Data Validation Report

Second Quarter 1996

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Data Validation Package
Second Quarter 1996

Sample Delivery Group Cross Reference
Second Quarter 1996

Well ED	Sample ED	Sample Delivery Group
Groundwaters-		
01MWI	097G110	K9602884
01MW2	097G1 11	K9602884
OIMW2	097G167	K9602936
OIMW3	097GI 12	K9602884
01MW4	097GI 13	K9602884
102CMW1	097GI40	K9602936
02CMW2	097GI41	K9602936
02CMW3	097GI42	K9602755
02CMW4	097GI43	K9602755
02CMW5	097G144 1	K9602755
02DMWI	097GI46	K9602784
02DMW2	097G145	K9602784
02EMWI	697 -GI 47 1	K9602755
02EMW2A	097G148.	K9602884
02EMW2B	097G149	K9602755
02EMW3	097G150 i	K9602755
02EMW4	097GI51	K9602755
102FMWlA	097GI52	K9602936
102FMWlB	097GI53	K9602784
02GMWI	097GI54	K9602917
	097GI55	K9602755
102JlMWIB	097G156	K9602755
102J7MWI	-0-97 G 15 7	K96M-755
		K9602936
102NMW1	097GI58	
102NMW2	097G159	K9602936
~02NMW3	097G160	K9602936
-r~02QMWI	097GI61	K9602936
02QMW2 1	097GI62	K960f9-
--:02QMW3	097GI63	K960
1!08MWI	097G1 14	K9602784
IOLAMW2	097GI64	K9602917
i I OLAMW3	-O97GF6-5-K96M-17-	
113MWI	097GI 15	K9602884
113MWI	~--OW G 115 1	K9604650
114MWI	097G1 16	K96027~5
114MW2	097G1 17	K9602755
15MW I	097GI 18	K9602884
:15M V-2-	097GI19	K9602884
-15MW2	097GI66	K9602936
16MW I	097GI20	K9602784
-1 6MW2-	097 G 12-1	K9602784

]Well ID	Sample ED	Sample Delivery Group
Groundwaters (continued) --		
18MW1	097G125	K9602784
18MW2	097G126	K9602784
~-WW3	097-G 127	K9602784
19Mwi	097G128	K9602784
-2 -3A-MW 1	097GI29 -	K960-2784
25MWI	097G130 -	K9602884
2~2~	097GI31	K9602884
25MW3	097GI32	K9602884
BMW2 I	097GI33	K9602884
BMW3	097GI34	K9602884
IBMW4	I 097G135	K9602884
BMW5	I 097GI36	K9602884
~B		K9602917
MW6	97G13~7-	
IBMW7	097G138	K9602917
I IBMW8	097G139	K9602917
Field **Duplicates**		
02EMW1 '	097DO24	K9602755
02NMW3	I 097DO25	
I IOLAMW2	097DO21	K9602917
25MW3	097DO20	K9602884
Rinsate Blanks		
V-IMW2	097RI10	K9602884
~01MW2	097RI19	K960-2936
-6 2 -CM W' 5	097RI22	K960M-5-
102GMW1	097RI20	IC960-2917
j02J1MW1B	097R123	K9602755
02QMW1	097RI21	K960-2936
tAMWI	097RI13	K9
25MW2	097R111	K9602884
~BMW6	097R1 12	K960291-7-
!:Source Blanks		
-1-M-C	097BO10	-K-960291-7-
~FQC	-09- 7 -BO 11	K960'7917
;Trip Blanks		
IFQC	097TO4	K9602884
FQC	097TO41	K96028~4
IFQC	097TO42	K96M-3-6--
FQC	097TO43	K9602755
FQC	097TO44 I	K9602
!FQC	097TO45	K960-2784
~FQC	097TO46	K9602784
	-6-9-7--T047 1	K9602H-4--

- 117MWI097G122		K9602784	IFQC		
17MW2	0976123	K9602784	FQC	097TO48	K4602917
17MW3	097GI24	K9602784	jFQC	097TO49	K96-02936

sActo97~SDG2.XLS

LABORATORY DATA CONSULTANTS, INC.
7750 El Camino Real, Suite 2C, Carlsbad, CA 92009 Phone: 619,634-0437 Fax: 619 634-0439

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Bechtel National, Inc.
401 West "A" Street, Suite 1000
San Diego, CA 92101-7905
Attn: Dr. Randy Jordan

July 11, 1996

Project Name Salton Sea Test Base
P roj ect # CTO 097

On June 27, 1996 the following data packages were received by Laboratory Data Consultants, Inc. from Bechtel National, Inc.. Attachment 1 is a summary of the samples that were reviewed for each analysis.

LDC Proiect # 1866

SDG #	Fraction
K9602755, K9602784, K9602884, K9602917, K9602936	Volatiles, Semivolatiles, Chlorinated Pesticides & PCBs, Metals, TPH as Gasoline, TPH as Diesel, Aromatic Volatile Organics, Total Recoverable Petroleum Hydrocarbons, Wet Chemistry

The above SDGs were reviewed using NFESC Level "C" and "D" guidelines. The analyses were validated using the following documents, as applicable to each method:

Navy Installation Restoration Laboratory Quality Assurance Guide, Interim Guidance Document, Naval Facilities Engineering Service Center, February 1996

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

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

EPA SW 846, Third Edition, Test Methods for Evaluatina Solid Waste, update 1, July 1992; update IIA, August 1993; update 11, September 1994; update 1113, January 1995

Completion of the following sample delivery group fraction is pending the arrival of additional data which has been requested from Columbia Analytical Services. The completed validation report for this fraction will be sent following receipt and review of this data.

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LDC Project 1666:

SDG # Fraction

K9602917 Aromatic Volatile Organics, Total Recoverable Petroleum Hydrocarbons

The data valiclators did utilize their professional judgement when evaluating the data to achieve the most complete and accurate assessment of the data. The data packages were reviewed according to the above stated validation procedures.

For GC/MS volatile analyses, the primary findings consisted of:

a) Initial and continuing calibration factors exceeded acceptance criteria in SDGs K9602884 and K9602917. The associated nondetect results for acetone were qualified as unusable in both SDGs. Since the laboratory met the protocol requirement, this finding should be considered advisory.

b) Laboratory control sample analyses were not performed for all batches in SDG K9602884.

C) Methylene chloride was detected in the method blanks. Since the laboratory met the protocol requirement, this finding should be considered advisory.

For GC/MS sernivolatile analyses, the primary findings consisted of:

a) Continuing calibration factors exceeded acceptance criteria in SDGs K9602884, K9602917 and K9602936. Since the laboratory met the protocol requirement, this finding should be considered advisory.

b) Matrix spike/matrix spike duplicate percent recoveries exceeded acceptance criteria for 4-nitrophenol in SDGs K9602884 and K9602917. Since the laboratory met the protocol requirement, this finding should be considered advisory.

C) Laboratory control sample RPDs exceeded acceptance criteria for 1.4-clichlorobenzene and 1,2,4-trichlorc benzene in SDG K9602936. Since the laboratory met the protocol requirement, this finding should be considered advisory.

d) Bis(2-ethylhexyl)phthalate was detected in the method blanks. Since the laboratory met the protocol requirement. this finding should be considered advisory.

For pesticides and PCBs analyses, the primary finding consisted of:

a) **Surrogate percent recoveries exceeded acceptance criteria for** samples 097G16785 and 097G16682 in SDG K9602936. Since the laboratory met the protocol requirement, this finding should be considered advisory.

For metals analyses, the primary findings consisted of:

a) Continuing calibration verification percent recoveries exceeded acceptance criteria for thallium in SDG K9602784.

b) Continuing calibration verification was not performed at the required frequency for mercury in SDG K9602884.

C) CRI standard was not performed at the required frequency for molybdenum in SDGs K9602755, K9602784, K9602884, K9602917 and K9602936.

d) ICP interference check sample analysis was not spiked for molybdenum in SDGs K9602884 and K9602784, antimony, cadmium, lead, nickel and uranium in SDG K9602917 and antimony in SDG K9602936. Since the laboratory met the protocol requirement, this finding should be considered advisory.

e) Matrix spike percent recoveries exceeded acceptance criteria for selenium in SDG K9602784 and arsenic, selenium and thallium in SDG K9602884. Since the laboratory met the protocol requirement, this finding should be considered advisory.

Several metals were detected in the blanks. -Since the laboratory met the protocol requirement, this finding should be considered adviscry.

g) ICP serial dilution exceeded acceptance criteria for barium in SDG K9602784 and barium and zinc in SDG K9602917. Since the laboratory met the protocol requirement, this finding should be considered advisory.

For wet chemistry analyses, the primary findings consisted of:

a) Analyses holding times for pH were exceeded in several samples SDG K9602884.

For TPH as gasoline analyses, no significant findings were observed.

For TPH as diesel analyses, no significant findings were observed.

For TRPH analyses. no significant findings were observed.

For BTEX analyses, the primary finding consisted of:

a) Laboratory control sample analyses were not performed for all batches in SDG K9602936.

In general, the data for all analyses appear usable with the limitations noted in the Data Validation Reports. Data validation flags were noted on the Laboratory Form ls and included with each validation report.

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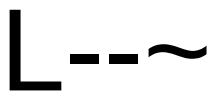

Rich-ard M. Amano
President/Principal Chemist

LABORATORY DATA CONSULTANTS, INC.
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Bechtel National, Inc. July 17, 1996
401 West "A" Street, Suite 1000
San Diego, CA 92101-7905.
Attn: Dr. Randy Jordan

Project Name Salton Sea Test Base
Project # CTO 097

On June 27, 1996 the following data packages were received by Laboratory Data Consultants, Inc. from Bechtel National, Inc.. Attachment 1 is a summary of the samples that were reviewed for each analysis.

LDC Proiect # 1866

SDG #	Fraction
K9602917	Aromatic Volatile Organics, Total Recoverable Petroleum Hydrocarbons, Wet Chemistry

The above SDGs were reviewed using NFESC Level "D" guidelines. The analyses were validated using the following documents, as applicable to each method:

Navy Installation Restoration Laboratory Quality Assurance Guide, Interim Guidance Document, Naval Facilities Engineering Service Center, February 1996

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

The data validators did utilize their professional judgement when evaluating the data to achieve the most complete and accurate assessment of the data. The data packages were reviewed according to the above stated validation procedures.

For wet chemistry analyses, no significant findings were observed.

For TRPH analyses, no significant findings were observed.

For BTEX analyses, the primary finding consisted of-

a) Positive detects verified by recalculation were'not confirmed in samples 097R1 2041 and 097BOl 043 for xylenes in SDG K9602917.

b) The evaluation of the initial calibration data was based upon a laboratory resubmittal. The original raw data did not confirm the response factors listed on the calibration summary forms. Additionally,_ the original compound areas reported did not confirm the resubmitted data. The

laboratory could not clearly explain this change. Although data qualification was not considered necessary for this finding, the data end user should consider this in the overall use of the data.

In general, the data for all analyses appear usable with the limitations noted in the Data Validation Reports. Data validation flags were noted on the Laboratory Form is and included with each validation report.

Si re y,

Richard M. Amano
President/Principal Chemist

LDC Report# 1866C1

Laboratory Data Consultants, Inc.
Data Validation Report

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

Collection Date: May 13 through May 14, 1996
LDC Report Date: July 8, 1996

Matrix: Water

Parameters: Volatiles

Laboratory: Columbia Analytical Services, Inc.

Sample Delivery Group (SDG): K9602884

Sample Identification

097G13031
097G13233
097DO2031
097TO4133
097R11132
097G13133
097G11335
097G11232
097G11032
097G11133
097G11933
097G11832
097TO4032
097R11033
097G1 1335MS
097G1 1335MSD

Introduction

This data review covers 16 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8260A for Volatiles.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (February 1994) as there are no current guidelines for EPA SW 846 Method 8260A. The modifications were based on EPA SW W Method 8260A.

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.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

1. Technical Holding Times

All technical holding time requirements were met.

11. 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 with the following exceptions:

Date	Compound	%RSD	Associated Samples	Flag	
	Chloroethane	30.9	**All samples in** SOG		A
	Acetone	**31.0**	**K-9602884**	i	

Average relative response factors (RRF) for all volatile target compounds and system monito~ng compounds were within validation criteria with the following exceptions:

Date	Compound	RRF (Urnits)	**Associated** Samples	FlagAorP
4/23/96	**Acetone**	**0.038 (~0.050)**	**All samples in SOG K9602884**	**J (all detects) R (all non-aetects)**	**A**

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	
5/23196	Hexachlorobutadiene	30.6	097G130311 0971313233 097002031 097TO4133 097RI1132 097GI3133 097G11335 097GI1232 097GI1032 097GIIII33 097G11933 097G1 1832 097TO4032 097R11033 VBU<01		A

All of the continuing calibration RRF values were within validation criteria with the following exceptions:

Date	Compound	RRF (Limits)	Associated Samples	Flag	A or P
5123/96	Acetone	0.030 ('aO.050)	097G13031 097G13233 097002031 09TT04133 097RI1132 097G113133 097G11335 097G11232 097G11032 097GII 1133 09713111933 097G11832 097TO4032 097RI1033 VBLK01	J (all detects) R (all non-detects)	A
5124/96	Acetone	0.032 (-2:0.050)	097GI 133SMS 097GI 1335MSD VBLK02	J (ail detects) R (all non-detects)	A

- |

V. Blanks

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

Method Blar k ID	Ana D ,lyt s is	Compound TIC (FIT in minutes)	Concentration	Associated Sa_::P:,:
V6LKOI	5/23196	Methylene chloride	0.3 ug/L	All sampies in SOG K9602e&4

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:

	TIC (RT In minutes)	**Concentration**	**difled Final ncentration**
Sample	**Compound**	**Reported**	FMC -.1 .1
097G13233	Methyiene chloride	0.2 ug/L	1.OU ug/L
09Tr04133	Methylene chloride	0.4 ug/L	I.OU ug/L
097RI1132	Methytene chloride	0.2 ug/L	1.0U ug/L
097G13133	Methylene chloride	0.2 ugil-	1.OU ug/L
097G11335	Methylene chloride	0.2 ug/L	I.Ou ug/L
097GI1232	Methyiene chloride	0.2 uglL	I.OU ug/L
097G 11032	Methylene chloride	0.1 ug/L	I.0U ug/L
097GIII33	Methylene chloride	0.3 ug/L	1.OU ug/L
097G 119,33	Methylene chloride	0.2 ug/L	1.01-1 ug/L
097G11832	Methylene chloride	0.2 ug/L	I.Ou ug/L
097T04G32	MethVene crlonde	0.4 ug/L	1.CU ug;L
L=	Methytene chloride	0.3 ug/L	1.OU ug/L

VI. Surrogate Spikes

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

VIIII. **Matrix Spike/Matrix Spike Duplicates**

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

VIII. Laboratory Control Samples (LCS)

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

Sample	Compound	Finding	Criteria	Flag	**A or P**
All samples in SOG	**All TCL compounds**	**No LCS** analyzed.	**LCS analysis required.**	None	

K9602884

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 of Data

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

XVI. Field Duplicates

Samples 097DO2031 and 097G1 3233 were identified as field duplicates. No volatiles were detected in any of the samples with the following exceptions:

	Concentration (ug/L)		
Compound	097DO2031	097GI3233	RPD
Methylene chloride	0.2	NO	Not calculable
Benzene	0.2	0.2	0
Toluene	1.6	1.8	12
Ethylbenzene	0.3	0.3	0
Xylene (total)	1.9	2.2	15
1,3,5-Trimethylbenzene	0.1	NO	Not calculable
1,2,4-Trimethylbenzene	0.6	0.6	0
1,3-Dichlorobenzene	0.04	NO	Not calculable
1,4-Oichlorobenzene	0.05	NO	Not calculable
n-Butylbenzene	0.06	NO	Not calculable

XVIL **Field Blanks**

Samples 097TO4133 and 097TO4032 were identified as trip blanks. No volatile contaminants were found in these blanks with the following exceptions:

Trip Blank 10	Compound	Concentration (ug/L)
097TO4133	Methylene chloride	0.4
097TO4032	Methylene chloride	0.4
	Toluene	O.C5
	1,4-Dichlorobenzene	0.05

Samples 097R11132and 097R1 1033 were identified as rinsates. No volatile contaminants were found in these blanks with the following exceptions:

Rinsate ID	Compound	Concsntratlon (ug/L)
097RI 1132	Acetone	6
	Methyllene chloride	0.2
	Chloroform	1.1
	Bromachloro methane	0.2
	Benzene	0.5
	Brom odichlo ram ethane	0.1
	Toluene	2.9
	Ethyl benzene	0.4
	Xyiene (total)	2.6
	1,3,5-Trimethylbenzene	0.1
	1,2,4-Trimethylbenzene	0.4
097RI1033	Acetone	6
	Methylene chloride	0.3
	Chloroform	2.0
	Bro m ochlorom ethane	0.3
	Benzene	0.7
	Brom odichloro methane	0.2
	Toluene	4.2
	Ethyl benzene	0.6
	Xylene (total)	3.2
	n-Propylbenzene	0.08
	1,3,5-Trimethylbenzene	0.1
	1,2,4-Trimethylbenzene	0.4

1866C1.BC3

Salton Sea Test Base, CTO 097
Volatiles - Data Qualification Summary - SDG K9602884

SDG	Sample	Compound	Flag	AorP	Rear.."
K9602884	097G131331	Chloroethane	i	A	Initial calibration (%RSO)
	097G13233	Acetone			
	097DO2031				
	097TO4133				
	097R11132				
	097GI3133				
	097G11335				
	097G11232				
	097GI1032				
	097G11133				
	097GI1933				
	097GI1832				
	097TO4032				
	097RI1033				
K9602884	097G13031	Acetone	J (all detects)	A	Initial cafibration (RRF)
	097G13233		R (all non-detects)		
	097DO2031				
	097TO4133				
	097R11132				
	097G13133				
	097GI1335				
	097G11232				
	097G11032				
	097G11133				
	097GI1933				
	097G11a32				
	097TO4032				
	0971R11033				
K9602884	097G13031	HexachlorobLrtadiene		A	Continuing calibration (%D)
	097G13233				
	097DO2031				
	097TO4133				
	097R11132				
	097G13133				
	097G 11335				
	097GI1232				
	097G11032				
	097G11133				
	097GI1933				
	097GI1832				
	097TO4032				
	097R1 10-33				

1866CI.BC3

SDG	Sample	Compound	Flag	AorP	**Reason**
K9602884	097GI3031	Acetone	J (all detects)	A	Continuing calibration
	097G13233		R (all non-detects)		(RRF)
	097002031				
	097TO4133				
	097RI1132				
	097GI3133				
	097G11335				
	097G11232				
	097G 11032				
	097G1 1133				
	097G11933				
	097G 11832				
	097TO4032				
	097R11033				
K9602884	097G13031	All TIIL compounds	None	p	Laboratory control samples
	097G13233				
	097002031				
	097TO4133				
	097RI1132				
	097G13133				
	097G11335				
	0971311232				
	097G1 1032				
	097G11133				
	097G1 1933				
	097GI1832				
	097TO4032				
	097R11				

Salton Sea Test Base, CTO 097
Volatiles - Laboratory Blank Data Qualification Summary - SDG K9602884

SDG	Sample	Compound TIC (FIT in minutes)	Modified Final Concentration	A or P
K9602884	0971313233	Methylene chloride	I.OU ugjL	A
K9602884	09TT04133	Methylene chloride	1.01.1 ug;L	A
K9602864	097RI1132	Methylene chloride	1.01.1 uglL	
K9602854	097GI3133	Methylene chloride	I.OU ug;L	A
K9602884	097GI1335	Methylene chloride	I.OU ugL	A
K9602884	097G11232	Methylene chloride	I.OU ua,,L	A
K9602584	097G 11032	Methylene chloride	1.OU ug/L	

SOG	Sample	Compound 'nC (RT In minutes)	M,,diflod Final C, centration	
K9602884	097G11133	Methylene chloride	I.OU ug/L	A
K9602884	097G11933	Methylene chloride	1.01.1 ug/L	A
K9602884	097GI1832	Methylene chloride	1.OU ug/L	A
K9602854	097TO4032	Methylene chloride	I.OU ug/L	A
K9602884	0971`111033	Methylene chloride	1.01-1 ugil-	A

Laboratory Data Consultants, Inc.
Data Validation Report

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

Sample Delivery Group (SDG): K9602917**

Sample Identification

097BO1033
097BO1131
097BOl 131 MS
097BOl 131 MSD

** Indicates SDG underwent NFESC Level D review.

Introduction

This data review covers 4 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8260A for Volatiles.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (February 1994) as there are no current guidelines for EPA SW 846 Method 8260A. The modifications were based on EPA SW 846 Melfiod 8260A.

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

Blank results are summarized in Section V.

Field duplicates are summarized in Section XVI.

The following are definitions of the data qualifiers:

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

i Indicates an estimated value.

R Quality control indicates the data is not usable.

N Presumptive evidence of presence of the constituent.

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

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

1. Technical Holding Times

All te&nical 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 with the following exceptions:

Date	Compound	%RSD	Associated Samples	Flag	Ao
4/23/96	Chlorcethane	30.9	097601033		A
	Acetone	31.0	097601131 VSLK01		
5/28/96	Chloroethane	39.5	097601131 MS 097BOI 131 MSID VBLX02		A

Average relative response factors (RRF) for all volatile target compounds and system monitoring compounds were within validation criteria with the following exceptions:

Date	Compound	RRF (Limits)	Samples	Flag	
			A ..... W.		1
4/23/96	Acetone	0.038 (~0.05)	097BOIC33 097BO1131 VBLK01	J (all detects) R (all non-detects)	A
5/28/96	Acetone	0.04 (2:0.05)	097601131 MS 097BOl 131 MSD VBLK02	J (all detects) R (all non-cetects)	A

IV. **Continuing Calibration.**

Continuing calibration was performed at the required frequencies.

All of the continuing calibration percent differences ('//OD) between the initial calibration RRF and the continuing calibration RRF were less than or equal to 25.00,/0 .

All of the continuing calibration RRF values were within validation criteria with the following exceptions:

Date	Compound	RRIF (Limits)	Associated Samples	Flag	A or P
4/23/96	Acetone	0.032 (;--0.05)	097801033 097BO1131 VBLKOI	J (all detects) *R* (all non-detects)	A
5/28/96	Acetone	0.037 (~tO.05)	097BOI 131 MS 097BOI 131 MSD VBLX02	J (all detects) *R* (all non-detects)	A

V. Blanks

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

Method Blank ID	Analysis Date	Compound TIC (RT in minutes)	Concentration	Associated Samples
VBLK01	5/24/96	Methylene chloride	0 * 4 ug/L	097E301033
		1,4-Dichlorobenzene	0.04 ug/L	097BOI 131

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
F;;;I 033	Methylene chionde	0.5 ug/L	I.OU ua/L

V1. Surrogate Spikes

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

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)

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

IX Regional Quality Assurance and Quality Control

Not applicable.

X. Internal Standards

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

XI. **Target Compound Identifications**

All target compound identifications were within validation criteria.

XII. **Compound Quantitation and CRQLs**

All compound quantitation and CROLs were within validation criteria.

XIII. Tentatively Identified Compounds (TICs)

All tentatively identified compounds were within validation criteria.

XIV. **System Performance**

The system performance was acceptable.

XV. **Overall Assessment of Data**

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

XVI. **Field Duplicates**

No field duplicates were identified in this SDG.

XVII. **Field Blanks**

Samples 097BO1033 and 097BO1131 were identified as source blanks. No volatile contaminants were found in these blanks with the following exceptions:

Source Blank ID	Compound	**Concentration** (ug
097BO1033	Acetone	9
	Methylene chloride	0.5
	Chloroform	2-2
	Bromochloro methane	0.2
	Bromodichloro m ethane	0.2
	Toluene	0.9
	Ethylbenzene	0.2
	Xylene (total)	1.1
	1,2,4-Trimethylbenzene	0.2
097BO1131	Chloroform	0.1
	Benzene	0.6
	Bromodichlorom ethane	0.4
	Toluene	0.2
	Dibro mochlo ro methane	2.6
	Bromoform	8.5
	2-Chlorotoluene	0.2
	4-Chlorotoluene	O.C8

186601.SC4

Salton Sea Test Base, CTO 097
Volatiles - Data Qualification Summary - SDG K9602917**

F

SDG	Sample	Compound	Flag	A.,P	R
K9602917	097BO1033	Chloroethane	i	A	Initial calibration *(%RSO)*
	097BO1131	Acetone	i		
K9602917	097801033	Acetone	J (all detects)	A	Initial caiibration (RRF)
	097BO1131		*R* (all non-detects)		
K9602917	097BOIC33	Acetone	J (all detects)	A	Continuing calibration
	097BO1131		*R* (all non-detects)		(%Oll

Salton Sea Test Base, CTO 097
Volatiles - Laboratory Blank Data Qualification Summary - SDG K9602917**

SOG	Sample	Compound TIC (FIT In minutes)	Modified Final Concentration	A a
F2917	097BO1033	Methylene chloride	1.01-1 ugiL	A_

LDC Report#r 1866C2

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name:	Salton Sea Test Base, CTO 097
Collection Date:	May 13 through May 14, 1996
LDC Report Date:	July 9, 1996
M atrix:	Water
Parameters:	Semivolatiles
Laboratory:	Columbia Analytical Services, Inc.

Sample Delivery Group (SDG): K9602884

Sample Identification

097G13082 097G13281 097DO2081 097R11182 097G13181 097G11383 097G11282 097G11081 097G11882 097RI1082 097G1 1381 MS 097G1 1384MSD

Introduction

This data review covers 12 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) OLM02.1 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 XVI.

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

The following are definitions of the data qualifiers:

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

i Indicates an estimated value.

R Quality control indicates the data is not usable.
N Presumptive evidence of presence of the constituent.
UJ Indicates the compound or element was analyzed for but not detected. The sample detection limit is an estimated value.
A Indicates the finding is based upon technical validation criteria.
P Indicates the finding is related to a protocol/contractual deviation.

1. Technical Holding Times

All technical holding time requirements were met.

11. **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**	
6/5/96	**N-Nitrosociphenytamine**	31.7	**All samples in SOG**	i	**A**
	3,3'-Dichlorobenzid~ne	18.2	**K9602854**	j	

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**	Associat **ad Samples**
SBLKO1	**5/19/96**	**Sis(2-ethylhexyl)phthalate**	**3 ug/L**	**All sampies in**
		Unknown (6.27)	**2 ug/L**	**K9602884**

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 (FIT In minutes)	Reported TConcentration	Modifl d Final Concentration
097G13082	Bis(2-ethyihexyQptTthalate9 ug/L	IOU ug/L	
097G13281	Bis(2-ethyihexyQphthalate23 ug/L	23U ug/L	
097002081	Bis(2-ethylhexyl)phthalate9 ug/L	1 OU ug/L	
097RI1182	Bis(2-ethyihexyQ phthalateI ug/L	IOU ugIL	
097G13181	Bis(2-ethylhexyl)phthalate12 ugiL	12U ugil	
097GI1383	Bis(2-ethyiheW)phthalate1 ug/L	IOU ug/L	
O97G11282	Bis(2-ethy1hexyJ)phthalat63 ug/L	IOU ug/L	
097GI 1081	Bis(2-ethylhexyl)phthalateI ug/L	IOU ug/L	
097R11082	Bis(2-ethylhexyQphthalate1 ug/L	IOU ugiL	

V1. Surrogate Spikes

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

V111. Matrix Spike/Matrix Spike Duplicates

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

Sample (Associated Samples)	Compound	MS (%R) (Limits)	MSD (%R) (Limits)	RPO (Limits)	Flag	TA	7.r P
097G 11381 MS/ 097G1 1384MSD (All samples in SOG K9602884)	4-Nitrophenol	113 (10-80)	99(10-80)		J (all detects)	A	

VIII. Laboratory Control Samples (LCS)

Although laboratory control samples were not required by the method, laboratory control samples were reported by the laboratory. Percent recoveries (%R) were within QC limits.

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

Not applicable.

X. Internal Standards

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

XI. **Target Compound Identifications**

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 097G13281 and 097DO2081 were identified as field duplicates. No sernivolatiles were detected in any of the samples with the following exceptions:

	Concentration (ug/L)		
Compound	**097G13281**	**097DO2081**	**RpD**
Butylbenzylphthalate	1	ND	**Not calculable**
Bis(2-ethy(hexyj)phthalate	23	9	**88**

XVII. Field Blanks

Samples 097R1 1182 and 097R1 1082 were identified as rinsates. No sernivolatile contaminants were found in these blanks with -the following exceptions:

Rinsate ID	Compound	Concentration (ug/L)
097R1 1182	Bis(2-ethylhexy1)phthaIat9	
097R11C82	Bis(2-ethy1hexy0phthalate	

Salton Sea Test Base, CTO 097
Semivolatiles - Data Qualification Summary - SDG K9602884

SDG	Sample	Compound	Flag	A or P	Reason
K9602884	097GI3082 0971313281 097002081 0971`111182 097GI3181 O97G11383 097G11282 097GI1081 097G11882 097R11082	N-Ndrosodiphenylamine 3,3'-Dichlorobanzidine	i	A	Continuing calibration (%D)
K9602884	097G13082 097G13281 097DO2081 097RI1182 O97G13181 097G113153 O97G11282 097G11081 097GI1882 097R11082	4-Nftrophenol	J (all detects)	A	Matrix s ' Dike/Matrix spike duplicates (%R)

Salton Sea Test Base, CTO 097
Semivolatiles - Laboratory Blank Data Qualification Summary - SDG K9602884

SDG	Sample	Compound TIC (FIT In minutes)	Modified Final Concentration	A r 7P
K9602884	097G13082	Bis(2-ethylhexy1)phthalateIOU UG/L	A	
K9602884	097G13281	Bis(2-ethylhexyl)phthalate,23U U ;~7	A	
K9602864	097002081	Bis(2-ethylhexyl)phthalateIOU ugii-	A	
K9602884	O97R11182	Sis(2-ethylhexyl)phthalateIOU ug/L	A	
K9602884	097GI3181	Eis(2-ethylhexyl)phthalate12U ugiL	A	
K9602884	O97G113a3	Sis(2-ethylhexyl)phthalateIOU ug;L	A	
K9602884	097GI1282	8is(2-ethy1hexyl)phthalateIOU ugiL	A	
K9602884	097G 11081	Bis(2-ethylhexyl)phthalateIOU ug/L	A	
K9602884	O97R1IO82	Bis(2-ethy1hexyl)phthalate1 OU ug/ L	A	

7-

LDC Report# 1866D2

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name:	Salton Sea Test Base, CTO 097
Collection Date:	May 15, 1996
LDC Report Date:	July 10, 1996
Matrix:	Water
Parameters:	Semivolatiles
Laboratory:	Columbia Analytical Services, Inc.

Sample Delivery Group (SDG): K9602917**

Sample Identification

097BO1082
097BO1181

** Indicates SDG underwent NFESC Level D review,

Introduction

This data review covers 2 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses **were per EPA** Contract Laboratory Program Statement of Work (SOW) OLM02.1 for Sernivolatiles.

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

The following are definitions of the data qualifiers:

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

Indicates an estimated value.

R Quality control indicates the data is not usable.

N Presumptive evidence of presence of the constituent.

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

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

1. Technical Holding Times

All technical holding time requirements were met.

II. 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 sernivolatile target compounds and system monitoring compounds were greater than or equal to 0.05 as required.

IV. Continuing Calibration

Continuing calibration was perfbrmed 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:

D ate	Compound	%D	**Associated Samples**	Flag	TA , 7rP
	N-Nftrosodiphenylamine	31.7	**All samples in SOG**	i	**A**
	3,3'-Dichlorobenzidine	38.2	**K9602917**	i	

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

V. Blanks

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

Method Blank ID	**Extraction Date**	TC **Compound** (RT in minutes)	**Concentration**	**Associated Samples**
SBLKO1	**5/19/96**	**Bis(2-ethylhexyl)phthalate**	**3 ug/L**	**All samples in SDG**
		Unknown (6.27)	**2 ug/L**	**K9602917**

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 concentratons found in the associated method blanks with the following exceptions:

F sample	Compound TIC (RT In minutes)	Reported Concentration	Modified Final Concentration
097BO1082	**Bis(2-ethyihexyQphthalate**	**2 ug/L**	**IOU ug/L**
097801181	**Bis(2-ethyihexyQ phthalate**	**1 ug/L**	**IOU ugiL**

V1. Surrogate Spikes

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

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 (Associated Samples)	Compound	MS (%R) (Umits)	MSD (%R) (umits)	**RPD** (Limits)	Flag	AcrP
097GI 1383MSIMSO (All samples in SDG K9602917)	**4-Nitrophenol**	**113(10-80)**	**99(10-80)**		**J (all detects)**	**A**

Vill. Laboratory Control Samples (LCS)

Although laboratory control samples were not required by the method, laboratory control samples were reported by the laboratory. Percent recoveries (%R) were within QC limits.

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Internal Standards

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

X1. Target Compound Identifications

All target compound identifications were within validation criteria-

XII. **Compound Quantitation and CROLS**

All compound quantitation and CRQLs were within validation criteria.

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

All tentatively identified compounds were within validation criteria.

XIV. **System Performance**

The system performance was acceptable.

XV. **Overall Assessment of Data**

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

XVI. **Field Duplicates**

No field duplicates were identified in this SDG.

XVIL Field Blanks

Samples 097BOl 082 and 097BOl 181 were identified as source blanks. No sernivolatile contaminants were found in these blanks with the following exceptions:

Source Blank ID	Compound	Concentration (ug/L)
097BO1082	Bis(2-ethy1hexy1)phtha1ate	Z
097SO1181	Bis(2-ethy1hexyi) phthalate	

Salton Sea Test Base, CTO 097
Semivolatiles - Data Qualification Summary - SDG K9602917**

SDG	Sample	Compound	Flag	AorP	Reason
K9602917	097BO1082	N-Nitrosodiphenylamine	i	A	Continuing calibration
	097801181	3,3'-Dichlorobenzidine	i		(%D)
K960291	097BO1082	4-Nitrophenol	J (all detects)	A	Matrix spike/Matrix spike
	097BOl 1 ST-				duplicates (%R)

Salton Sea Test Base, CTO 097
Semivolatiles - Laboratory Blank Data Qualification Summary - SDG K9602917**

SDG	Sample	Compound 'nC (RT In minu tos)	Modified Final Cancer
K9602917	097801082	Bis(2-ethylhexyQphthalateIOU ug/L	A
K9602917	097BO1181	Bis(2-ethythexyl)phthalateIOU ug/L	A

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LDC Report# 1866E2

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name:	Salton Sea Test Base, CTO 097
Collection Date:	May 17, 1996
LDC Report Date:	July 9, 1996
Matrix:	Water
Parameters:	Semivolatiles
Laboratory:	Columbia Analytical Services, Inc.

Sample Delivery Group

Sample Identification

097R1 1981
097G16781
097G16685

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 (SOW) OLM02.1 for Semivolatiles.

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

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

1. Technical Holding Times

All technical holding time requirements were met.

11. **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 RRF and the continuing calibration RRF were less than or equal to 25.0% with the following exceptions:

Data	Compound	%D	7A lated Samples	Flag	ArP]
6/6196	2,2'-Oxybis(1 -chic ro ' propane)	26;7	All samples in SDG	i	A
	N-Ngrosodiphenylamine	28.3	K9602936		
	Anthracene	25.7			
	3,3'-Dichlaroberizidine	35.7			

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 a pplicable. No sernivolatile contaminants were found in the method blanks with the following exceptions:

Method Blank ID	Extrac D,,:on	Compound TIC (RT in minutes)	Concentration	Associate
SBLK01	5/21/96	Bis(2-eth Ihexyl)phthalate	1 ugtL	All samples in SOG K9602935

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
097R1 1981	**Bis(2-ethythexAphthalatel ugtL**	**IOU ug/L**	
097G16781	**Bis(2-ethyihexyQphthalate**	**7 ug/L**	**IOU ugIL**
097G16685	**B1s(2-ethyihexA phthalate**	**2 ug/L**	**IOU** Ug/L

VI. **Surrogate Spikes**

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

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)

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

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.

X11. **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 097R1 1981 was identified as a rinsate. No semivolatile contaminants were found in this blank with the following exceptions:

Rinsate ID	Compound	Concentration
097R1 1981	BiS(2-ethyihexy1)phtha1ate	I

Salton Sea Test Base, CTO 097
Semivolatiles - Data Qualification Summary - SDG K9602936

SDG	Sample	Compound	AcrP	Re
K9602936	097RI1981	Z2'-Oxybis(I -chloropropane)	A	Continuing calibration
	097GI 6781	N-Nitrosodiphenylamine		(%D)
	097G16685	Arithracens		
		3,3'-Dichicrobenzidine		
K9602936	097RI1981	1,4-Dichlorobenzene	A	Laboratory control samples
	097G16781	1,2.4-Trichlorobenzene		(11130)
	097G16685			

Salton Sea Test Base, CTO 097
Semivolatiles - 1-2boratory Blank Data Qualification Summary - SDG K9602936

SDG	Sample	Compound TIC (FIT In minutes)	Modified Final Concentration	A or P
K9602936	097RI1981	Sis(2-ethylhexyqphthalate1 OU ug/L	A	
K9602936	097GI6781	Sis(2-ethythexyl)phthafate	IOU ug/L	A
K9602936	097GI 6685	Sis(2-ethylhexyl) phthalate	1 OU ug/L	A

LDC Report# 1866133

Laboratory Data Consultants, Inc.
Data Validation Report

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

Collection Date: May 9 though May 10, 1996

LDC Report Date: July 10, 1996

Matrix: Water

Parameters: Chlorinated Pesticides & PCBs

Laboratory: Columbia Analytical Services, Inc.

Sample Delivery Group (SDG): K9602784

Sample Identification

097G11486
097R11385
097G12985
097G12886
097G12785
097G12985MS
097G12985MSD

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) OLM03.1 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 dezected. The sample detection limit is an estimated value.
A	Indicates the finding is based upon technical validation criteria.
P	Indicates the finding is related to a protocol/contractual deviation.

1. Technical Holding Times

All technical holding time requirements were met.

11. **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% .

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 25.00"0, CC limits.

Ill. **Initial Calibration**

Initial calibration sequence was followed as required.

Initial calibration of single and multicomponent compounds 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 compounds were within the 20.01/'0' CC limits.

All required peaks for muiticomponent compounds 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 CC limits.

The relative percent differences (RPD) of amount in Individual-Mix standards were within the 25.0% CC 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 results were not provided and therefore were not reviewed.

V11. **Surrogate Spikes**

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

Vill. **Matrix Spike/Matrix Spike Duplicates**

Matrix spike (MS) and matrix spike duplicate (MSID) 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)

Although laboratory control samples were not required by the method, laboratory control samples were reported by the laboratory. Percent recoveries (%R) were within QC 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 water samples and was not performed.

X1. **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.

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 097R11385 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 K9602784

No Sample Data Qualified in this SDG

Salton Sea Test Base, CTO 097
Chlorinated Pesticides & PCBs - Laboratory Blank Data Qualification Summary - SDG K9602784

No Sample Data Qualified in this SDG

LDC Report# 1866C3

Laboratory Data Consultants, Inc.
Data Validation Report

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

Collection Date: May 13 though May 14, 1996
LDC Report Date: July 10, 1996

Matrix: Water

Parameters: Chlorinated Pesticides & PCBs

Laboratory: Columbia Analytical Services, Inc.

Sample Delivery Group (SDG): K9602884

Sample Identification

097G13385
097G13085
097G13285
097DO2085
097G13585
097R11185
097G13185
097G13686
097G11386
097G11285
097G11085
097G11885
097R11085
097G11586
097G1 1386MS
097G1 1386MSD

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) OLM03.1 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.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

1. Technical Holding Times

All technical holding time requirements were met.

11. **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% .

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.

III. **Initial Calibration**

Initial calibration sequence was followed as required.

Initial calibration of single and multicomponent compounds 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 compounds were within the 20.0% QC limits.

All required peaks for multicomponent compounds 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 results were not provided and therefore were not reviewed.

V1. **Surrogate Spikes**

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

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.

Vill. Laboratory Control Samples (LCS)

Although laboratory control samples were not required by the method, laboratory control samples were reported by the laboratory. Percent recoveries (%R) were within QC limits.

IX Regional Quality Assurance and Quality Control

Not applicable.

X. Pesticide Cleanup Checks

a. Florisill 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 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**

Samples 097G13285 and 097DO2085 were identified as field duplicates. No chlorinated pesticides or PCBs were detected in any of the samples.

XV. **Field Blanks**

Samples 097R1 1185 and 097R1 1085 were identified as rinsates. No chlorinated pesticide or PCB contaminants were found in these blanks.

Salton Sea Test Base, CTO 097
Chlorinated Pesticides & PCBs - Data Qualification Summary - SDG K9602884

No Sample Data Qualified in this SDG

Salton Sea Test Base, CTO 097
Chlorinated Pesticides & PCBs - Laboratory Blank Data Qualification Summary - SDG K9602884

No Sample Data Qualified in this SDG

LDC Report# 1866A4

Laboratory Data Consultants, Inc.
Data Validatidn Report

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

Collection Date: May 8, 1996

LDC Report Date: July 10, 1996

Matrix: Water

Parameters: Metals

Laboratory: Columbia Analytical Services, Inc.

Sample Delivery Group (SDG): K9602755

Sample Identification

097G11661
097G11761
097G11661S
097G11661D

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) for Inorganic Analysis, Multi-media, Multiconcentration, D.N. ILM04.0 for Title 22 Metals, including EPA Method 200.8 for Antimony. **Data** validation review was based on EPA Contract Laboratory Program Statement of Work (SO", D.N. ILM03.0.

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.
A	Indicates the finding is based upon technical validation criteria.
P	Indicates the finding is related to a protocol/contractual deviation.

1. Technical Holding Times

All technical holding time requirements were met.

11. **Calibration**

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 with the following exceptions:

Sample	Analyte	Finding	**criteria**	Flag	AorP
All samples in SOG K9602755	Molybdenum	CRI standard was not analyzed.	All CRDL standards for ICP and AA must be anaiyzed and reported.	None	P

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

111. **Blanks**

Method blanks were reviewed for each matrix as applicable.

Data qualification by the initial, continuing and preparation blanks (1CB/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 re ' porting limit in the initial, continuing and preparation blanks with the following exceptions:

Method Blank ID	Analyte	Concentration	Associated Samples
ICS	Mercury	0.1 u(3/L	All samples in SOG K9602755
	Zinc	2.2 ugiL	
	Molybdenum	7.6 ugil	
CC81	Chromium	2.3 ugjL	All samples in SOG K9602755
	Zinc	1.5 ug/L	
	Molybdenum	3.8 ug;L	
CCB2	Zinc	1.7 ug/L	All samples in SOG K9602755
	Molybdenum	4.3 u=.,L	
CCB3	Molybdenum	3.8 ugL	All samples in SOG K9602755

Method Blank ID	Analyte	Concentration	Associated Samples
PB (prep blank)	Chromium	3.740 ug/L	All samples in SOG K9602755
	Mercury	0. 100 ug/L	
	Zinc	1.660 ug/L	
CCB3	Selenium	1.2 ug/L	All samples in SOG K9602755

No 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	Analyte	Reported Concentration	Modified Final Concentration
097G 11661	Zinc	5.5 ug/L	5.5U ug/L
097GI 1761	Znc	2.7 ug/L	2-7U 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 (%R) were within QC limits.

VI. **Duplicate Sample Analysis**

Duplicate sample analyses were reviewed for each matrix as applicable. Results were within CC limits.

VII. **Matrix Spike Analysis**

Matrix spike analyses were reviewed for each matrix as applicable. Percent recoveries (%R) were within CC lim, its of 75-1 '1250/0 .

Vill. Internal Standards (ICP-MS)
All internal standard percent recoveries (%R) were within QC limits.
IX Furnace Atomic Absorption QC
All reported MSAs were reviewed and found acceptable.
Raw data were not reviewed for this SDG.
X. ICP Serial Dilution
The frequency of analysis was met.
The criteria for analysis were met.
XL 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.
XIII. Field Duplicates
No field duplicates were identified in this SDG.
IX Field Blanks
No field blanks were identified in this SDG.

Salton Sea Test Base, CTO 097
Metals - Data Qualification Summary - SDG K9602755

SDG	Sample	I	Analyte	Flag	AarP	1,	Reason
K9602755	097G11661 097G11761	Molybdenum None		p	Calibration		

SaltonSea Test Base, CTO 097
Metals - Laboratory Blank Data Qualification Summary - SDG K9602755

SDG	Sample	Analyte	Modifled Final Concentration	A or 7P
K9602755	097G 11661	Zinc	5.5U Ug/L	A
K9602755	097GI1761	Zinc	2.7U ug/L J	A

1866A4.BC3

LDC Report# 1866134

Laboratory Data Consultants, Inc.
Data Validati6n Report

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

Collection Date: May 9 through May 10, 1996
LDC Report Date: July 10,. 1996
Matrix: Water

Parameters: Metals

Laboratory: Columbia Analytical Services, Inc.

Sample Delivery Group (SDG): K9602784

Sample Identification

097G14561
097G14661
097G15361
097G1 1461
097G12261
097R1 1361
097G12961
097G12861
097G12061
097G12161
097G12361
097G12461
097G12561
097G12761
097G12661
097G 12961 S
097G12961D

Introduction

This data review covers 17 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 Title 22 Metals, including EPA Method 200.8 for Antimony. Data validation review was based on EPA Contract Laboratory Program Statement of Work (SOW), D.N. ILM03.0.

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 III.

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.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

1. **Technical Holding Times**

All technical holding time requirements were met.

11. **Calibration**

An initial calibration was performed.

The frequency and analysis criteria of the initial calibration verification (ICV) and continuing calibration verification (CCV) were met with the following exceptions:

Date	Lab. Reference/11)	Analyte	%R (Limits)	Associated Samples	Flag TA 7.rP
5/28/96	ICV	Thailium	112.8 (90-110)	097GI 1461 097G1 2261 097R1 1361 097G1 2961 097G1 2861 097G12061 097G12161 097GI2361 097G12461 097G12561 097GI2761 097G 12661 097GI2961S 097G 12961 D PBW	None p

CRDL standards for ICP and AA were analyzed and reported as required with the following exceptions:

S.-Ple	Analyte	Finding	C riteria	Flag A or P
097G1 1461 097G12261 097R1 1361 097GI2961 097G12861 097G12061 097G1 2161 097G12361 097G12461 097G12561 097G12761 097G 12661 097GI2961S 097G 12961 D PBW	Molybdenum	CRI standard was not analyzed.	All CROL standards for ICP and AA must be analyzed and reported.	None P

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

Ill. Blanks

Method blanks were reviewed for each matx as applicable.

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

Method Blank ID	Analyte	Concentration	Associated Samples
ICS	Beryllium	-0.4 ug/L	097GI 1461 097GI2261 097RI 1361 0971312961 097GI2861 097G12061 097G 12161 097GI2361 097GI2461 097GI2561 097GI2761 097G1 2661
CCB1	Chromium	2.5 ug/L	097G1 1461 097G12261 097R1 1361 097G 12961 097G12861 097GI2061 097G1 2161 097G12361 097G 12461 097G 12551 097G 12761 097G12551
CCB2	Beryllium Mercury	-0.4 ug/L 0.1 ug/L	097G1 1461 0971312251 097R1 1361 097G 129 61 097G12851 097G12061 097G 12161 097G1226I 097G12461 -097G 125 61 097G 12761 097G 12661

Method Blank ID	Anallyte--T	Concentration	Associated Samples
CCB3	Barium	1.9 ug/L	097GI 1461
	Copper	-2.8 ug/L	097G12261
	Mercury	0.1 ugjL	097R1 1361
			097G1 2961
			097G1 2861
			097GI2061
			097GI 2161
			097GI 2361
			097GI2461
			097G12561
			097G12761
			097GI2661
PB (prep blank)	Beryllium	0.400 ug/L	097G 11461
			097G12251
			097R1 1361
			097G12961
			097GI 2861
			097G 12061
			097G 12161
			097G1 2361
			097G12461
			097G1 2561
			0971312761
			097GI2661
CCB1	Barium		
	Copper	-2.5 ug/L	097G 12261
	Znc	1.9 ug/L	097R1 1361
		2.2 ug/L	097G 11461
			097G 129 61 097GI2861 097GI2061 097G 12161 097G 123 61 097G12461 097G12561 097G 12761 097G 12661
CCB1	Selenium	1.0 ug/L	0971311461
			097G12251
			0971111361
			097G12961
			097G12861
			097G12061
			097G 12161
			097G 12361
			097G 12461
			097G1 2561
			097G1 2761
			097G1 2661
CCB2	Lead	1.0 ugL	All samples in SCG K9602754
CCB3	Lead	1.0 ug/L	All samples in SE)G K9602784

Method Blank ID	Analyte	Concentration	Associated Samples
CCB1	Lead	1.1 ug/L	All samples in SOG K9602784
CCB2	Lead	1.4 ug/L	All samples in SOG K9602784

No 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	Analyte	Reported Concentration	Modified Fina Concentratio
097GI4561	Lead	2.8 ug/L	2.8U uglL
097G11461	Zinc	3.7 ug/L	3.7U ug/L
097GI2251	Selenium	3.1 ugtL	3.1 U ug/L
	Zinc	2.1 ug/L	2-lU ug/L
097G12961	23nc	4.1 ug/L	-%.1U ug/L
097G 12861	Selenium	1.9 ugiL	I-SU uglL
	Zinc	2.6 ug/L	2.5U ug~L
097G 12061	Zinc	3.7 ug/L	3. ₄U ug/L
097G 12161	Zinc	4.0 ug/L	4.GU ug/L
0971312361	Chromium	4.9 ugjL	4.91J ug/L
	Lead	5.6 ugjL	5.6U ua/L
	Selenium	1.7 uq/L	1.'Ll ug/L
0971312461	Lead	1:7 ug/L	I7U uo/L
	Selenium	4.3 ug/L	-Z.3U ug,,L
	Zinc	4.5 ug/L	4.5U uc/L
097G 125 61	Selenium	3.2 ug/L	3.2U ug/L
	Zinc	1.9 ugiL	1.9LI ua/L
097GI2761	Lead	3.0 ug/L	3.OU ugil
	Zinc	3.8 ugiL	3.81J ug,,L

sample	Analyte	Reported Concentration	Modified Final Concentration
1[~I 2661	**Selenium**	**4.0 ug/L**	**4-OU ug/L**
	Zinc	**1.9 ug/L**	**1 AU ug/L**

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

The frequency of analysis was met with the following exceptions:

Sample	Analyte	Finding	**Criteria**	Flag	TA ▪ 7,P
097G12961 097GI2761	**Molybdenum**	**This metal was not spiked in ICSAB. The concentrations of the common interferents in these samples appro)dmated the spike values or were not reported.**	**This metal is potentially affected by common interferents and should be spiked in ICSAB.**	j	**A**

The criteria for analysis were met.

V. Laboratory Control Samples (LCS)

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

VI. **Duplicate Sample Analysis**

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

VII. **Matrix Spike Analysis**

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

Sample (Associated Samples)	Anslyte	%R	Flag	AorP
097G12961S (097G1 1461 097GI2261 097RI 1361 097GI2961 097G1 2861 097G12061 097G1 2161 097G12361 097G12461 097G12561 097GI2761 097G12661)	Selenium	45.0		A

Vill. **Internal Standards** (ICP-MS)
All internal standard percent recoveries (%R) were within QC limits.

IX. **Furnace Atomic Absorption** QC
All reported MSAs were reviewed and found acceptable.

Raw data were not reviewed for this SDG.

X. ICP **Serial Dilution**

The frequency of analysis was met
The criteria for analysis were met with the following exceptions:

Diluted Sample	Analyte	%D (Limits)	Associated Samples	Flag	A or P
097GI2961L	Barium	10.8 (:510)	097G1 1461 097GI2261 097R 11361 097G12961 097G12861 097G 12061 097G12161 097G 12261 097G 12461 097C312551 097GI2761 097G12651 097G12961S 097G129610	J (all dete=s)	A

XI. **Sample Result Verification**

Raw data were not reviewed for this SDG.

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 097R1 1361 was identified as a rinsate. No metal contaminants were found in this blank.

Salton Sea Test Base, CTO 097
Metals - Data Qualification Summary - SDG K9602784

SDG	Sample	Analyte	Flag	AorP	Reas
K9602784	0971311461	Thallium	None	p	Calibration
	097G12261	Molybdenum			
	097RI1361				
	097G12961				
	097G 12861				
	097GI 2061				
	097G12151				
	097G12361				
	097G1 2461				
	097G12561				
	097GI2761				
	097G12661				
K9602784	097G12961	Molybdenum		A	ICP interference check
	097G12761				sampie analysis
K9602784	0971311461	Selenium	i	A	Matrix s.pike analysis (II.R)
	097G12261				
	0971111361				
	097G12961				
	0971312861				
	097G12061				
	097GI2161				
	097G12361				
	097G12461				
	097G12561				
	097GI2761				
	097G121561				
K9602764	097G11461	Barium	J (all detects~	A	ICP serial dilution (90)
	097G 12261				
	097R11361				
	097G 12961				
	097GI2861				
	097GI2061				
	0971312161				
	097G12361				
	097GI2461				
	097G12561				
	097G12761				
	097GI2661				

Salton Sea Test Base, CTO 097
Metals - Laboratory Blank Data Qualification Summary - SPG K9602784

SDG	Sample	Analyte	Modified Final Concentration	A or P
K9602784	0971314561	Lead	2.8U ug/L	A

SDG	Sample	Analytq	Modified Final Concentrauan	A , P
K9602784	097G11461	Zinc	3.7U ug/L	
K9502784	097G12261	Selenium	3.IU ug/L	A
		Zinc	2.1 U ug/L	
K9602784	097GI2961	ZInc	4.1 U ug/L	A
K9602784	09713121361	Selenium	1.91.1 ug/L	A
		Zinc	2.6U ug/L	
K9602784	097GI2061	Zinc	3.7U ugjL	A
K9602784	097G12161	Zinc	4.OU uglL	A
K9602784	097GI2361	Chromium	4.91-1 ug/L	A
		Lead	5.6U ugjL	
		Selenium	1.71.1 ug/L	
K9602784	097GI2461	Lead	1.7U ug/L	A
		Selenium	4.3U ug/L	
		Zinc	4.5U ugjL	
K9602784	097G1 2561	Selenium	3.2U ug/L	A
		Zinc	1.9U ug/L	
K9602754	097GI2761	Lead	3.01.1 ug/L	A
		Zinc	3.8U ug/L	
K9602784	097G1 2661	Selenium	4.01.1 ug/L	A
		Zinc	1.91.1 ug/L	