beginning of the initial calibration sequence on each GC column. The analyte resolution between adjacent peaks of required compounds was greater than or equal to 60% .

Performance evaluation mixtures (PEM) were analyzed at the proper frequency. The resolution between adjacent peaks was 90% on both GC columns. The absolute retention times for the initial and continuing PEMs were within the calculated retention time windows based on the three-point initial calibration.

The individual 4,4'-DDT and Endrin breakdowns were less than 20.0% and the combined breakdowns were less than 30.0% .

The relative percent difference (RPD) of amount in PEMs were within 25.0% QC limits.

111. **Initial Calibration**

Initial calibration sequence was followed as required.

Initial calibration of single and multicomponent analytes were performed for both columns at proper frequencies.

The retention time windows were established according to the method.

The percent relative standard deviations (%RSD) of calibration factors for -single component analytes were within the 20.0% QC limits.

All required peaks for multicomponent analytes were present.

IV. **Continuing Calibration**

Continuing calibration sequence was followed as required. No more than 12 hours elapsed between continuing calibration analyses in an analytical sequence.

The retention times (RT) of all compounds in Individual Mix and multicomponent standards were within QC limits.

The relative percent differences (RPD) of amount in Individual Mix standards were within the 25.00/,0' QC limits.

V. Blanks

Method blanks were reviewed for each matrix as applicable. No chlorinated pesticide or PCB contaminants were found in the method blanks.

Instrument blank analyses were performed at the required frequencies. No chlorinated pesticide or PCB contaminants were found in the instrument blanks above one-half the CRQL.

V1. **Surrogate Spikes**

Surrogates were added to all samples, standards and blanks as required by the SOW. All surrogate recoveries were within QC limits of 30-150% .

Vill. **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.

Vill. Laboratory Control Samples (LCS)

Not applicable to multi-media samples. Laboratory control samples were reported by the laboratory. Percent recoveries were within laboratory control limits.

IX Regional Quality Assurance and Quality Control

Not applicable.

X. Pesticide Cleanup Checks

a. Florisil Cartridge Check

Florisil cartridge checks were performed at the required frequency and all compounds were within the 80-120% recovery QC criteria.

b. GPC Calibration

GPC cleanup is not required for the water samples and was not performed.

X11. **Target Compound Identification**

Raw data were not reviewed for this SDG.

X111. **Compound Quantitation and Reported CRQLs**

Raw data were not reviewed for this SDG.

X111. **Overall Assessment of Data** Data flags are summarized at the end of this report. XIV. Field Duplicates No field duplicates were identified in this SDG. XV. Field Blanks No field blanks were identified in this SDG.

Salton Sea Test Base, CTO 097
Chlorinated Pesticides & PCBs - Data Qualification Summary - SDG K9601003

No Sample Data Qualified in this SDG

Salton Sea Test Base, CTO 097
Chlorinated Pesticides & PCBs - Laboratory Blank Data Qualification Summary
SDG K9601003

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: February 21, 1996

LDC Report Date: April 9, 1996

Matrix: Water

Parameters: Chlorinated Pesticides & PCBs

Laboratory: Columbia Analytical Services, Inc.

Sample Delivery Group (SDG): K9601039

Sample Identification

097RO5486
097GO5486
097GO5286
097DO1285
097GO8285
097GO8285R
097BOO885
097BOO885R
097BOO985
097BOO985MS
097BOO985MSD

Introduction

This data review covers 11 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA Contract Laboratory Program Statement of Work (SOW) OLM02.0 for Chlorinated Pesticides and PCBs.

This review follows the USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (February 1994); the following subsections correlate to the above guidelines.

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.

Blank results are summarized in Section V.

Field duplicates are summarized in Section XIV.

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.

1. Technical Holding Times

All technical holding time requirements were met.

11. **GC/ECD Instrument Performance Check**

A Resolution check mixture was analyzed at the beginning of the initial calibration sequence on each GC column. The analyte resolution between adjacent peaks of required compounds was greater than or equal to 60% .

Performance evaluation mixtures (PEM) were analyzed at the proper frequency. The resolution between adjacent peaks was 90% on both GC columns. The absolute retention times for the initial and continuing PEMs were within the calculated retention time windows based on the three-point initial calibration.

The individual 4,4'-DDT and Endrin breakdowns were less than 20.0% and the combined breakdowns were less than 30.0% .

The relative percent difference (RPD) of amount in PEMs were within 25.0% QC limits.

111. **Initial Calibration**

Initial calibration sequence was followed as required.

Initial calibration of single and multicomponent analytes were performed for both columns at proper frequencies.

The retention time windows were established according to the method.

The percent relative standard deviations (%RSD) of calibration factors for single component analytes were within the 20.0% QC limits.

All required peaks for multicomponent analytes were present.

IV. **Continuing Calibration**

Continuing calibration sequence was followed as required. No more than 12 hours elapsed between continuing calibration analyses in an analytical sequence.

The retention times (RT) of all compounds in Individual Mix and multicomponent standards were within QC limits.

The relative percent differences (RPID) of amount in Individual Mix standards were within the 25.0% QC limits,

V. Blanks

Method blanks were reviewed for each matrix as applicable. No chlorinated pesticide or PCB contaminants were found in the method blanks.

Instrument blank analyses were performed at the required frequencies. No chlorinated pesticide or PCB contaminants were found in the instrument blanks above one-half the CROL.

VI. **Surrogate Spikes**

Surrogates were added to all samples, standards and blanks as required by the SOW. All surrogate recoveries were within QC limits of 30-150% with the following exceptions:

Sample	**Column**	Surrogate-T	%R	Compound -1 Fla	A 7.,P
				9 F	
09713008a5	RTX-1701 I	Docachlorobiphenyt	30	**All TCL compounds** _FJ I	A

Vil. **Matrix Spike/Matrix Spike Duplicates**

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

Vill. Laboratory Control Samples (LCS)

Not applicable to multi-media samples. Laboratory control samples were reported by the laboratory. Percent recoveries were within laboratory control limits.

IX. **Regional Quality Assurance and Quality Control**

Not applicable.

X. Pesticide Cleanup Checks

a. Florisil Cartridge Check

Florisil cartridge checks were performed at the required frequency and all compounds were within the 80-120% recovery QC criteria.

b. GPC Calibration

GPC cleanup is not required for the water samples and was not performed.

XI. **Target Compound Identification**

Raw data were not reviewed for this SDG.

X11. **Compound Quantitation and Reported CRQLs**

Raw data were not reviewed for this SDG.

XIII. Overall Assessment of Data

Data flags are summarized at the end of this report.

XIV. **Field Duplicates**

Samples 097GO5286 and 097DO1285 were identified as field duplicates. No chlorinated pesticides or PCBs were detected in any of the samples.

XV. **Field Blanks**

Sample 097RO5486 was identified as a rinsate. No chlorinated pesticide or PC6 contaminants were found in this blank.

Samples 097BOO885, 0971300885R, and 097BOO985 were identified as source blanks. No chlorinated pesticide or PCB contaminants were found in these blanks.

Salton Sea Test Base, CTO 097
Chlorinated Pesticides & PCBs - Data Qualification Summary - SDG K9601039

A

SDG	Sample	Compound	Flag	AorP	Reason
F601 039	097800585	All TCL compounds	i	-A	Surrogate spikes (% R)

Salton Sea Test Base, CTO 097
Chlorinated Pesticides & PCBs - Laboratory Blank Data Qualification Summary - SDG K9601039

No Sample Data Qualified in this SDG

Salton Sea Test Base, CTO 097
Data Validation Reports
LDC# 1804

Metals

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Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Salton Sea Test Base, CTO 097
Collection Date: February 6, 1996
LDC Report Date: April 9, 1996
Matrix: Water

Parameters: TCL Metals

Laboratory: Columbia Analytical Services, Inc.

Sample Delivery Group (SDG): K9600753**

Sample Identification

097BOO661
097GO5161
097GO7461
097RO6061
097GO6061
097GO7461S
097GO7461D

** Indicates SDG underwent NEESA 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 Contract Laboratory Program Statement of Work (SOW) for Inorganic Analysis, Multi-media, Multiconcentration, D.N. ILM04.0 for TCL Metals including Molybdenum and EPA Method 200.8 for Antimony. Data validation review was based on EPA Contract Laboratory Program Statement of Work (SOW), ILM03.0 for TCL Metals and EPA Method 200.8 for Antimony.

This review follows USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review (February 1994) and incorporates updates per EPA SOW (D.N. ILM02.1); the following subsections correlate to the guidelines.

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 Ill.

Field duplicates are summarized in Section XIII.

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.

1. **Technical Holding Times**

All technical holding time requirements were met.

11. **Calibration**

All criteria for the initial calibration were met.

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

CRDL standards for ICIP and AA were analyzed and reported as required.

Instrument detection limits, interelement corrections and linear range analysis were performed at the required frequency.

Ill. **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 element. No contaminant concentrations were found above the IDL in the initial, continuing and preparation blanks with the following exceptions:

Method Blank ID	Analyte	Concentration	**Associated Samples**
ICB	Barium	0.6 ug/L	All samples in SDG K9600753
CCBI	Chromium	2.0 ug/L	All samples in SDG K9600753
	Zinc	2.1 ug/L	
CCB2	Copper	0.9 ug/L	All samples in SDG K9600753
	Mercury	0.1 ug/L	
CC83	Mercury	0.1 ug/L	All samples in SDG K9600753
	Selenium	1.0 ug/L	
PB (prep blank)	Beryllium	0.440 ug/L	All samples in SDG K9600753
	Cobaft	-3.330 ug/L	
	Copper	1.340 ug/L	
	Zinc	3.090 ug/L	
CCB1	Beryllium	0.6 ug/L	All samples in SOG K9600753
	Chromium	2.0 ug/L	
	Copper	1.4 ug/L	
	Mercury	0.1 ug/L	
	7inc	2.1 ugtL	
	Molybdenum	-2.6 ug/L	

Method Blank ID	Analyte	Concentration	Associated Samples
CCB2	**Barium**	**-0.6 ug/L**	**All samples in SDG K9600753**
	Beryllium	**0.3 ug/L**	
	Copper	**2.1 ug/L**	
	Molybdenum	**-6.1 ug/L**	

No metal contaminant concentrations were found above the CRDL in the initial, continuing and preparation blanks.

Sample concentrations were compared to 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 ID	Analyto	Reported trot'on	Modified Final Concentration
097BOO661	**Copper**	**1.3 ug/L**	**1.31.1 ug/L**
	Zinc	**4.1 ug/L**	**4.1 U ug/L**
097GO5161	**Beryllium**	**0.43 ug/L**	**0.43U ug/L**
	Copper	**4.0 ug/L**	**4.OU ug/L**
	Zinc	**5.6 ug/L**	**5.61.1 ug/L**
097GO7461	**Chromium**	**7.3 ug/L**	**7.31.1 ug/L**
	Zinc	**14.8 ugIL**	**14.8U ug/L**
097RO6061	**Beryllium**	**0.44 ugtL**	**0.44U ug/L**
	Copper	**1.3 ugtL**	**1.3U ug/L**
	Zinc	**6.7 ug/L**	**6.71-1 ug/L**
097GO6061	**Beryllium**	**0.44 ug/L**	**0.44U ug/L**
	Zinc	**7.6** ug/L	**7.6U ug/L**

IV. **ICP Interference Check Sample (ICS) Analysis**

The frequency of analysis was met.

The criteria for analysis were met.

V. Laboratory Control Samples (LCS)

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

VI. **Duplicate Sample Analysis**

Duplicate sample analyses were reviewed for each matrix as applicable. Relative percent differences (RPD) were within QC limits.

VII. **Matrix Spike Analysis**

Matrix spike analyses were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits of 75-125% with the following exceptions:

Sample (Associated Samples)	Analyte	%R	Flag	A or P
097GO7461 S (0971300661 097GO51 61 097GO7461 097RO6061 097GO6061)	Selenium	42.0		A

Vill. Internal Standard (ICP-MS)

All internal standard percent recoveries were within QC limits of 60-125%.

IX Furnace Atomic Absorption QC

All graphite furnace atomic absorption QC were within validation criteria with the following exceptions:

Analytical Spike	Analyte	%R (Limits)	Associated Sample	Flag	
097GO5161A	Arsenic	80.5 (85-115)	097GO51 61		A
	Selenium	48.0 (85-115)			
	Thallium	72.0 (85-115)			
097GO7461A	Selenium	49.0 (85-115)	097GO7461		A
097GO6061A	Selenium	46.0 (85-115)	097GO6061		A

X. ICP Serial Dilution

The frequency of analysis was met. The criteria for analysis were met.

XI. **Sample Result Verification**

All sample result verifications met validation criteria.

X11. **Overall Assessment of Data**

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

X111. **Field Duplicates**

No field duplicates were identified in this SDG.

XIV. **Field Blanks**

Sample 097RO6061 was identified as a rinsate. No TCL metal contaminants were found in this blank with the following exceptions:

Rinsate ID	Analyte	Concentration (ug/L)
097ROB061	**Beryllium**	**0.44**
	Copper	**1.3**
	Zinc	**6.7**

Sample 097BOO661 was identified as a source blank. No TCL metal contaminants were found in this blank with the following exceptions:

Source Blank ID	Ana"	**Concentration** (ug/L)
097BOO661	**Copper**	**1.3**
	Zinc	**4.1**

Salton Sea Test Base, CTO 097
TCL Metals - Data Qualification Summary - SDG K9600753**

FG	Sample ID	Analyte	Flag	AorP	Reason
K9600753	097BOO661 097GO5161 097GO7461 097RO6061 097GO6061	Selenium		A	Matrix spike analysis (%R)
K9600753	097GO5161	Arsenic Selenium Thalliurn	i	A	Furnace atomic absorption QC (%R)
K96007	097GO7461 097GO6061	Selenium	i	A	Furnace atomic absorption QC (%R)

Salton Sea Test Base, CTO 097
TCL Metals - Laboratory Blank Data Qualification Summary - SDG K9600753**

SIDG	Sample ID	Anslyte	Modified Final T concentration	A or P
K9600753	097BOO661	Copper Zinc	1.3U ug/L 4.1 U ug/L	A
K9600753	097GO5161	Beryllium Copper Zinc	0.43U ug/L 4.OU ug/L 5.6U ug/L	A
K9600753	097GO7461	Chromium Zinc	7.31.1 ug/L 14.81-1 ug/L	A
K9600753	097RO6061	Beryllium Copper Zinc	0.44U ug/L 1.3U ug/L 6.71.1 ug/L	A
K9600753	097GO6061	Beryllium Zinc	0.44U ugil- 7.6U ug/L	A

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Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Salton Sea Test Base, CTO 097

Collection Date: February 7, 1996

LDC Report Date: April 9, 1996

Matrix: Water

Parameters: TCL Metals

Laboratory: Columbia Analytical Services, Inc.

Sample Delivery Group (SDG): K9600765

Sample Identification

097GO5361
097GO5661
097GO5961
097BOO761
097GO5361S
097GO5361D

Introduction

This data review covers 6 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA Contract Laboratory Program Statement of Work (SOW) for Inorganic Analysis, Multi-media, Multiconcentration, D.N. ILM04.0 for TCL Metals including Molybdenum and EPA Method 200.8 for Antimony. Data validation review was based on EPA Contract Laboratory Program Statement of Work (SOW), ILM03.0 for TCL Metals and EPA Method 200.8 for Antimony.

This review follows USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review (February 1994) and incorporates updates per EPA SOW (D.N. ILM03.0); the following subsections correlate to the guidelines.

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 Ill.

Field duplicates are summarized in Section XIII.

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.

1. Technical Holding Times

All technical holding time requirements were met.

11. **Calibration**

An initial calibration was performed.

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

CRDL standards for ICP and AA were analyzed and reported as required.

Instrument detection limits, interelement corrections and linear range analysis were performed at the required frequency.

Ill. **Blanks**

Method blanks were reviewed for each matrix as applicable.

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

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Method Blank IDT	Analyte	Concentration	Associated Samples
ICB	Barium	1.5 ug/L	All samples in SDG K9600765
	Copper	-0.7 ug/L	
	Molybdenum	2.6 ug/L	
CCB1	Barium	0.9 ug/L	All samples in SDG K9600765
	Chromium	2.2 ug/L	
	Lead	1.0 ug/L	
CCB2	Barium	1.5 ug/L	All samples in SDG K9600765
	Beryllium	0.7 ug/L	
	Chromium	2.7 ug/L	
	Copper	0.6 ug/L	
	Mercury	0.1 ug/L	
CCB3	Barium	0.9 ug/L	All samples in SDG K9600765
	Beryllium	0.5 ug/L	
	Mercury	0.1 ug/L	
PB (prep blank)	Barium	0.870 ug/L	All samples in SDG K9600765
	Beryllium	0.460 ug/L	
	Chromium	2.450 ug/L	
	Copper	0.840 ug/L	
	Vanadium	2.220 ug/L	

Method Blank ID	Analyto	Concentration	**Associated** Samples
CCB1	**Barium**	1.5 ug/L	All samples in SDG K9800765
	Mercury	0.1 ug/L	
CCB2	Barium	1.5 ug/L	All samples in SDG K9600765
	Chromium	-1.9 ugtL	
	Zinc	-1.6 ug/L	
CCB1	Selenium	1.0 ug(L	All samples in SDG K9600765

No metal contaminant concentrations were found above the CRDL in the initial continuing and preparation blanks.

Sample concentrations were compared to 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	Anallyte	**Report d** Concentr:tion	**Modified Final** Concentration
097GO5361	Beryllium	0.70 ug/L	OJOU ug/L
	Copper	2.0 ug/L	2.OU ug/L
	Vanadium	3.9 ug/L	3.9U ug/L
097GO5661	Beryllium	0.68 ug/L	0.68U ug/L
	Copper	1.2 ug/L	1.2U ug/L
	Vanadium	7.4 ug/L	7AU ug/L
097GO5961	Lead	2.7 ug/L	2.7U ug/L
	Vanadium	2-2 ug/L	2.2U ug/L
097BOO761	Lead	1.0 ug/L	I.OU ug/L
	Vanadium	9.0 ug/L	9.OU ug/L
	Molybdenum	5.8 ug/L	5.8U ug/L

IV. **ICP Interference Check Sample (ICS) Analysis**

The frequency of analysis was met.

The criteria for analysis were met.

V. Laboratory Control Samples (LCS)

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

VI. **Duplicate Sample Analysis**

Duplicate sample analyses were reviewed for each matrix as applicable. Relative percent differences (RPD) were within QC limits.

VII. **Matrix Spike Analysis**

Matrix spike analyses were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits of 75-125% with the following exceptions:

Sample (Associated Samples)	Analyte	%R	Flag	A or P
097GO5361 S (All samples in SDG K9600765)	**Selenium**	0.0	**J (all detects) R (all non-detects)**	**A**

VIII. Internal Standard (ICP-MS)

Raw data were not reviewed for this SDG.

IX. **Furnace Atomic Absorption QC**

All reported MSAs were reviewed and found acceptable. Raw data were not reviewed for this SDG.

IX. **ICP Serial Dilution**

Not required by the method.

XI. **Sample Result Verification**

Raw data were not reviewed for this SDG.

XII. **Overall Assessment of Data**

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

X111. Field Duplicates

No field duplicates were identified in this SDG.

XIV. **Field Blanks**

Sample 097BOO761 was identified as a source blank. No TCL metal contaminants were found in this blank with the following exceptions:

Source Blank ID	Analyte	Concentradon (ug/L)
097BOO761	Barium	45.4
	Copper	13.9
	Lead	1.0
	Vanadium	9.0
	Zinc	11.5
	MoMAsnum	5.8

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Salton Sea Test Base, CTO 097
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SDG	Sample	Anaiyte	Flag	AorP	Reason
K9600765	097GO5361	Selenium	J (all detects)	A	Matrix spike analysis (%R)
	097GO5661		R (all non-detects)		
	097GO5961				
	097BOO761				

Salton Sea Test Base, CTO 097
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SOG	Sample	Analyte	Modified Final Concentration	
K9600765	097GO5361	Beryllium	0.70U ug/L	A
		Copper	2.01.1 ug/L	
		Vanadium	3.9U ug/L	
K9600765	097GO5661	Beryllium	O-SOU ug/L	A
		Copper	1.21.1 ug/L	
		Vanadium	7.41.1 ug/L	
K9600765	097GO5961	Lead	2.7U ug/L	A
		Vanadium	2.2U ug/L	
K9600765	097BOO761	Lead	1.01.1 ug/L	A
		Vanadium	9.01.1 ug/L	
		Molybdenum	5.81-1 ug/L	