

## I. Technical Holding Times

All technical holding time requirements were met.

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

## II. GC/MS Instrument Performance Check

The samples were analyzed after the DFTPP tuning. The instrument performance check could not be verified at the 12 hour interval.

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 calibration check compounds and less than or equal to 50.0% for all other 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 20.0% for all calibration check compounds and less than or equal to 50.0% for all other compounds.

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 Samples
B7101587*1*MB	10/21/97	Di-n-butylphthalate	220 ug/Kg	All samples in SDG G9710387

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
18609-610	Di-n-butylphthalate	470 ug/Kg	470U ug/Kg
18609-612	Di-n-butylphthalate	282 ug/Kg	370U ug/Kg
18609-614	Di-n-butylphthalate	333 ug/Kg	370U ug/Kg
18609-616	Di-n-butylphthalate	200 ug/Kg	370U ug/Kg
18609-618	Di-n-butylphthalate	190 ug/Kg	370U ug/Kg
18609-620	Di-n-butylphthalate	230 ug/Kg	350U ug/Kg
18609-622	Di-n-butylphthalate	250 ug/Kg	350U ug/Kg
18609-624	Di-n-butylphthalate	190 ug/Kg	350U ug/Kg
18609-626	Di-n-butylphthalate	290 ug/Kg	350U ug/Kg
18609-628	Di-n-butylphthalate	310 ug/Kg	380U ug/Kg
18609-630	Di-n-butylphthalate	280 ug/Kg	380U ug/Kg
18609-632	Di-n-butylphthalate	260 ug/Kg	390U ug/Kg

## VI. Surrogate Spikes

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

## VII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable with the following exceptions:

Samples	Compound	Finding	Criteria	Flag	A or P
All samples in SDG G9710387	N-Nitroso-di-n-propylamine	The MS/MSD associated with these samples was not spiked with this compound.	The MS/MSD must be performed according to the QAPP.	None	P

Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

### VIII. Laboratory Control Samples (LCS)

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

Samples	Compound	Finding	Criteria	Flag	A or P
All samples in SDG G9710387	N-Nitroso-di-n-propylamine	The LCS/LCSD associated with these samples was not spiked with this compound.	The LCS/LCSD must be performed according to the QAPP.	None	P

Percent recoveries (%R) and relative percent differences (RPD) 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

No field duplicates were identified in this SDG.

**XVII. Field Blanks -**

No field blanks were identified in this SDG.

**MCAS EI Toro**  
**Semivolatiles - Data Qualification Summary - SDG G9710387**

SDG	Sample	Compound	Flag	A or P	Reason
G9710387	18609-610 18609-612 18609-614 18609-616 18609-618 18609-620 18609-622 18609-624 18609-626 18609-628 18609-630 18609-632	N-Nitroso-di-n-propylamine	None	P	Matrix spike/Matrix spike duplicates
G9710387	18609-610 18609-612 18609-614 18609-616 18609-618 18609-620 18609-622 18609-624 18609-626 18609-628 18609-630 18609-632	N-Nitroso-di-n-propylamine	None	P	Matrix spike/Matrix spike duplicates

**MCAS EI Toro**  
**Semivolatiles - Laboratory Blank Data Qualification Summary - SDG G9710387**

SDG	Sample	Compound TIC (RT in minutes)	Modified Final Concentration	A or P
G9710387	18609-610	Di-n-butylphthalate	470U ug/Kg	A
G9710387	18609-612	Di-n-butylphthalate	370U ug/Kg	A
G9710387	18609-614	Di-n-butylphthalate	370U ug/Kg	A
G9710387	18609-616	Di-n-butylphthalate	370U ug/Kg	A
G9710387	18609-618	Di-n-butylphthalate	370U ug/Kg	A
G9710387	18609-620	Di-n-butylphthalate	350U ug/Kg	A
G9710387	18609-622	Di-n-butylphthalate	350U ug/Kg	A

SDG	Sample	Compound TIC (RT in minutes)	Modified Final Concentration	A or P
G9710387	18609-624	Di-n-butylphthalate	350U ug/Kg	A
G9710387	18609-626	Di-n-butylphthalate	350U ug/Kg	A
G9710387	18609-628	Di-n-butylphthalate	380U ug/Kg	A
G9710387	18609-630	Di-n-butylphthalate	380U ug/Kg	A
G9710387	18609-632	Di-n-butylphthalate	390U ug/Kg	A

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

**Project/Site Name:** MCAS El Toro  
**Collection Date:** October 16, 1997  
**LDC Report Date:** June 29, 1998  
**Matrix:** Soil  
**Parameters:** Semivolatiles  
**Validation Level:** NFESC Level C  
**Laboratory:** VOC Analytical Laboratories, Inc.  
**Sample Delivery Group (SDG):** G9710387

**Sample Identification**

18609-610  
18609-612  
18609-614  
18609-616  
18609-618  
18609-620  
18609-622  
18609-624  
18609-626  
18609-628  
18609-630  
18609-632

## Introduction

This data review covers 12 soil samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8270-SIM for Semivolatiles.

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 the method stated above.

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

Blank results are summarized in Section V.

Field duplicates are summarized in Section XVI.

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

## **I. Technical Holding Times**

All technical holding time requirements were met.

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

## **II. GC/MS Instrument Performance Check**

The samples were analyzed after the DFTPP tuning. The instrument performance check could not be verified at the 12 hour interval.

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 calibration check compounds and less than or equal to 50.0% for all other 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 30.0% for all calibration check compounds and less than or equal to 50.0% for all other compounds.

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.

## **VI. Surrogate Spikes**

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

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

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)**

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

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

Not applicable.

### **X. Internal Standards**

Internal standard data were not provided and therefore not reviewed.

### **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.

### **XVII. Field Blanks**

No field blanks were identified in this SDG.

**MCAS EI Toro**  
**Semivolatiles - Data Qualification Summary - SDG G9710387**

No Sample Data Qualified in this SDG

**MCAS EI Toro**  
**Semivolatiles - Laboratory Blank Data Qualification Summary - SDG G9710387**

No Sample Data Qualified in this SDG

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

**Project/Site Name:** MCAS El Toro  
**Collection Date:** October 16, 1997  
**LDC Report Date:** June 30, 1998  
**Matrix:** Soil  
**Parameters:** Chlorinated Pesticides & PCBs  
**Validation Level:** NFESC Level C  
**Laboratory:** VOC Analytical Laboratories, Inc.

**Sample Delivery Group (SDG):** G9710387

**Sample Identification**

18609-610  
18609-612  
18609-614  
18609-616  
18609-618  
18609-620  
18609-622  
18609-624  
18609-626  
18609-628  
18609-630  
18609-632

## Introduction

This data review covers 12 soil samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8081 for Chlorinated Pesticides and PCBs.

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 the method stated above.

A table summarizing all data qualification flags is provided at the end of this report. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from 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 analyte was analyzed for but not detected at or above the stated limit.
- J Indicates an estimated value.
- R Quality control indicates the data is not usable.
- N Presumptive evidence of presence of the constituent.
- UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.
- A Indicates the finding is based upon technical validation criteria.
- P Indicates the finding is related to a protocol/contractual deviation.
- None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

## I. Technical Holding Times

All technical holding time requirements were met.

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

## II. GC/ECD Instrument Performance Check

Instrument performance was acceptable unless noted otherwise under initial calibration and continuing calibration sections.

## III. Initial Calibration

Initial calibration of single and multicomponent compounds was performed for the primary (quantitation) column and confirmation column as required by this method.

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

## IV. Continuing Calibration

Continuing calibration was performed at required frequencies.

The percent differences (%D) of calibration factors in continuing standard mixtures were within the 15.0% QC limits.

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

## V. Blanks

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

## VI. Surrogate Spikes

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

Sample	Column	Surrogate	%R (Limits)	Compound	Flag	A or P
18609-826	DB-608	Tetrachloro-m-xylene	146 (35-135)	All TCL compounds	J (all detects)	A

## 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)**

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

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

Not applicable.

### **X. Pesticide Cleanup Checks**

#### **a. Florisil Cartridge Check**

Florisil cleanup was not required and therefore not performed in this SDG.

#### **b. GPC Calibration**

GPC cleanup was not required and therefore not performed in this SDG.

### **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.

### **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**

No field blanks were identified in this SDG.

**MCAS EI Toro  
Chlorinated Pesticides & PCBs - Data Qualification Summary - SDG G9710387**

SDG	Sample	Compound	Flag	A or P	Reason
G9710387	18609-626	Tetrachloro-m-xylene	J (all detects)	A	Surrogate spikes (%R)

**MCAS EI Toro  
Chlorinated Pesticides & PCBs - Laboratory Blank Data Qualification Summary -  
SDG G9710387**

No Sample Data Qualified in this SDG

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

**Project/Site Name:** MCAS El Toro  
**Collection Date:** October 16, 1997  
**LDC Report Date:** June 30, 1998  
**Matrix:** Soil  
**Parameters:** Metals & Cyanide  
**Validation Level:** NFESC Level C  
**Laboratory:** VOC Analytical Laboratories, Inc.  
**Sample Delivery Group (SDG):** G9710387

**Sample Identification**

18609-610  
18609-612  
18609-614  
18609-616  
18609-618  
18609-620  
18609-622  
18609-624  
18609-626  
18609-628  
18609-630  
18609-632

## Introduction

This data review covers 12 soil samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Methods 6010 and 7000 for Metals and EPA SW 846 Method 9010A for Cyanide. The metals analyzed were Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Vanadium, and Zinc.

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

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

Blanks are summarized in Section III.

Field duplicates are summarized in Section XIII.

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

## I. Technical Holding Times

All technical holding time requirements were met.

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

## II. Calibration

An initial calibration was performed.

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

Sample	Analyte	Finding	Criteria	Flag	A or P
All samples in SDG G9710387	Cyanide	Calibration verification not performed at the required frequencies.	Calibration verification should be performed immediately following initial calibration and once every ten samples.	None	P

## III. Blanks

Method blanks were reviewed for each matrix as applicable.

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

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

The frequency of analysis was met.

The criteria for analysis were met.

## V. Matrix Spike Analysis

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

Spike ID (Associated Samples)	Analyte	MS (%R) (Limits)	MSD (%R) (Limits)	RPD (Limits)	Flag	A or P
18609-598MS/MSD (All samples in SDG G9710387)	Selenium	15 (73-122)	19 (73-122)	-	J (all detects) R (all non-detects)	A
18609-598MS/MSD (All samples in SDG G9710387)	Silver	79 (80-120)	-	-	J	A
	Barium	69 (80-120)	-	-	J	
	Magnesium	125 (80-120)	-	-	J (all detects)	
	Arsenic	69 (74-120)	59 (74-120)	-	J	
	Mercury	-	75 (77-120)	-	J	

## VI. Duplicate Sample Analysis

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

## VII. Laboratory Control Samples (LCS)

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

## VIII. Internal Standards (ICP-MS)

ICP-MS was not utilized in this SDG.

## IX. Furnace Atomic Absorption QC

Graphite furnace atomic absorption QC were not reviewed for this SDG.

## X. ICP Serial Dilution

Although ICP serial dilution analysis was not required by the method, it was performed by the laboratory. The analysis criteria were met.

## 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.

## XIII. Field Duplicates

No field duplicates were identified in this SDG.

#### **XIV. Field Blanks -**

No field blanks were identified in this SDG.

MCAS EI Toro  
 Metals & Cyanide - Data Qualification Summary - SDG G9710387

SDG	Sample	Analyte	Flag	A or P	Reason
G9710387	18609-610 18609-612 18609-614 18609-616 18609-618 18609-620 18609-622 18609-624 18609-626 18609-628 18609-630 18609-632	Cyanide	None	P	Calibration
G9710387	18609-610 18609-612 18609-614 18609-616 18609-618 18609-620 18609-622 18609-624 18609-626 18609-628 18609-630 18609-632	Selenium	J (all detects) R (all non-detects)	A	Matrix spike analysis (%R)
G9710387	18609-610 18609-612 18609-614 18609-616 18609-618 18609-620 18609-622 18609-624 18609-626 18609-628 18609-630 18609-632	Silver Barium Magnesium Arsenic Mercury	J J J (all detects) J J	A	Matrix spike analysis (%R)

MCAS EI Toro  
 Metals & Cyanide - Laboratory Blank Data Qualification Summary - SDG G9710387

No Sample Data Qualified in this SDG

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

**Project/Site Name:** MCAS El Toro  
**Collection Date:** November 5, 1997  
**LDC Report Date:** June 30, 1998  
**Matrix:** Water  
**Parameters:** Total Petroleum Hydrocarbons as Gasoline  
**Validation Level:** NFESC Level C  
**Laboratory:** VOC Analytical Laboratories, Inc.  
**Sample Delivery Group (SDG):** G9711110

**Sample Identification**

18609-759  
18609-760

## Introduction

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

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

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

Blank results are summarized in Section III.

Field duplicates are summarized in Section IX.

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

The following are definitions of the data qualifiers:

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

## **I. Technical Holding Times**

All technical holding time requirements were met.

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

## **II. Calibration**

### **a. Initial Calibration**

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

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

### **b. Calibration Verification**

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

## **III. Blanks**

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

## **IV. Accuracy and Precision Data**

### **a. Surrogate Recovery**

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

### **b. Matrix Spike/Matrix Spike Duplicates**

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

### **c. Laboratory Control Samples**

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

## **V. Target Compound Identification**

Raw data were not reviewed for this SDG.

## **VI. Compound Quantitation and CRQLs**

Raw data were not reviewed for this SDG.

## **VII. System Performance**

Raw data were not reviewed for this SDG.

## **VIII. Overall Assessment of Data**

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

## **IX. Field Duplicates**

No field duplicates were identified in this SDG.

## **X. Field Blanks**

Sample 18609-760 was identified as a trip blank. No total petroleum hydrocarbons as gasoline contaminants were found in this blank.

Sample 18609-759 was identified as a rinsate. No total petroleum hydrocarbons as gasoline contaminants were found in this blank.

**MCAS El Toro  
Total Petroleum Hydrocarbons as Gasoline - Data Qualification Summary - SDG  
G9711110**

No Sample Data Qualified in this SDG

**MCAS El Toro  
Total Petroleum Hydrocarbons as Gasoline - Laboratory Blank Data Qualification  
Summary - SDG G9711110**

No Sample Data Qualified in this SDG

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

**Project/Site Name:** MCAS El Toro  
**Collection Date:** November 5, 1997  
**LDC Report Date:** June 29, 1998  
**Matrix:** Water  
**Parameters:** Total Petroleum Hydrocarbons as Extractables  
**Validation Level:** NFESC Level C  
**Laboratory:** VOC Analytical Laboratories, Inc.

**Sample Delivery Group (SDG):** G9711110

**Sample Identification**

18609-759

## Introduction

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

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 the method stated above.

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

Blank results are summarized in Section III.

Field duplicates are summarized in Section IX.

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

The following are definitions of the data qualifiers:

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

## **I. Technical Holding Times**

All technical holding time requirements were met.

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

## **II. Calibration**

### **a. Initial Calibration**

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

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

### **b. Calibration Verification**

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

## **III. Blanks**

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

## **IV. Accuracy and Precision Data**

### **a. Surrogate Recovery**

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

### **b. Matrix Spike/Matrix Spike Duplicates**

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

### **c. Laboratory Control Samples**

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

## **V. Target Compound Identification**

Raw data were not reviewed for this SDG.

## **VI. Compound Quantitation and CRQLs**

Raw data were not reviewed for this SDG.

## **VII. System Performance**

Raw data were not reviewed for this SDG.

## **VIII. Overall Assessment of Data**

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

## **IX. Field Duplicates**

No field duplicates were identified in this SDG.

## **X. Field Blanks**

Sample 18609-759 was identified as a rinsate. No total petroleum hydrocarbons as extractables contaminants were found in this blank.

**MCAS El Toro  
Total Petroleum Hydrocarbons as Extractables - Data Qualification Summary - SDG  
G9711110**

No Sample Data Qualified in this SDG

**MCAS El Toro  
Total Petroleum Hydrocarbons as Extractables - Laboratory Blank Data  
Qualification Summary - SDG G9711110**

No Sample Data Qualified in this SDG

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

**Project/Site Name:** MCAS El Toro  
**Collection Date:** November 5, 1997  
**LDC Report Date:** June 30, 1998  
**Matrix:** Water  
**Parameters:** Volatiles  
**Validation Level:** NFESC Level C  
**Laboratory:** VOC Analytical Laboratories, Inc.  
**Sample Delivery Group (SDG):** G9711110

**Sample Identification**

18609-759  
18609-760

## Introduction

This data review covers 2 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 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 the method stated above.

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

Blank results are summarized in Section V.

Field duplicates are summarized in Section XVI.

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

## I. Technical Holding Times

All technical holding time requirements were met.

Cooler temperatures were not provided and therefore not reviewed.

## II. GC/MS Instrument Performance Check

The samples were analyzed after the BFB tuning. The instrument performance check could not be verified at the 12 hour interval.

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 calibration check compounds and less than or equal to 50.0% for all other compounds.

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)	Associated Samples	Flag	A or P
11/5/97	Acetone 2-Butanone 4-Methyl-2-pentanone	0.040 ( $\geq 0.05$ ) 0.040 ( $\geq 0.05$ ) 0.023 ( $\geq 0.05$ )	All samples in SDG G9711110	J (all detects) R (all non-detects)	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% for all calibration check compounds and less than or equal to 50.0% for all other compounds.

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
11/14/97	4-Methyl-2-pentanone	0.033 ( $\geq 0.05$ )	All samples in SDG G9711110	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
B7118581	11/14/97	Methylene chloride Acetone Methyl-tert-butyl ether Toluene	0.28 ug/L 2.5 ug/L 0.38 ug/L 0.16 ug/L	All samples in SDG G9711110

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.

## VI. Surrogate Spikes

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

## VII. Matrix Spike/Matrix Spike Duplicates

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)

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 SDG G9711110	All TCL compounds	The LCS was analyzed as a continuing calibration standard.	The LCS should be analyzed independently from the calibration.	None	P

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 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

Sample 18609-760 was identified as a trip blank. No volatile contaminants were found in this blank.

Sample 18609-759 was identified as a rinsate. No volatile contaminants were found in this blank with the following exceptions:

Rinsate ID	Compound	Concentration (ug/L)
18609-759	Chloroform	2.0
	Dibromochloromethane	1.7
	Bromodichloromethane	1.8

**MCAS El Toro  
Volatiles - Data Qualification Summary - SDG G9711110**

SDG	Sample	Compound	Flag	A or P	Reason
G9711110	18609-759 18609-760	Acetone 2-Butanone 4-Methyl-2-pentanone	<del>J (all detects)</del> <del>B (all non-detects)</del>	A	Initial calibration (RRF)
G9711110	18609-759 18609-760	4-Methyl-2-pentanone	<del>J (all detects)</del> <del>B (all non-detects)</del>	A	Continuing calibration (RRF)
G9711110	18609-759 18609-760	All TCL compounds	None	P	Laboratory control samples

**MCAS El Toro  
Volatiles - Laboratory Blank Data Qualification Summary - SDG G9711110**

No Sample Data Qualified in this SDG

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

**Project/Site Name:** MCAS El Toro  
**Collection Date:** November 5, 1997  
**LDC Report Date:** June 30, 1998  
**Matrix:** Water  
**Parameters:** Semivolatiles  
**Validation Level:** NFESC Level C  
**Laboratory:** VOC Analytical Laboratories, Inc.  
**Sample Delivery Group (SDG):** G9711110

**Sample Identification**

18609-759  
18609-759MS  
18609-759MSD

## Introduction

This data review covers 3 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8270B for Semivolatiles.

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 the method stated above.

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

Blank results are summarized in Section V.

Field duplicates are summarized in Section XVI.

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

## I. Technical Holding Times

All technical holding time requirements were met.

Cooler temperatures were not provided and therefore not reviewed.

## II. GC/MS Instrument Performance Check

The samples were analyzed after the DFTPP tuning. The instrument performance check could not be verified at the 12 hour interval.

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 calibration check compounds and less than or equal to 50.0% for all other 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 20.0% for all calibration check compounds and less than or equal to 50.0% for all other compounds.

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 Samples
B11474*1*MB	11/11/97	Di-n-butylphthalate Bis(2-ethylhexyl)phthalate	2.0 ug/L 0.86 ug/L	All samples in SDG G9711110

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
18609-759	Bis(2-ethylhexyl)phthalate	2.10 ug/L	10U ug/L

## VI. Surrogate Spikes

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

## VII. Matrix Spike/Matrix Spike Duplicates

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)

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

No field duplicates were identified in this SDG.

### XVII. Field Blanks

Sample 18609-759 was identified as a rinsate. No semivolatile contaminants were found in this blank with the following exceptions:

Rinsate ID	Compound	Concentration (ug/L)
18609-759	Bis(2-ethylhexyl)phthalate	2.10

**MCAS El Toro**  
**Semivolatiles - Data Qualification Summary - SDG G9711110**

No Sample Data Qualified in this SDG

**MCAS El Toro**  
**Semivolatiles - Laboratory Blank Data Qualification Summary - SDG G9711110**

SDG	Sample	Compound TIC (RT in minutes)	Modified Final Concentration	A or P
G9711110	18609-759	Bis(2-ethylhexyl)phthalate	10U ug/L	A

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

**Project/Site Name:** MCAS El Toro  
**Collection Date:** November 5, 1997  
**LDC Report Date:** July 1, 1998  
**Matrix:** Water  
**Parameters:** Chlorinated Pesticides & PCBs  
**Validation Level:** NFESC Level C  
**Laboratory:** VOC Analytical Laboratories, Inc.  
**Sample Delivery Group (SDG):** G9711110

**Sample Identification**

18609-759  
18609-759MS  
18609-759MSD

## Introduction

This data review covers 3 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8081 for Chlorinated Pesticides and PCBs.

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 the method stated above.

A table summarizing all data qualification flags is provided at the end of this report. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from 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 analyte was analyzed for but not detected at or above the stated limit.
- J Indicates an estimated value.
- R Quality control indicates the data is not usable.
- N Presumptive evidence of presence of the constituent.
- UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.
- A Indicates the finding is based upon technical validation criteria.
- P Indicates the finding is related to a protocol/contractual deviation.
- None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

## I. Technical Holding Times

All technical holding time requirements were met.

Cooler temperatures were not provided and therefore not reviewed.

## II. GC/ECD Instrument Performance Check

Performance evaluation mixture data were not provided and therefore not reviewed.

## III. Initial Calibration

Initial calibration of single and multicomponent compounds was performed for the primary (quantitation) column and confirmation column as required by this method.

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

## IV. Continuing Calibration

Continuing calibration was performed at required frequencies.

The percent differences (%D) of calibration factors in continuing standard mixtures were within the 15.0% QC limits with the following exceptions:

Date	Standard	Column	Compound	%D	Associated Samples	Flag	A or P
11/9/97	CCV AR1660 1ppm	DB-608	Aroclor-1260	18.0	18609-759 97210MB	J	P

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

## V. Blanks

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

## VI. Surrogate Spikes

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

## VII. Matrix Spike/Matrix Spike Duplicates

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

Spike ID (Associated Samples)	Compound	MS (%R) (Limits)	MSD (%R) (Limits)	RPD (Limits)	Flag	A or P
18609-759MS/MSD (All samples in SDG G9711110)	4,4'-DDT	-	-	36 ( $\leq 30$ )	J	A
	Dieldrin	-	-	33 ( $\leq 30$ )	J	
	Endrin	145 (43-134)	-	39 ( $\leq 30$ )	J	
	gamma-BHC	137 (73-125)	-	-	J (all detects)	

### VIII. Laboratory Control Samples (LCS)

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

### IX. Regional Quality Assurance and Quality Control

Not applicable.

### X. Pesticide Cleanup Checks

#### a. Florisil Cartridge Check

Florisil cleanup was not required and therefore not performed in this SDG.

#### b. GPC Calibration

GPC cleanup was not required and therefore not performed in this SDG.

### 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.

### 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 18609-759 was identified as a rinsate. No chlorinated pesticide or PCB contaminants were found in this blank.

MCAS El Toro  
 Chlorinated Pesticides & PCBs - Data Qualification Summary - SDG G9711110

SDG	Sample	Compound	Flag	A or P	Reason
G9711110	18609-759	Aroclor-1260	J	P	Continuing calibration (%D)
G9711110	18609-759	4,4'-DDT Dieldrin Endrin gamma-BHC	J J J -J (all detects)	A	Matrix spike/Matrix spike duplicates (%R)(RPD)

MCAS El Toro  
 Chlorinated Pesticides & PCBs - Laboratory Blank Data Qualification Summary -  
 SDG G9711110

No Sample Data Qualified in this SDG

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

**Project/Site Name:** MCAS El Toro  
**Collection Date:** November 5, 1997  
**LDC Report Date:** July 1, 1998  
**Matrix:** Water  
**Parameters:** Metals & Cyanide  
**Validation Level:** NFESC Level C  
**Laboratory:** VOC Analytical Laboratories, Inc.

**Sample Delivery Group (SDG):** G9711110

**Sample Identification**

18609-759  
18609-759MS  
18609-759MSD

## Introduction

This data review covers 3 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Methods 6010 and 7000 for Metals and EPA SW 846 Method 9010A for Cyanide. The metals analyzed were Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Vanadium, and Zinc.

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

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

Blanks are summarized in Section III.

Field duplicates are summarized in Section XIII.

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

## I. Technical Holding Times

All technical holding time requirements were met.

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

## II. 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:

Sample	Analyte	Finding	Criteria	Flag	A or P
All samples in SDG G9711110	Cyanide	Calibration verification not performed at the required frequencies.	Calibration verification should be performed immediately following initial calibration and once every ten samples.	None	P

## III. Blanks

Method blanks were reviewed for each matrix as applicable.

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

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

The frequency of analysis was met.

The criteria for analysis were met.

## V. Matrix Spike Analysis

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

Spike ID (Associated Samples)	Analyte	MS (%R) (Limits)	MSD (%R) (Limits)	RPD (Limits)	Flag	A or P
18609-759MS/MSD (All samples in SDG G9711110)	Selenium	-	71 (73-122)	-	J	A

## VI. Duplicate Sample Analysis

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

## VII. Laboratory Control Samples (LCS)

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

## VIII. Internal Standards (ICP-MS)

ICP-MS was not utilized in this SDG.

## IX. Furnace Atomic Absorption QC

Graphite furnace atomic absorption QC were not reviewed for this SDG.

## X. ICP Serial Dilution

Although ICP serial dilution analysis was not required by the method, it was performed by the laboratory. The analysis criteria were met.

## 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.

## XIII. Field Duplicates

No field duplicates were identified in this SDG.

## XIV. Field Blanks

Sample 18609-759 was identified as a rinsate. No metal or cyanide contaminants were found in this blank with the following exceptions:

Rinsate ID	Analyte	Concentration (ug/L)
18609-759	Aluminum Barium Beryllium Cadmium Calcium Copper Iron Lead Magnesium Manganese Potassium Sodium Zinc	350 82 0.3 4.2 56000 7.6 690 12 21000 23 4400 82000 310

**MCAS EI Toro  
Metals & Cyanide - Data Qualification Summary - SDG G9711110**

<b>SDG</b>	<b>Sample</b>	<b>Analyte</b>	<b>Flag</b>	<b>A or P</b>	<b>Reason</b>
G9711110	18609-759	Cyanide	None	P	Calibration
G9711110	18609-759	Selenium	J	A	Matrix spike analysis (%R)

**MCAS EI Toro  
Metals & Cyanide - Laboratory Blank Data Qualification Summary - SDG G9711110**

No Sample Data Qualified in this SDG

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

**Project/Site Name:** MCAS El Toro  
**Collection Date:** October 30, 1997  
**LDC Report Date:** June 30, 1998  
**Matrix:** Water  
**Parameters:** Total Petroleum Hydrocarbons as Gasoline  
**Validation Level:** NFESC Level C  
**Laboratory:** VOC Analytical Laboratories, Inc.  
**Sample Delivery Group (SDG):** G9710570

**Sample Identification**

18609-742  
18609-743  
18609-744

## Introduction

This data review covers 3 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8015 modified for Total Petroleum Hydrocarbons (TPH) as Gasoline.

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

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

Blank results are summarized in Section III.

Field duplicates are summarized in Section IX.

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

The following are definitions of the data qualifiers:

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

J Indicates an estimated value.

R Quality control indicates the data is not usable.

N Presumptive evidence of presence of the constituent.

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

A Indicates the finding is based upon technical validation criteria.

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

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

## **I. Technical Holding Times**

All technical holding time requirements were met.

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

## **II. Calibration**

### **a. Initial Calibration**

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

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

### **b. Calibration Verification**

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

## **III. Blanks**

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

## **IV. Accuracy and Precision Data**

### **a. Surrogate Recovery**

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

### **b. Matrix Spike/Matrix Spike Duplicates**

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

### **c. Laboratory Control Samples**

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

## **V. Target Compound Identification**

Raw data were not reviewed for this SDG.

## **VI. Compound Quantitation and CRQLs**

Raw data were not reviewed for this SDG.

## **VII. System Performance**

Raw data were not reviewed for this SDG.

## **VIII. Overall Assessment of Data**

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

## **IX. Field Duplicates**

No field duplicates were identified in this SDG.

## **X. Field Blanks**

Sample 18609-742 was identified as a trip blank. No total petroleum hydrocarbons as gasoline contaminants were found in this blank.

Sample 18609-743 was identified as a source blank. No total petroleum hydrocarbons as gasoline contaminants were found in this blank.

**MCAS EI Toro  
Total Petroleum Hydrocarbons as Gasoline - Data Qualification Summary - SDG  
G9710570**

No Sample Data Qualified in this SDG

**MCAS EI Toro  
Total Petroleum Hydrocarbons as Gasoline - Laboratory Blank Data Qualification  
Summary - SDG G9710570**

No Sample Data Qualified in this SDG

METHOD: GC CDOHS LUFT/EPA SW 846 Method 8015 Modified-Gasoline

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: <u>10/30/97</u>
IIa.	Initial calibration	A	<u>r<sup>2</sup> ≥ 0.990</u>
IIb.	Calibration verification	A	<u>% D</u>
III.	Blanks	A	
IVa.	Surrogate recovery	A	
IVb.	Matrix spike/Matrix spike duplicates	A	
IVc.	Laboratory control samples	A	<u>LCS</u>
V.	Target compound identification	N	
VI.	Compound Quantitation and CRQLs	N	
VII.	System Performance	N	
VIII.	Overall assessment of data	A	
IX.	Field duplicates	N	
X.	Field blanks	ND	<u>TB = 1 SB = 2</u>

Note: A = Acceptable                      ND = No compounds detected                      D = Duplicate  
 N = Not provided/applicable                      R = Rinstate                      TB = Trip blank  
 SW = See worksheet                      FB = Field blank                      EB = Equipment blank

Validated Samples:

1	18609-742	<u>AGQ</u>	11		21
2	18609-743		12		22
3	18609-744		13		23
4	<u>97515 2 MB</u>		14		24
5			15		25
6			16		26
7			17		27
8			18		28
9			19		29
10			20		30

Notes: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

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

**Project/Site Name:** MCAS EI Toro  
**Collection Date:** October 30, 1997  
**LDC Report Date:** June 30, 1998  
**Matrix:** Water  
**Parameters:** Total Petroleum Hydrocarbons as Extractables  
**Validation Level:** NFESC Level C  
**Laboratory:** VOC Analytical Laboratories, Inc.  
**Sample Delivery Group (SDG):** G9710570

**Sample Identification**

18609-743  
18609-744

## Introduction

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

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 the method stated above.

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

Blank results are summarized in Section III.

Field duplicates are summarized in Section IX.

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

The following are definitions of the data qualifiers:

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

J Indicates an estimated value.

R Quality control indicates the data is not usable.

N Presumptive evidence of presence of the constituent.

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

A Indicates the finding is based upon technical validation criteria.

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

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

## **I. Technical Holding Times**

All technical holding time requirements were met.

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

## **II. Calibration**

### **a. Initial Calibration**

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

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

### **b. Calibration Verification**

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

## **III. Blanks**

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

## **IV. Accuracy and Precision Data**

### **a. Surrogate Recovery**

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

### **b. Matrix Spike/Matrix Spike Duplicates**

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

### **c. Laboratory Control Samples**

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

## **V. Target Compound Identification**

Raw data were not reviewed for this SDG.

## **VI. Compound Quantitation and CRQLs**

Raw data were not reviewed for this SDG.

## **VII. System Performance**

Raw data were not reviewed for this SDG.

## **VIII. Overall Assessment of Data**

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

## **IX. Field Duplicates**

No field duplicates were identified in this SDG.

## **X. Field Blanks**

Sample 18609-744 was identified as a source blank. No total petroleum hydrocarbons as extractables contaminants were found in this blank.

**MCAS El Toro  
Total Petroleum Hydrocarbons as Extractables - Data Qualification Summary - SDG  
G9710570**

No Sample Data Qualified in this SDG

**MCAS El Toro  
Total Petroleum Hydrocarbons as Extractables - Laboratory Blank Data  
Qualification Summary - SDG G9710570**

No Sample Data Qualified in this SDG

LDC #: 288918 **VALIDATION COMPLETENESS WORKSHEET**

SDG #: G9710570 EPA Level III  NFESC Level C

Laboratory: VOC Analytical Laboratories, Inc.

Date: 6/25/98

Page: 1 of 1

Reviewer: [Signature]

2nd Reviewer: [Signature]

**METHOD:** GC CDOHS LUFT/EPA SW 846 Method 8015 Modified-Extractables

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 10/30/97
IIa.	Initial calibration	A	$r^2 > 0.990$
IIb.	Calibration verification	A	%D
III.	Blanks	A	
IVa.	Surrogate recovery	A	
IVb.	Matrix spike/Matrix spike duplicates	A	
IVc.	Laboratory control samples	A	LCS/LCSD
V.	Target compound identification	N	
VI.	Compound Quantitation and CRQLs	N	
VII.	System Performance	N	
VIII.	Overall assessment of data	A	
IX.	Field duplicates	N	
X.	Field blanks	ND	SB = 2

Note: A = Acceptable      ND = No compounds detected      D = Duplicate  
 N = Not provided/applicable      R = Rinsate      TB = Trip blank  
 SW = See worksheet      FB = Field blank      EB = Equipment blank

Validated Samples:

1	18609-743	AQ	11	21
2	18609-744	↓	12	22
3	97245 MB	↓	13	23
4			14	24
5			15	25
6			16	26
7			17	27
8			18	28
9			19	29
10			20	30

Notes: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

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

**Project/Site Name:** MCAS El Toro  
**Collection Date:** October 30, 1997  
**LDC Report Date:** June 30, 1998  
**Matrix:** Water  
**Parameters:** Volatiles  
**Validation Level:** NFESC Level C  
**Laboratory:** VOC Analytical Laboratories, Inc.  
**Sample Delivery Group (SDG):** G9710570

**Sample Identification**

18609-742  
18609-743  
18609-744

## Introduction

This data review covers 3 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 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 the method stated above.

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

Blank results are summarized in Section V.

Field duplicates are summarized in Section XVI.

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

## I. Technical Holding Times

All technical holding time requirements were met.

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

## II. GC/MS Instrument Performance Check

The samples were analyzed after the BFB tuning. The instrument performance check could not be verified at the 12 hour interval.

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 calibration check compounds and less than or equal to 50.0% for all other compounds.

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)	Associated Samples	Flag	A or P
11/5/97	Acetone 2-Butanone 4-Methyl-2-pentanone	0.040 ( $\geq 0.05$ ) 0.040 ( $\geq 0.05$ ) 0.023 ( $\geq 0.05$ )	All samples in SDG G9710570	J (all detects) R (all non-detects)	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% for all calibration check compounds and less than or equal to 50.0% for all other compounds with the following exceptions:

Date	Compound	%D (Limits)	Associated Samples	Flag	A or P
11/10/97	Chloroform Trichloroethene 4-Methyl-2-pentanone	31.7 ( $\leq 25$ ) 65.6 ( $\leq 50$ ) 64.4 ( $\leq 50$ )	All samples in SDG G9710570	J J J	P

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
11/10/97	Acetone 2-Butanone 4-Methyl-2-pentanone	0.034 ( $\geq 0.05$ ) 0.044 ( $\geq 0.05$ ) 0.037 ( $\geq 0.05$ )	All samples in SDG G9710570	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
B7116591	11/10/97	Methyl-tert-butyl ether Toluene	0.50 ug/L 0.22 ug/L	All samples in SDG G9710570

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.

## VI. Surrogate Spikes

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

## VII. Matrix Spike/Matrix Spike Duplicates

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)

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

LCS ID	Compound	%R (Limits)	Associated Samples	Flag	A or P
C71112951	Trichloroethene	157 (71-125)	All samples in SDG G9710570	J (all detects)	A

## **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**

No field duplicates were identified in this SDG.

## **XVII. Field Blanks**

Sample 18609-742 was identified as a trip blank. No volatile contaminants were found in this blank.

Sample 18609-743 was identified as a source blank. No volatile contaminants were found in this blank.

**MCAS EI Toro**  
**Volatiles - Data Qualification Summary - SDG G9710570**

SDG	Sample	Compound	Flag	A or P	Reason
G9710570	18609-742 18609-743 18609-744	Acetone 2-Butanone 4-Methyl-2-pentanone	<del>J (all detects)</del> <del>R (all non-detects)</del>	A	Initial calibration (RRF)
G9710570	18609-742 18609-743 18609-744	Chloroform Trichloroethene 4-Methyl-2-pentanone	J J J	P	Continuing calibration (%D)
G9710570	18609-742 18609-743 18609-744	Acetone 2-Butanone 4-Methyl-2-pentanone	<del>J (all detects)</del> <del>R (all non-detects)</del>	A	Continuing calibration (RRF)
G9710570	18609-742 18609-743 18609-744	Trichloroethene	J (all detects)	A	Laboratory control samples (%R)

**MCAS EI Toro**  
**Volatiles - Laboratory Blank Data Qualification Summary - SDG G9710570**

No Sample Data Qualified in this SDG

**METHOD:** GC/MS Volatiles (EPA SW 846 Method 8260A)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 10/30/97
II.	GC/MS Instrument performance check	ABW	no form V. can't confirm within 12 hr.
III.	Initial calibration	SW	To RSD ≤ 50% To CCC ≤ 30%
IV.	Continuing calibration	SW	To D ≤ 50% CCC ≤ 25%
V.	Blanks	SW	
VI.	Surrogate spikes	A	
VII.	Matrix spike/Matrix spike duplicates	SW	not client's sample
VIII.	Laboratory control samples	SW	LCS
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	A	
XI.	Target compound identification	N	
XII.	Compound quantitation/CRQLs	N	
XIII.	Tentatively identified compounds (TICs)	N	
XIV.	System performance	N	
XV.	Overall assessment of data	A	
XVI.	Field duplicates	N	
XVII.	Field blanks	ND	TB = 1 SB = 2

Note: A = Acceptable  
 N = Not provided/applicable  
 SW = See worksheet

ND = No compounds detected  
 R = Rinstate  
 FB = Field blank

D = Duplicate  
 TB = Trip blank  
 EB = Equipment blank  
 SB = source Blank

Validated Samples:

1	18609-742	H2O	11	21
2	18609-743		12	22
3	18609-744		13	23
4	BT116591		14	24
5			15	25
6			16	26
7			17	27
8			18	28
9			19	29
10			20	30











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

**Project/Site Name:** MCAS EI Toro  
**Collection Date:** October 30, 1997  
**LDC Report Date:** June 30, 1998  
**Matrix:** Water  
**Parameters:** Semivolatiles  
**Validation Level:** NFESC Level C  
**Laboratory:** VOC Analytical Laboratories, Inc.  
**Sample Delivery Group (SDG):** G9710570

**Sample Identification**

18609-743  
18609-744

## Introduction

This data review covers 2 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8270B for Semivolatiles.

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 the method stated above.

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

Blank results are summarized in Section V.

Field duplicates are summarized in Section XVI.

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

## I. Technical Holding Times

All technical holding time requirements were met.

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

## II. GC/MS Instrument Performance Check

The samples were analyzed after the DFTPP tuning. The instrument performance check could not be verified at the 12 hour interval.

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 calibration check compounds and less than or equal to 50.0% for all other 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 20.0% for all calibration check compounds and less than or equal to 50.0% for all other compounds.

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 Samples
B711291*1*MB	11/5/97	Bis(2-ethylhexyl)phthalate	3.3 ug/L	All samples in SDG G9710570

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
18609-743	Bis(2-ethylhexyl)phthalate	3.8 ug/L	10U ug/L
18609-744	Bis(2-ethylhexyl)phthalate	3.6 ug/L	10U ug/L

## VI. Surrogate Spikes

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

## VII. Matrix Spike/Matrix Spike Duplicates

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

## VIII. Laboratory Control Samples (LCS)

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

LCS ID (Associated Samples)	Compound	LCS %R (Limits)	LCSD %R (Limits)	RPD (Limits)	Flag	A or P
C711435*1*LC/36*1*LC (All samples in SDG G9710570)	4-Nitrophenol	23 (25-131)	-	50 ( $\leq 20$ )	J	A

## 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.

**XVII. Field Blanks**

Sample 18609-743 was identified as a source blank. No semivolatile contaminants were found in this blank with the following exceptions:

Source Blank ID	Compound	Concentration (ug/L)
18609-743	Bis(2-ethylhexyl)phthalate	3.8

**MCAS El Toro  
Semivolatiles - Data Qualification Summary - SDG G9710570**

SDG	Sample	Compound	Flag	A or P	Reason
G9710570	18609-743 18609-744	4-Nitrophenol	J	A	Laboratory control samples (%R) (RPD)

**MCAS El Toro  
Semivolatiles - Laboratory Blank Data Qualification Summary - SDG G9710570**

SDG	Sample	Compound TIC (RT in minutes)	Modified Final Concentration	A or P
G9710570	18609-743	Bis(2-ethylhexyl)phthalate	10U ug/L	A
G9710570	18609-744	Bis(2-ethylhexyl)phthalate	10U ug/L	A

**METHOD:** GC/MS Semivolatiles (EPA SW 846 Method 8270B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: <u>10/30/97</u>
II.	GC/MS Instrument performance check	A	<u>12hr check cannot be checked</u>
III.	Initial calibration	A	<u>no RSD CCC &lt; 30% others &lt; 50%</u>
IV.	Continuing calibration	A	<u>CCC &lt; 20% others &lt; 50%</u>
V.	Blanks	SW	
VI.	Surrogate spikes	A	
VII.	Matrix spike/Matrix spike duplicates	N	<u>insufficient sample</u> <u>not required (not enough sample)</u>
VIII.	Laboratory control samples	SW	<u>LC5/LC10</u>
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	A	
XI.	Target compound identification	N	
XII.	Compound quantitation/CRQLs	N	
XIII.	Tentatively identified compounds (TICs)	N	
XIV.	System performance	N	
XV.	Overall assessment of data	A	
XVI.	Field duplicates	N	
XVII.	Field blanks	SW	<u>SB = 1</u>

Note: A = Acceptable      ND = No compounds detected      D = Duplicate      SB = Source blank  
 N = Not provided/applicable      R = Rinsate      TB = Trip blank  
 SW = See worksheet      FB = Field blank      EB = Equipment blank

Validated Samples:

1	18609-743	<u>Water</u>	11		21	
2	18609-744		12		22	
3	<u>B711291*</u>	<u>1*MB</u>	13		23	
4			14		24	
5			15		25	
6			16		26	
7			17		27	
8			18		28	
9			19		29	
10			20		30	

LDC #: C-389 I2a  
 SDG #: G9710570

VALIDATION FILINGS WORKSHEET  
Blanks

Page: 1 of 1  
 Reviewer: [Signature]  
 2nd Reviewer: [Signature]

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

- Y N N/A Was a method blank analyzed for each matrix?
- Y N (N/A) Was a method blank analyzed for each concentration preparation level?
- Y N N/A Was a method blank associated with every sample?
- Y N N/A Was the blank contaminated? If yes, please see qualification below.

Blank extraction date: 11/5/97 Blank analysis date: 11/6/97

Conc. units: ug/L

Compound	Blank ID	Sample Identification												
		1	2											
	0711291 01-48													
Di-n-butylphthalate	<del>3.3</del>	<del>3.8</del>	<del>3.6</del>	<del>2</del>										
Butylbenzylphthalate														
Bis(2-ethylhexyl)phthalate	3.3	3.8	3.6											
Di-n-octylphthalate														
CRQL	100	100	100											
TICs:														
4-Hydroxy-4-methyl-2-pentanone														

CIRCLED RESULTS WERE NOT QUALIFIED. ALL RESULTS NOT CIRCLED WERE QUALIFIED BY THE FOLLOWING STATEMENT:  
 Common contaminants such as the phthalates and TICs noted above that were detected in samples within ten times the associated method blank concentration were qualified as not detected, "U". Other contaminants within five times the method blank concentration were also qualified as not detected, "U".



LDC #: 288912a  
SDG #: 39710570

**VALIDATION FINDINGS WORKSHEET**  
**Field Blanks**

Page: 1 of 1  
Reviewer: DE  
2nd reviewer: C

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

Y N N/A Were field blanks identified in this SDG?  
Y N N/A Were target compounds identified in the field blanks?

Sample: 81 Field Blank / Trip Blank / Rinsate (circle one) Source Blank

Compound	Concentration Units (ug/L)
<del>8 DEHP Di-n-butyl phthalate</del>	<del>3.8 3.6</del>
Benzoic acid hexyl phthalate	3.8

Sample: \_\_\_\_\_ Field Blank / Trip Blank / Rinsate (circle one)

Compound	Concentration Units ( )

Sample: \_\_\_\_\_ Field Blank / Trip Blank / Rinsate (circle one)

Compound	Concentration Units ( )

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

**Project/Site Name:** MCAS El Toro  
**Collection Date:** October 30, 1997  
**LDC Report Date:** July 1, 1998  
**Matrix:** Water  
**Parameters:** Chlorinated Pesticides & PCBs  
**Validation Level:** NFESC Level C  
**Laboratory:** VOC Analytical Laboratories, Inc.  
**Sample Delivery Group (SDG):** G9710570

**Sample Identification**

18609-743  
18609-744

## Introduction

This data review covers 2 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8081 for Chlorinated Pesticides and PCBs.

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 the method stated above.

A table summarizing all data qualification flags is provided at the end of this report. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from 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 analyte was analyzed for but not detected at or above the stated limit.
- J Indicates an estimated value.
- R Quality control indicates the data is not usable.
- N Presumptive evidence of presence of the constituent.
- UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.
- A Indicates the finding is based upon technical validation criteria.
- P Indicates the finding is related to a protocol/contractual deviation.
- None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

## I. Technical Holding Times

All technical holding time requirements were met.

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

## II. GC/ECD Instrument Performance Check

Performance evaluation mixture data were not provided and therefore not reviewed.

## III. Initial Calibration

Initial calibration of single and multicomponent compounds was performed for the primary (quantitation) column and confirmation column as required by this method.

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

## IV. Continuing Calibration

Continuing calibration was performed at required frequencies.

The percent differences (%D) of calibration factors in continuing standard mixtures were within the 15.0% QC limits.

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

## V. Blanks

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

Method Blank ID	Extraction Date	Compound	Concentration	Associated Samples
97207MB	10/31/97	Endosulfan sulfate Endrin ketone	0.013 ug/L 0.0054 ug/L	All samples in SDG G9710570

Sample concentrations were compared to concentrations detected in the method blanks. The sample concentrations were either not detected or were significantly greater ( >5X blank contaminants) than the concentrations found in the associated method blanks.

## VI. Surrogate Spikes

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

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

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

## **VIII. Laboratory Control Samples (LCS)**

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

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

Not applicable.

## **X. Pesticide Cleanup Checks**

### **a. Florisil Cartridge Check**

Florisil cleanup was not required and therefore not performed in this SDG.

### **b. GPC Calibration**

GPC cleanup was not required and therefore not performed in this SDG.

## **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.

## **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 18609-743 was identified as a source blank. No chlorinated pesticide or PCB contaminants were found in this blank with the following exceptions:

Source Blank ID	Compound	Concentration (ug/L)
18609-743	Endrin ketone	0.18

**MCAS EI Toro  
Chlorinated Pesticides & PCBs - Data Qualification Summary - SDG G9710570**

No Sample Data Qualified in this SDG

**MCAS EI Toro  
Chlorinated Pesticides & PCBs - Laboratory Blank Data Qualification Summary -  
SDG G9710570**

No Sample Data Qualified in this SDG

**METHOD:** GC Organochlorine Pesticides & PCBs (EPA SW 846 Method 8081)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 10-30-97
II.	GC/ECD Instrument Performance Check	N	PEM's not provided, not reviewed
III.	Initial calibration	A	r <sup>2</sup> = 0.990
IV.	Continuing calibration	A	%D
V.	Blanks	SW	
VI.	Surrogate spikes	A	
VII.	Matrix spike/Matrix spike duplicates	N	client specified
VIII.	Laboratory control samples	A	LCS/LCSD
IX.	Regional quality assurance and quality control	N	
Xa.	Florisil cartridge check	N	
Xb.	GPC Calibration	N	
XI.	Target compound identification	N	
XII.	Compound quantitation and reported CRQLs	N	
XIII.	Overall assessment of data	A	
XIV.	Field duplicates	N	
XV.	Field blanks	SW	SB = 1

Note: A = Acceptable      ND = No compounds detected      D = Duplicate  
 N = Not provided/applicable      R = Rinsate      TB = Trip blank  
 SW = See worksheet      FB = Field blank      EB = Equipment blank

Validated Samples:  
all waters

1SB	18609-743	+	11	21
2	18609-744	+	12	22
3	97207 MB		13	23
4			14	24
5			15	25
6			16	26
7			17	27
8			18	28
9			19	29
10			20	30

LDC #: 89913  
 SDG #: 99710570

VALIDATION FIN JGS WORKSHEET  
Blanks

Page 1 of 1  
 Reviewer: [Signature]  
 2nd Reviewer: [Signature]

METHOD: GC Pesticides/PCBs (EPA SW 846 Method 8080)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

- N N/A Were all samples associated with a method blank?
- N N/A Was a method blank performed for each matrix and whenever a sample extraction was performed?
- N ~~N/A~~ If extract clean-up was performed, were extract clean-up blanks analyzed at the proper frequencies?
- ~~N~~ N/A Were any pesticide/PCB contaminants detected above the reporting limit in the method blanks?
- N N/A Was method blank contamination < CRQL for all target compounds?

Blank extraction date: 10-31-97 Blank analysis date: 11- -97 Associated samples: 1-2  
 Conc. units: ng/L

Compound	Blank ID	Sample Identification							
		1	2						
	97207 MB								
Endosulfan sulfate	0.013								
Endrin ketone	0.0054	0.18	0.17						
RL	0.05								

Blank extraction date: \_\_\_\_\_ Blank analysis date: \_\_\_\_\_ Associated samples: \_\_\_\_\_  
 Conc. units: \_\_\_\_\_

Compound	Blank ID	Sample Identification							

CIRCLED RESULTS WERE NOT QUALIFIED. ALL RESULTS NOT CIRCLED WERE QUALIFIED BY THE FOLLOWING STATEMENT:  
 All contaminants within five times the method blank concentration were qualified as not detected, "U".

LDC #: 2889I3  
SDG #: 69710570

VALIDATION FINDINGS WORKSHEET  
Field Blanks

Page: 1 of 1  
Reviewer: 2  
2nd reviewer: g

METHOD: GC Pesticides/PCBs (EPA SW 846 Method 8080)

N  A Were field blanks identified in this SDG?  
 N  A Were target compounds detected in the field blanks?

Sample: 1 Field Blank / <sup>Source</sup> Trip Blank / Rinsate (circle one)

Compound	Concentration Units (µg/L)
Endrin ketone	0.18

Sample: \_\_\_\_\_ Field Blank / Trip Blank / Rinsate (circle one)

Compound	Concentration Units ( )

Sample: \_\_\_\_\_ Field Blank / Trip Blank / Rinsate (circle one)

Compound	Concentration Units ( )

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

**Project/Site Name:** MCAS El Toro  
**Collection Date:** October 30, 1997  
**LDC Report Date:** July 1, 1998  
**Matrix:** Water  
**Parameters:** Metals & Cyanide  
**Validation Level:** NFESC Level C  
**Laboratory:** VOC Analytical Laboratories, Inc.  
**Sample Delivery Group (SDG):** G9710570

**Sample Identification**

18609-743  
18609-744  
18609-743MS  
18609-743MSD  
18609-744MS  
18609-744MSD

## Introduction

This data review covers 6 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Methods 6010 and 7000 for Metals and EPA SW 846 Method 9010A for Cyanide. The metals analyzed were Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Vanadium, and Zinc.

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

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

Blanks are summarized in Section III.

Field duplicates are summarized in Section XIII.

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

## I. Technical Holding Times

All technical holding time requirements were met.

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

## II. 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:

Sample	Analyte	Finding	Criteria	Flag	A or P
All samples in SDG G9710570	Cyanide	Calibration verification not performed at the required frequencies.	Calibration verification should be performed immediately following initial calibration and once every ten samples.	None	P

## III. Blanks

Method blanks were reviewed for each matrix as applicable.

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

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

The frequency of analysis was met.

The criteria for analysis were met.

## V. Matrix Spike Analysis

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

Spike ID (Associated Samples)	Analyte	MS (%R) (Limits)	MSD (%R) (Limits)	RPD (Limits)	Flag	A or P
18609-744MS/MSD (All samples in SDG G9720570)	Selenium	69 (73-122)	67 (73-122)	-	J	A

## VI. Duplicate Sample Analysis

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

## VII. Laboratory Control Samples (LCS)

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

## VIII. Internal Standards (ICP-MS)

ICP-MS was not utilized in this SDG.

## IX. Furnace Atomic Absorption QC

Graphite furnace atomic absorption QC were not reviewed for this SDG.

## X. ICP Serial Dilution

Although ICP serial dilution analysis was not required by the method, it was performed by the laboratory. The analysis criteria were met.

## 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.

## XIII. Field Duplicates

No field duplicates were identified in this SDG.

## XIV. Field Blanks

Sample 18609-743 was identified as a source blank. No metal or cyanide contaminants were found in this blank with the following exceptions:

Source Blank ID	Analyte	Concentration (ug/L)
18609-744	Aluminum	170
	Arsenic	2.5
	Barium	93
	Calcium	66000
	Copper	11
	Iron	550
	Magnesium	26000
	Manganese	10
	Potassium	4100
	Sodium	91000
	Zinc	38

Sample 18609-744 was identified as a rinsate. No metal or cyanide contaminants were found in this blank with the following exceptions:

Rinsate ID	Analyte	Concentration (ug/L)
18609-744	Aluminum	250
	Arsenic	2.0
	Barium	81
	Calcium	60000
	Chromium	5.9
	Copper	9.2
	Iron	650
	Lead	3.0
	Magnesium	24000
	Manganese	17
	Potassium	6000
	Sodium	91000
	Zinc	31

**MCAS EI Toro  
Metals & Cyanide - Data Qualification Summary - SDG G9710570**

<b>SDG</b>	<b>Sample</b>	<b>Analyte</b>	<b>Flag</b>	<b>A or P</b>	<b>Reason</b>
G9710570	18609-743 18609-744	Cyanide	None	P	Calibration
G9710570	18609-743 18609-744	Selenium	J	A	Matrix spike analysis (%R)

**MCAS EI Toro  
Metals & Cyanide - Laboratory Blank Data Qualification Summary - SDG G9710570**

No Sample Data Qualified in this SDG

**METHOD: Metals & Cyanide (EPA SW 846 Method 6010/7000 & 9010A)**

Extra metals: \_\_\_\_\_

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 10/30/97
II.	Calibration	SW	
III.	Blanks	A	
IV.	ICP Interference Check Sample (ICS) Analysis	SW	
V.	Matrix Spike Analysis	SW	MS/MSD except Hg*
VI.	Duplicate Sample Analysis	N	
VII.	Laboratory Control Samples (LCS)	A	LCS/LCSD
VIII.	Internal Standard (ICP-MS)	N	ICP-MS not used
IX.	Furnace Atomic Absorption QC	A	MSA not performed
X.	ICP Serial Dilution	A	
XI.	Sample Result Verification	N	
XII.	Overall Assessment of Data	A	
XIII.	Field Duplicates	N	
XIV.	Field Blanks	SW	SB = 1 R = 2

Note: A = Acceptable      ND = No compounds detected      D = Duplicate  
 N = Not provided/applicable      R = Rinsate      TB = Trip blank  
 SW = See worksheet      FB = Field blank      EB = Equipment blank

SB = Source blank

Validated Samples:

1	18609-743	11	21
2	18609-744	12	22
3	18609-743MS	13	23
4	18609-743MSD	14	24
5	18609-744MS	15	25
6	18609-744MSD	16	26
7	PBW	17	27
8		18	28
9		19	29
10		20	30

Notes: \* Hg MSD sample foamed during analysis.









LDC #: 288974  
 SDG #: 69710570

VALIDATION FINDINGS WORKSHEET  
Field Blanks

Page: 1 of 1  
 Reviewer: mz  
 2nd reviewer: A

METHOD: Trace Metals (EPA SW 846 Method 6010/7000)

- N N/A Were field blanks identified in this SDG?  
 N N/A Were target analytes detected in the field blanks?

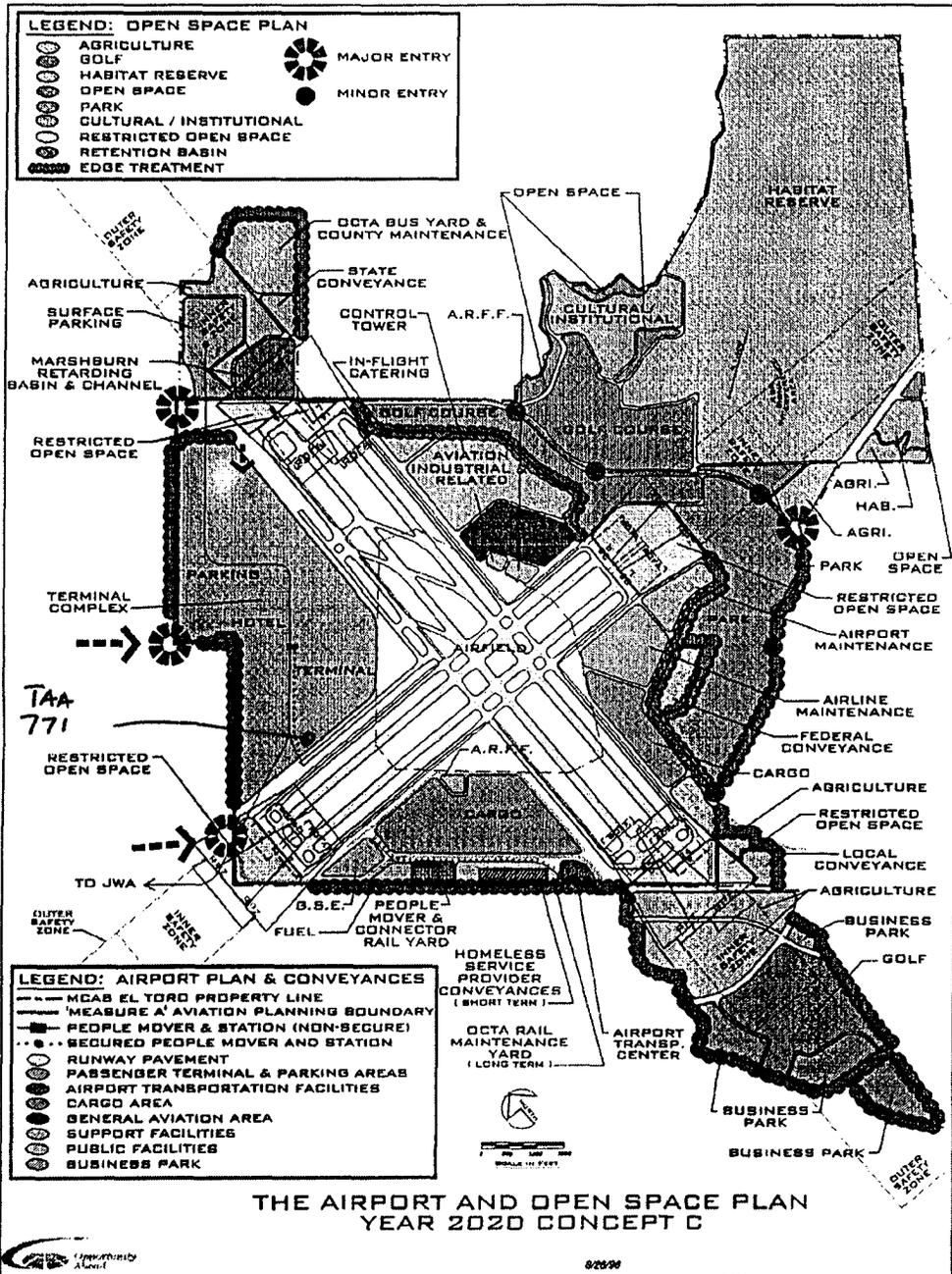
Sample: 1 Field Blank / Trip Blank / Rinsate /  Other Source blank (circle one)

Analyte	Concentration Units ( $\mu\text{g/l}$ )
Al	170
As	2.5
Ba	93
Ca	66000
Cu	11
Fe	550
Mg	26000
Mn	10
K	4100
Na	91000
Zn	38

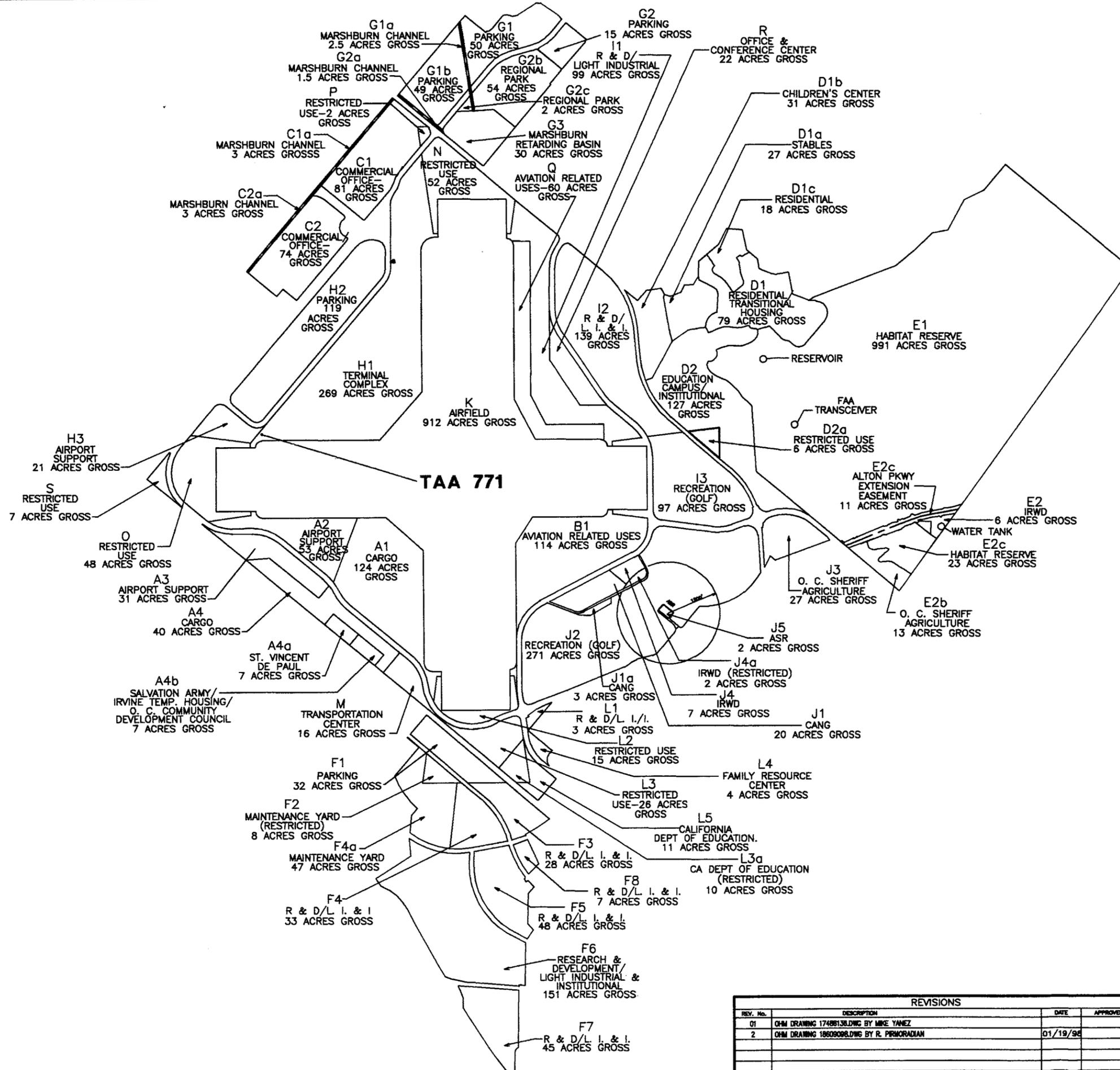
Sample: 2 Field Blank / Trip Blank /  Rinsate / Other \_\_\_\_\_ (circle one)

Analyte	Concentration Units ( $\mu\text{g/l}$ )
Al	250
As	2.0
Ba	81
Ca	60000
Cr	5.9
Cu	9.2
Fe	650
Pb	3.0
Mg	24000
Mn	17
K	6000
Na	91000
Zn	31

***Appendix I***  
***Tentative Reuse Parcel Location of TAA 771***



TAA 771 LOCATION ON REUSE MAP



**TAA 771**



Nov. 09, 1999 - 10:20:29 I:\OHM CORP\PROJECTS\18609\18609269.dwg

REVISIONS			
REV. No.	DESCRIPTION	DATE	APPROVED
01	OHM DRAWING 17488136.DWG BY MIKE YANEZ		
2	OHM DRAWING 1860908.DWG BY R. PIRMORADIAN	01/19/98	

PROJECT <b>SWDIV</b>		 OHM Remediation Services Corp. A Subsidiary of OHM Corporation SAN DIEGO, CA	
DRAWN BY R. PIRMORADIAN	DATE 11/09/99	<b>EL TORO COMMUNITY REUSE PLAN</b> <b>1997 WORKING MAP LAND USES/</b> <b>CONVEYANCES GROSS ACRES</b> <b>TAA 711</b> <b>MARINE CORPS AIR STATION</b> <b>EL TORO, CALIFORNIA</b>	
CHECKED BY <i>DR</i>	DATE 12/6/99		
APPROVED BY	DATE		
PROJECT MANAGER		DATE	
AUTOCAD FILE No. 18609269.DWG			
SCALE 1"=2,400'	SHEET 1	OF 1	DOCUMENT CONTROL No. SW5983
OHM PROJECT No. 18609		DRAWING No. FIG A-1	