Previous

Table C-3 (continued)
Summary of Detected Volatile Organic Compounds, Site 18 Off-Station Monitoring Wells (1992-1999)
MCAS El Toro

Station ID	Base Screen Depth (ft bgs)	Sample Date	Primary VOCs Detected and Regulatory Standards Concentrations in µg/L												
			TCE		PCE		1,2-DCE		Chloroform		Benzene		Other Compounds Detected		
			5.0		5.0		(total)				1.0			Result	
		8-Feb-96	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U			
		25-Jul-96		ND		ND		ND		ND		ND			
		11-Nov-96	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U			
		1-Feb-97		ND		ND		ND		ND		ND			
		26-Mar-97	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	Methylene Chloride	2.0	
		27-Oct-98	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U			
		15-Jul-99	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U			
18_MCAS07-7	919	17-Oct-88	0.5	U	0.8		0.5	U	0.5	U					
		30-Nov-88	0.5	U	0.8		0.5	U	0.5	U			1,1,1-Trichloroethane	0.5	J*
		19-Jan-89	0.5	U	0.5	J	0.5	U	0.5	U					
		5-Apr-89	0.5	U	0.6		0.5	U	0.5	U					
		4-May-89	0.5	U	0.6		0.5	U	0.5	U					
		8-Feb-90	0.5	U	0.5	U	0.5	U	0.5	U					
		2-Aug-90	0.5	U	0.5	U	0.5	U	0.5	U					
		16-Nov-90	0.5	U	0.5	U	0.5	U	0.5	U					
		25-Mar-91	0.5	U	0.5	U	0.5	U	0.5	U					
		25-Mar-91	0.5	U	0.5	U	0.5	U	0.5	U					
		26-Jul-91	0.5	J	0.5	U	0.5	U	0.5	U					
		23-Oct-91	0.5	U	0.5	U	0.5	U	0.5	U					
		12-May-92	0.5	U	0.5	U	0.5	U	0.5	U					
		22-Sep-92	0.5	U	0.5	U	0.5	U	0.5	U					
		5-Dec-92	0.5	U	0.5	U	0.5	U	0.5	U					

Table C-3 (continued)
Summary of Detected Volatile Organic Compounds, Site 18 Off-Station Monitoring Wells (1992-1999)
MCAS El Toro

Station ID	Base Screen Depth (ft bgs)	Sample Date	Primary VOCs Detected and Regulatory Standards Concentrations in µg/L												
			TCE		PCE		1,2-DCE		Chloroform		Benzene		Other Compounds Detected		
			5.0		5.0		(total)				1.0			Result	
		17-Mar-93	0.5	U	0.5	U			0.5	U	0.5	U			
		16-Jun-93	0.5	U	0.5	U			0.5	U	0.5	U			
		29-Oct-93	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U			
		22-Dec-95		ND		ND		ND		ND		ND			
		8-Feb-96	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U			
		25-Jul-96		ND		ND		ND		ND		ND			
		11-Nov-96	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U			
		1-Feb-97		ND		ND		ND		ND		ND			
		26-Mar-97	1.0		1.0	U	1.0	U	1.0	U	1.0	U	Methylene Chloride	1.0	J
		27-Oct-98	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U			
18_MCAS07-7	919	15-Jul-99	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U			
18_MCAS08	410	11-Mar-89	0.5	U	0.5	U	0.5	U	3.0						
		3-Nov-89	0.5	U	0.5	U	0.5	U	3.0						
		6-Feb-90	0.5	U	0.5	U	0.5	U	0.5	J					
		12-Feb-90	0.5	U	0.5	U	0.5	U	0.5	U					
		2-Jun-90	0.5	U	0.5	U	0.5	U	0.5	J					
		2-Dec-90	0.5	U	0.5	U	0.5	U	0.5	U					
		11-May-91	0.5	U	0.5	U	0.5	U	0.5	U					
		22-May-91	0.5	U	0.5	U	0.5	U	0.5	U					
		5-Nov-91	0.5	U	0.5	U	0.5	U	0.5	U					
		12-Jan-92	0.5	U	0.5	U	0.5	U	0.5	U					
		10-Jul-92	0.5	U	0.5	U	0.5	U	0.5	U					

Table C-3 (continued)
Summary of Detected Volatile Organic Compounds, Site 18 Off-Station Monitoring Wells (1992-1999)
MCAS El Toro

Station ID	Base Screen Depth (ft bgs)	Sample Date	Primary VOCs Detected and Regulatory Standards Concentrations in µg/L													
			TCE		PCE		1,2-DCE		Chloroform		Benzene		Other Compounds Detected			
			5.0		5.0		(total)				1.0			Result		
		7-Oct-92	0.5	U	0.5	U	0.5	U	0.5	U						
		1-Dec-92	0.5	U	0.5	U	0.5	U	0.5	U						
		23-Apr-93	0.5	U	0.5	U			0.5	U	0.5	U				
		23-Apr-93	0.5	U	0.5	U			0.5	U	0.5	U				
		8-May-93	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U				
		16-Oct-95		ND		ND		ND		ND		ND				
		1-Feb-96	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U				
		12-Apr-96		ND		ND		ND		ND		ND				
		8-Nov-96		ND		ND		ND		ND		ND				
		20-Nov-96	1.0		1.0	U	1.0	U	1.0	U	1.0	U				
		26-Mar-97	0.8	J	1.0	U	1.0	U	1.0	U	1.0	U	Methylene Chloride	1.0		
		14-Jul-97	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U				
		29-Oct-97	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	Methylene Chloride	0.4	J	
		27-Oct-98	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	Acetone	0.8	J	
		4-Aug-99	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U				
18_MCAS09	445	27-Oct-89	0.5	J	0.5	U	0.5	U	1.8				Chlorobenzene	0.5	J	
		12-Feb-90	1.0		0.5	U	0.5	U	0.5	U						
		13-Jul-90	1.5		0.5	U	0.5	U	0.5	U						
		17-Nov-90	1.3		0.5	U	0.5	U	0.5	U						
		2-Dec-90	1.0		0.5	U	0.5	U	0.5	U						

Table C-3 (continued)
Summary of Detected Volatile Organic Compounds, Site 18 Off-Station Monitoring Wells (1992-1999)
MCAS El Toro

Station ID	Base Screen Depth (ft bgs)	Sample Date	Primary VOCs Detected and Regulatory Standards Concentrations in µg/L													
			TCE		PCE		1,2-DCE		Chloroform		Benzene		Other Compounds Detected			
			5.0		5.0		(total)				1.0			Result		
		18-Mar-91	1.8		0.5	U	0.5	U	0.5	U						
		12-Jul-91	1.7		0.5	U	0.5	U	0.5	U						
		7-Dec-91	1.7		0.5	U	0.5	U	0.5	U						
		12-Feb-92	1.8		0.5	U	0.5	U	0.5	U						
		6-May-92	1.1		0.5	U	0.5	U	0.5	U						
		5-Jun-92	1.1		0.5	U	0.5	U	0.5	U						
		23-Aug-92	1.2		0.5	U	0.5	U	0.5	U						
		2-Dec-92	1.8		0.5	U	0.5	U	0.5	U						
		20-Apr-93	2.5		0.5	U			0.5	U	0.5	U				
		11-May-93	2.0		1.0	U	1.0	U	1.0	U	1.0	U				
		14-Dec-95	1.1			ND		ND		ND		ND				
		16-Jan-96	1.0		1.0	U	1.0	U	1.0	U	1.0	U				
		30-Jun-96	0.5			ND		ND		ND		ND				
		19-Nov-96	3.0		1.0	U	1.0	U	1.0	U	1.0	U	Methylene Chloride	2.0		
		8-Jan-97	1.0			ND		ND		ND		ND				
		26-Mar-97	1.0		1.0	U	1.0	U	1.0	U	1.0	U	Methylene Chloride	1.0		
		14-Jul-97	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U				
		29-Oct-97	0.5	J	1.0	U	1.0	U	1.0	U	1.0	U	Methylene Chloride	0.8	J	
		6-Aug-99	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U				
18_MCAS10	375	11-Jul-89	0.5	U	0.5	U	0.5	U	9.7							
		7-Nov-89	0.5	U	0.5	U	0.5	U	9.7							
		31-Jan-90	0.5	U	0.5	U	0.5	U	0.5	U						

Table C-3 (continued)
Summary of Detected Volatile Organic Compounds, Site 18 Off-Station Monitoring Wells (1992-1999)
MCAS El Toro

Station ID	Base Screen Depth (ft bgs)	Sample Date	Primary VOCs Detected and Regulatory Standards Concentrations in µg/L													
			TCE		PCE		1,2-DCE		Chloroform		Benzene		Other Compounds Detected			
			5.0		5.0		(total)				1.0			Result		
		20-Jul-90	0.5	U	0.5	U	0.5	U	0.5	U						
		18-Nov-90	0.5	U	0.5	U	0.5	U	0.5	U						
		3-Feb-91	0.5	U	0.5	U	0.5	U	0.5	U						
		2-Mar-91	0.5	U	0.5	U	0.5	U	0.5	U						
		12-Jul-91	0.5	U	0.5	U	0.5	U	0.5	U						
		7-Dec-91	0.5	U	0.5	U	0.5	U	0.5	U						
		12-Feb-92	0.5	U	0.5	U	0.5	U	0.5	U						
		8-May-92	0.5	U	0.5	U	0.5	U	0.5	U						
		5-Aug-92	0.5	U	0.5	U	0.5	U	0.5	U						
		27-Aug-92	0.5	U	0.5	U	0.5	U	0.5	U						
		2-Dec-92	0.5	U	0.5	U	0.5	U	0.5	U						
		11-Apr-93	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U				
		23-Apr-93	0.5	U	0.5	U			0.5	U	0.5	U				
		29-Nov-94		ND		ND		ND		ND		ND				
		6-Jul-95		ND		ND		ND		ND		ND				
		19-Jan-96	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U				
		24-Jan-96		ND		ND		ND		ND		ND				
		14-Jul-96		ND		ND		ND		ND		ND				
		19-Nov-96	3.0		1.0	U	1.0	U	1.0	U	1.0	U				
		19-Jan-97		ND		ND		ND		ND		ND				
		18-Mar-97	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U				
		18-Mar-97	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U				

Table C-3 (continued)
Summary of Detected Volatile Organic Compounds, Site 18 Off-Station Monitoring Wells (1992-1999)
MCAS El Toro

Station ID	Base Screen Depth (ft bgs)	Sample Date	Primary VOCs Detected and Regulatory Standards Concentrations in µg/L											
			TCE		PCE		1,2-DCE		Chloroform		Benzene		Other Compounds Detected	
			5.0		5.0		(total)				1.0			Result
		14-Jul-97	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U		
		29-Oct-97	1.0	U	1.0	U	1.0	U	1.0	U	0.6	J		
		22-Oct-98	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U		
		5-Aug-99	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U		

Notes:

Data in this table is compiled from technical documents provided by other CLEAN II contractors.

BOLD results exceed regulatory standard

(1) Table lists results for primary volatile organic compounds (VOCs) detected in groundwater sampling Rounds 1 through 8.
All concentrations in micrograms per liter (µg/L)

(2) Data qualifiers:
U = not detected above the listed detection limit
J = estimated concentration
Results for MCAS wells/ports from Orange County Water District sampling include ND for not detected and TR for trace detected.

(3) VOC abbreviations and regulatory standards (listed at top of results columns):
Trichloroethene (TCE), federal maximum contaminant level (MCL) 5.0 µg/L
Tetrachloroethene (PCE), federal MCL 5.0 µg/L
1,2-Dichloroethene (1,2-DCE) total, results include cis-1,2-DCE and (State MCL 6.0 µg/L) and trans-1,2-DCE
Benzene, State MCL 1.0 µg/L

Appendix D

Data Quality and Validation Summary

Appendix D
Data Quality and Validation

This section identifies quality control (QC) procedures and an assessment of QC results for laboratory data generated from the groundwater sampling effort (Rounds 9, 10, and 11) for groundwater monitoring at MCAS El Toro. Information in this section was compiled from technical documents provided by other CLEAN II Contractors. The topics discussed are QC procedures, data verification and validation, a summary of the data validation results, and an evaluation of the analytical data based on precision, accuracy, representativeness, completeness, and comparability (PARCC). These areas were evaluated to assure that the data obtained from the analysis of the samples was adequate to meet the project data quality objectives (DQOs).

D.1 Quality Control Procedures

Laboratory QC and Field QC samples used for this project are identified below.

D.1.1 Laboratory QC Samples

Laboratory QC samples are used to:

- Verify that procedures, such as sample handling, storage, and preparation, are not introducing variables into the sampling chain that could render the validity of samples questionable; and
- Assess data quality in terms of precision and accuracy.

Quality control samples are regularly prepared in the laboratory so that all phases of the sampling process are monitored. The QC protocols were the same for all water analyses. The types of laboratory QC samples prepared during the analysis of water samples from the field activities are discussed below.

D.1.1.1 Method Blanks

One method blank was analyzed per batch of samples (not greater than 20 samples). The method blank was processed following the same preparatory and analytical procedures as the field-collected samples. These QC samples were used to detect the presence and magnitude of contaminants or other anomalies resulting from the sample preparation and analytical procedures.

D.1.1.2 Laboratory Control Samples/Duplicates

A minimum of one laboratory control sample (LCS)/laboratory control sample duplicate (LCSD) was prepared and analyzed with each batch of samples (which did

not exceed 20 samples) for inorganics analyses. The LCS was prepared by spiking a known amount of certain analytes of interest for each analytical method into ASTM type II water. The LCS was then carried through the same procedures as the field-collected samples. The percent recoveries of the spiked compounds were used to assess whether the laboratory processes were within acceptable performance limits for the analytical methods. This provided an indication of the accuracy and acceptability of the individual methods.

D.1.1.3 Matrix Spikes/Matrix Spike Duplicates

At a minimum, one matrix spike (MS)/matrix spike duplicate (MSD) pair was prepared and analyzed for every 20 samples for organics analyses. The MS/MSD samples were prepared by spiking a known amount of certain analytes of interest for each method into a sample of the matrix. The spiked samples were then carried through the same procedures as the unspiked field-collected samples. The percent recoveries of the spiked compounds were used as an indication of the accuracy and appropriateness of the methods for the matrix. The precision of the methods was also assessed by calculating and evaluating the relative percent difference (RPD) between the results of the MS and MSD.

D.1.1.4 Surrogates

Surrogate compounds (artificial compounds with similar chemical properties and behavior to the compounds of interest) were added to each sample analyzed for applicable organic analytical methods. The percent recoveries of these spiked surrogate compounds were used to assess the accuracy of sample preparation and analysis methods.

D.1.2 Field QC Samples

Field QC samples were collected to evaluate the ambient sampling conditions, the thoroughness of the decontamination procedures, and the reproducibility of the field sampling techniques.

D.1.2.1 Trip Blanks

The laboratory prepared trip blanks using deionized water. Trip blanks were shipped to the base along with the VOC containers provided by the laboratory for sampling. The blanks were returned to the laboratory unopened. One set of trip blanks was sent in each cooler used to ship groundwater samples for VOC analysis.

D.1.2.2 Equipment Rinsate Blanks

Equipment rinsate blanks were prepared by pouring deionized water through sampling equipment after decontamination and before the next groundwater sample was collected.

D.1.2.3 Field Duplicates

Field duplicates were submitted as blind duplicates (i.e., the laboratory was not informed that the samples were duplicates). Field duplicates are a second set of sample bottles that were filled at the same time the accompanying sample was collected. At least one field duplicate was taken for every ten groundwater samples sent to the laboratory and was analyzed for the same parameters as the duplicated sample.

D.2 Data Verification and Validation

The purpose of data verification and validation is to assure that the data collected meet the DQOs and that the data are of sufficient quality for use for the project objectives.

D.2.1 Data Verification

Data collected were subjected to the data verification process. Data verification includes proof-reading and editing hard-copy data reports to assure that data correctly represent the analytical measurement. In general, verification identifies nontechnical errors in the data package that can be corrected (e.g., typographical errors). Data verification also includes verifying that the sample identifiers on laboratory reports (hard copy) match those on the chain-of-custody record.

D.2.2 Data Validation

Data validation was performed by an independent subcontractor (Laboratory Data Consultants, Inc.). One hundred percent of all data collected that was analyzed by a fixed-base analytical laboratory underwent data validation in accordance with Naval Facilities Engineering Service Center (NFESC; formerly Naval Energy and Environmental Support Activity [NEESA]). Approximately ninety percent of the data sent for validation was subject to Level III validation criteria and the remaining ten percent were subject to Level IV sampling and chemical analysis quality assurance requirements of the Navy Installation Restoration Program (IRP) (NFESC , SWDIV 1996).

Data validation is a systematic process used to interpret, define, and document analytical data quality and assess whether the data quality is sufficient to support the intended use(s) of the data. Validation of a data package includes a reconstruction of sample preparation and analysis activities from the raw data and reconciliation of the raw data with the reduced results, identification of data anomalies, and qualification of data to identify data usability limitations.

The Round 9, 10 and 11 data validation reports were reviewed and summarized by CDM Federal project personnel to assess data suitability and usability. The results of this internal review are summarized in Sections D.3 and D.4.

D.2.3 Data Validation Qualifiers

Analytical data were qualified based on data validation reviews. For chemical data, qualifiers were assigned in accordance with the applicable U.S. EPA National Functional Guidelines for Data Validation (U.S. EPA 1993-1994). Any data that were assigned an "R" (rejected) qualifier have been deemed " unusable" and as such were not used for any purpose including, but not limited to, data interpretation, tables, and figures. Data may be rejected for noncompliance of method requirements during the course of validation, or as a result of dilutions and reanalyses by the validators in order to yield only one complete set of data for a given sample and eliminate redundant data. The intent of the latter classification is to guide data users in choosing the best analytical result when reanalyses and/or dilutions exist. A "J" qualifier indicates an estimated concentration, while a "U" qualifier indicates a result is considered undetected.

D.3 Data Validation/Internal Evaluation Summary

This section summarizes the results of data validation reports for all analytical parameters. Significant data validation findings for the analytes in each method category are summarized below. Data validation reports are contained in Appendix E.

D.3.1 Volatile Organic Compounds (CLP/8260B)

Round 9 (January-February 1999): The only data rejected were acetone, 2-butanone, 4-methyl-2-pentanone, and 2-hexanone results for the majority of groundwater grab samples in sample delivery group (SDG) EL008 and SDG EL009. These rejections occurred because either the initial or continuing calibration results were out of criteria. No other data were rejected. Results in SDG EL009 for five analytes were qualified as estimated "J" because continuing calibration results were also out of criteria for this analyte. Methylene chloride was detected in one field blank sample in SDG EL009 (sample number 1710114) but not in associated samples, so no data qualifications were necessary. The surrogate recoveries, precision for field duplicate results, MS/MSD percent recoveries, and holding time criteria were met.

Round 10 (April-May 1999): The only data rejected were nondetects for acetone, 2-butanone, 4-methyl-2-pentanone, and 2-hexanone for groundwater samples in SDG EL010, EL011, and EL012. These rejections occurred because either the initial or continuing calibration results were out of criteria. No other data were rejected. Results for five analytes in samples from SDGs EL010 and EL011 were qualified estimated "J" due to continuing calibration results out of criteria. Methylene chloride was detected in laboratory blank samples for all three SDGs, resulting in qualification of eight sample results as non-detect "U." Methylene chloride was also detected in 10 trip blanks and one equipment rinsate sample. In general, surrogate recoveries, precision for field duplicate results, MS/MSD percent recoveries, and holding time criteria were met.

Round 11 (July-August 1999): The only data rejected were nondetects for acetone, 2-butanone, and 2-hexanone results for the majority of groundwater grab samples in SDGs EL013, EL014, EL015, EL016, and EL017 due to initial and continuing calibrations results out of criteria. Additionally, 4-methyl-2-pentanone results in SDG EL015 were rejected for the same reason. Bromomethane results in SDG EL015 and dichlorodifluoromethane results in SDG EL016 were qualified as estimated "J" because the continuing calibration results were above acceptable criteria. Chloromethane results from SDG EL013 and EL014 were estimated "J" due to continuing calibration results out of criteria. Additionally, some carbon disulfide, carbon tetrachloride, 1,1,1-trichloroethane and 1,2-dibromo-3-chloropropane results from SDGs EL018, EL019, EL020, and EL021 were also estimated "J" because continuing calibration results were above acceptance criteria. Methylene chloride was detected in laboratory blank samples in SDGs EL013 and EL014, resulting in qualification of one associated site sample as nondetect "U." In general, surrogate recoveries, precision for field duplicate results, MS/MSD percent recoveries, and holding time criteria were met.

D.3.2 Wet Chemistry

Round 9 (January-February 1999): Wet chemistry data included the following analyses: alkalinity, chloride, iron (Fe^{+2} and Fe^{+3}), fluoride, nitrate, sulfide, sulfate, and total organic carbon analyses. No data were rejected. Samples in SDG EL009 had alkalinity and sulfide results qualified as estimated "J" due to initial calibration not performed and LCSs not being analyzed, respectively. No other QC results required qualification of data.

Round 10 (April-May 1999): Wet chemistry data included the following analyses: alkalinity, chloride, iron (Fe^{+2} and Fe^{+3}), fluoride, nitrate, sulfide, sulfates, and total organic carbon analyses. No data were rejected. The holding times were exceeded for nitrate, as well as Fe^{+2} and Fe^{+3} iron analyses, for some of the samples in SDG EL010; this resulted in qualification of the data as estimated "J." Initial calibration and continuing calibration results that did not meet criteria for some samples in SDG EL010 for nitrate, sulfide, and alkalinity that also resulted in values being qualified as estimated. All total sulfide results in SDG EL010 and EL011 were qualified as estimated "J" because laboratory control samples were not analyzed with these samples. No other QC results required qualification of data.

Round 11 (July-August 1999): Wet chemistry data included the following analyses: alkalinity, chloride, Fe^{+2} and Fe^{+3}, fluoride, nitrate, sulfide, sulfates, and total organic carbon analyses. No data were rejected. The holding times were exceeded for iron^{+2} and iron^{+3} analyses for samples in SDGs EL015 and EL016 (1 to 10 hours late), as well as total organic carbon results for SDG EL016 (1 to 7 days late). These data results were qualified estimated "J." Initial calibration and continuing calibration results were out of criteria for some samples in SDGs EL015 and EL016 for nitrate that also resulted in

values being qualified as estimated. In addition, samples in SDGs EL015 and EL016 were qualified as estimated "J" for total sulfide results because laboratory control samples were not analyzed with these samples. No other QC results required qualification of data.

D.3.3 Gross Alpha/Beta

Round 9 (January-February 1999): No data were rejected. All results were qualified as estimated "J" due to MS/MSD results out of criteria.

Round 10 (April-May 1999): No data were rejected. MS/MSD percent recoveries were above acceptance criteria, resulting in qualification of all gross alpha/beta radionuclide results in SDG 9905031 as estimated "J." No other QC results required qualification of data.

Round 11 (July-August 1999): No data were rejected. MS/MSD percent recoveries were above acceptance criteria for all samples in SDG 99-07-109, resulting in qualification of all gross alpha/beta radionuclide results as estimated "J." No other QC results required qualification of data.

D.3.4 Total Alpha Emitting Radium

Round 9 (January-February 1999): No data were rejected and no problems were noted during the validation process for the samples analyzed for total radium.

Round 10 (April-May 1999): No data were rejected and no problems were noted during the validation process for the samples analyzed for total radium.

Round 11 (July-August 1999): No data were rejected. MS/MSD percent recoveries were above acceptance criteria for all samples in SDG 99-07-109 resulting in "J" qualification for all total radium results. No other QC results required qualification of data.

D.3.5 Radium 228

Round 9 (January-February 1999): No data were rejected.

Round 10 (April-May 1999): No data were rejected and no problems were noted during the validation process for the samples analyzed for radium 228.

Round 11 (July-August 1999): No data were rejected and no problems were noted during the validation process for the samples analyzed for radium 228.

D.3.6 Total Uranium

Round 9 (January-February 1999): No data were rejected. Half of the results were qualified as estimated "J."

Round 10 (April-May 1999): No data were rejected and no problems were noted during the validation process for the samples analyzed for total radium. Method blank results associated with about half the samples in SDG 9905031 contained activity above the minimum detectable activity but did not require data qualification. No other QC results required qualification of data.

Round 11 (July-August 1999): No data were rejected, and no problems were noted during the validation process for the samples analyzed for total radium.

D.3.7 Perchlorate

Round 9 (January-February 1999): No samples were analyzed for perchlorate.

Round 10 (April-May 1999): No data were rejected. There were no problems noted during the validation process for the samples analyzed for perchlorate that resulted in data being qualified. Data validators noted that blanks were not used to establish calibration curves for any of the perchlorate analyses. No other QC results required qualification of data.

Round 11 (July-August 1999): No data were rejected. MS/MSD results were above acceptance criteria for samples in the following SDGs: S9902278, S9902141, S9902141, S9902111, and S9902264 (samples 171030508 and 171030408). Samples above the criteria for these SDGs were qualified as estimated "J." No other QC results required qualification of data.

D.3.8 Methane

Round 9 (January-February 1999): No samples were analyzed for methane.

Round 10 (April-May 1999): No samples were analyzed for methane.

Round 11 (July-August 1999): No data were rejected. There were no significant problems noted during the validation process for the samples analyzed for methane, however, no MS/MSD sample was analyzed for samples in SDG P9901409 and no duplicate sample was analyzed for the samples in SDG P9901456. These did not result in qualification of the data results. No other QC results required qualification of data.

D.4 QC Evaluation of the Analytical Data

This section presents the results of the internal evaluation of both field and laboratory QC checks. Data quality is assessed against established DQOs. The evaluation of the

validated data sets compared the objective versus the actual data results through the use of the precision, accuracy, representativeness, completeness, and comparability (PARCC) parameters.

Precision, accuracy, and completeness goals for the major chemical analyses that were performed on samples collected from the site were those specified in the U.S. EPA CLP Statement of Work (SOW); for those procedures not specified in the CLP SOW, the criteria specified in U.S. EPA Method SW-846 applied. Primary analytical methodologies used in this effort are listed in Table D1.

D.4.1 Precision and Accuracy

The procedures in this section are designed to assess QC data for blanks, duplicates, spikes, and surrogates. The review of these data provides information concerning the precision and accuracy measurements conducted by the laboratories and field procedures.

D.4.1.1 Laboratory Method Blanks

Methylene chloride and acetone were reported in at least one of the laboratory method blanks for volatile organic analyses. All affected data points have been qualified accordingly during the data validation process.

D.4.1.2 Laboratory Control Samples/Duplicates

In general, most LCS/LCSDs analyzed by the laboratory were within control limits. The overall precision and accuracy of the laboratory on the basis of these samples is considered acceptable. LCS/LCSDs that were not within control limits are discussed in the data validators' case narratives in Appendix E.

D.4.1.3 Matrix Spikes/Matrix Spike Duplicates

In general, most MS/MSD results that were prepared and analyzed by the laboratory were within control limits.

D.4.1.4 Surrogates

In general, most surrogate compounds that were prepared and analyzed by the laboratory were within control limits.

D.4.1.5 Trip Blanks

Methylene chloride was reported in one trip blank during Round 9, ten trip blanks during Round 10, and five trip blanks during Round 11. The maximum reported concentration was 2.4 μg/L. All affected data points have been qualified accordingly. For additional information on the trip blanks, see the data validators' case narratives in Appendix E.

D.4.1.6 Equipment Rinsate Blanks

Acetone was reported in one Round 9 equipment rinsate (ER) sample and five Round 10 ER samples. The maximum concentration reported was 18 μg/L. Chloroform and bromodichloromethane were reported in three Round 11 ER samples, at maximum concentrations of 1.5 and 0.9 μg/L, respectively.

D.4.2 Representativeness

Representativeness is the reliability with which a measurement or measurement system reflects the true conditions under investigation (U.S. EPA 1989). Representativeness is influenced by the number and location of the sampling points, sampling timing and frequency of monitoring efforts, and the field and laboratory sampling procedures (U.S. EPA 1989).

The representativeness of data was enhanced by the use of established field and laboratory procedures and their consistent application. Samples that were collected are considered to be representative of the location of sample collection. Less samples for VOCs analysis were collected during Rounds 9 and 10, as well as Round 11 (compared to Rounds 1 through 8), so Figure 4-1 may include more interpretation than previous reports.

D.4.3 Completeness

The completeness of the data is described as a ratio of the amount of data expected from the field program versus the amount of valid data actually received. Valid data are considered to be those data that have not been rejected (were not R-qualified either from data validation or internal data review). Completeness can be expressed by the following equation:

$$C = \frac{(\text{number of valid results}) \times 100}{\text{total number of requested results}}$$

Based on the internal review, the completeness of the sample set submitted for analysis is over 90 percent. This is within the completeness goals set for this project.

D.4.4 Comparability

Comparability evaluates whether the reported data is comparable with similar data reported by other organizations. The comparability of the laboratory results was found to be acceptable. All samples have been analyzed by the same laboratories, using the complete list of published methods specified in the field sampling plan. Primary analytical methods employed are listed in Table D1. All units were consistent and appropriate for the matrix sampled.

References

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

SWDIV, 1996. Policy Guidance on Data Validation, Code 18, Policy Memorandum Number 13, April.

US EPA 1993-1994. US EPA National Functional Guidelines for Data Validation. US Environmental Protection Agency.

US EPA 1989. US EPA Region IX Guidance for Preparing Quality Assurance Project Plans for Superfund Remedial Projects. 9QA-03-89. September.

Table D-1
Primary Analytical Methodologies

Parameter	Method Number	Method
Volatile Organic Compounds	U.S. EPA 8260B/CLP	GC/MS
Radionuclides		
Gross Alpha/Beta	U.S. EPA 9310	Alpha Spectroscopy
Total Radium	U.S. EPA 903.0	Gamma Spectroscopy
Radium 228	U.S. EPA 904.0	Gas Proportional Counting
Total Uranium	U.S. EPA 908.0	Alpha Spectroscopy
Wet Chemistry		
TOC	U.S. EPA 415	Combustion
Alkalinity	U.S. EPA 301.1	IC/Colorimetric
Chloride	U.S. EPA 300	IC/Colorimetric
Nitrate	U.S. EPA 300	IC/Colorimetric
Sulfate	U.S. EPA 375/300	IC/Colorimetric
Sulfide	U.S. EPA 376	IC/Colorimetric
Ferric/Ferrous Iron	SM 3500Fe-D	IC/Colorimetric
Perchlorate	CA. DHS CLO4.Meth	IC
Methane	U.S. EPA RSK 175	GC/Flame Detection

Notes:

CA DHS = California Department of Health Services
CLP = Contract Laboratory Program
GC/MS = gas chromatography/mass spectroscopy
IC = ion chromatography
RSK = Robert S. Kerr Laboratory
SM = Standard Methods
U.S. EPA = United States Environmental Protection Agency

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Appendix E

Laboratory Data Validation Reports

Table E-1
Index for Laboratory Data Validation Reports
Groundwater Monitoring Rounds 9, 10, and 11 (January-August 1999)
MCAS El Toro

Sample Delivery Group (SDG) No.	Laboratory Data Consultants (LDC) Report No.	Sampling Date	Analytical Category (LDC Designation)	Analytical Category (CDM Federal Designation)
Round 9				
EL008	3659A1	2-4 Feb. 1999	Volatiles	VOCs
EL009	3659B1	21 Jan.-1 Feb. 1999	Volatiles	VOCs
9902053	3775C22	21 Jan.-4 Feb. 1999	Gross Alpha and Beta	Gross Alpha and Beta
9902053	3775C29	21 Jan.-4 Feb. 1999	Total Radium	Total Radium
ELR04	3775B29	21 Jan.-4 Feb. 1999	Radium 228	Radium 228
9902053	3775C59	21 Jan.-4 Feb. 1999	Total Uranium	Total Uranium
EL008	3659A6	3-4 Feb. 1999	Wet Chemistry	Wet Chemistry
EL009	3659B6	21 Jan.-1 Feb. 1999	Wet Chemistry	Wet Chemistry
Round 10				
EL010	3909A1	26 Apr.-7 May 1999	Volatiles	VOCs
EL011	3909B1	10-14 May 1999	Volatiles	VOCs
EL012	3909C1	20 May 1999	Volatiles	VOCs
9905031	3929A22	26 Apr.-14 May 1999	Gross Alpha and Beta	Gross Alpha and Beta
9905031	3929A35a	26 Apr.-14 May 1999	Total Radium	Total Radium
9905031	3929A35b	26 Apr.-14 May 1999	Radium 226	Radium 228
9905031	3929A35c	26 Apr.-14 May 1999	Total Uranium	Total Uranium
EL010	3909A6	26 Apr.-7 May 1999	Wet Chemistry	Wet Chemistry
EL011	3909B6	10-14 May 1999	Wet Chemistry	Wet Chemistry
S9901379	3867G6	19 Apr.-3 May 1999	Perchlorate	Perchlorate
S9901434	3867E6	4-6 May 1999	Perchlorate	Perchlorate
S9901456	3867F6	7-10 May 1999	Perchlorate	Perchlorate
S9901489	3867C6	13 May 1999	Perchlorate	Perchlorate
S9901527	3867B6	17 May 1999	Perchlorate	Perchlorate
S9901538	3867D6	18 May 1999	Perchlorate	Perchlorate
S9901559	3867H6	19 May 1999	Perchlorate	Perchlorate
S9901569	3867I6	20 May 1999	Perchlorate	Perchlorate
S9901585	3867A6	21 May 1999	Perchlorate	Perchlorate
Round 11				
EL013	4031A1	12-14 Jul. 1999	Volatiles	VOCs
EL014	4031B1	15-20 Jul. 1999	Volatiles	VOCs
EL015	4031C1	15-21 Jul. 1999	Volatiles	VOCs
EL016	4031D1	22-26 Jul. 1999	Volatiles	VOCs
EL017	4031E1	27-28 Jul. 1999	Volatiles	VOCs
EL018	4052A1	29-30 Jul. 1999	Volatiles	VOCs
EL019	4052B1	2-3 Aug. 1999	Volatiles	VOCs

Table E-1 (continued)
Index for Laboratory Data Validation Reports
Groundwater Monitoring Rounds 9, 10, and 11 (January-August 1999)
MCAS El Toro

Sample Delivery Group (SDG) No.	Laboratory Data Consultants (LDC) Report No.	Sampling Date	Analytical Category (LDC Designation)	Analytical Category (CDM Federal Designation)
Round 11 (continued)				
EL020	4052C1	4-5 Aug. 1999	Volatiles	VOCs
EL021	4052D1	6 Aug. 1999	Volatiles	VOCs
99-07-109	4094A22	15-26 Jul. 1999	Gross Alpha and Beta	Gross Alpha and Beta
99-07-109	4094A29a	15-26 Jul. 1999	Total Radium	Total Radium
99-07-109	4094A29b	15-26 Jul. 1999	Radium 228	Radium 228
99-07-109	4094A59	15-26 Jul. 1999	Total Uranium	Total Uranium
EL015	4031C6	15-21 Jul. 1999	Wet Chemistry	Wet Chemistry
EL016	4031D6	22-26 Jul. 1999	Wet Chemistry	Wet Chemistry
EL018	4052A6	29 Jul. 1999	Wet Chemistry	Wet Chemistry
S9902111	4031I6	13-14 Jul. 1999	Perchlorate	Perchlorate
S9902141	4031J6	15-16 Jul. 1999	Perchlorate	Perchlorate
S9902179	4031K6	19-21 Jul. 1999	Perchlorate	Perchlorate
S9902206	4031L6	22-23 Jul. 1999	Perchlorate	Perchlorate
S9902234	4031M6	26-27 Jul. 1999	Perchlorate	Perchlorate
S9902264	4031N6	28 Jul. 1999	Perchlorate	Perchlorate
S9902278	4031O6	29 Jul. 1999	Perchlorate	Perchlorate
S9902402	4031P6	6 Aug. 1999	Perchlorate	Perchlorate
P9901409	4031F51	15 Jul. 1999	Methane	Methane
P9901456	4031H51	21 Jul. 1999	Methane	Methane
P9901438	4031G51	19-20 Jul. 1999	Methane	Methane

Notes:

CDM = Camp, Dresser & McKee
LDC = Laboratory Data Consultants
No. = Number
SDG = Sample Delivery Group
VOCs = Volatile Organic Compounds

M60050.000711
MCAS EL TORO
SSIC # 5090.3

ROUND 9

GROUNDWATER MONITORING DATA SUMMARY REPORT 1999 MONITORING ROUNDS 9,10, AND 11

DATED 30 JUNE 2000

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: MCAS El Toro, CTO 171

Collection Date: February 2 through February 4, 1999

LDC Report Date: March 11, 1999

Matrix: Water

Parameters: Volatiles

Validation Level: Level III

Laboratory: Laucks Testing Laboratories

Sample Delivery Group (SDG): EL008

Sample Identification

1710134
1710135
1710127
1710124
1710137
1710123
1710126
1710129
1710132
1710131
1710130
1710133

Introduction

This data review covers 12 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8260B 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

Instrument performance was checked at 12 hour intervals.

All ion abundance requirements were met.

III. Initial Calibration

Initial calibration was performed using required standard concentrations.

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

Average relative response factors (RRF) for all 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
12/8/98	Acetone 2-Butanone 2-Hexanone	0.016 (≥0.05) 0.018 (≥0.05) 0.037 (≥0.05)	All samples in SDG EL008	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% with the following exceptions:

Date	Compound	%D	Associated Samples	Flag	A or P
2/4/99	Acetone 4-Methyl-2-pentanone	35.5 34.4	1710134 1710135 1710127 1710124 1710137 1710123 1710126 1710129 VBLK01	J J	A

Date	Compound	%D	Associated Samples	Flag	A or P
2/5/99	Chloromethane Acetone	26.5 29.0	1710132 1710131 1710130 1710133 VBLK02	J J	A

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

Date	Compound	RRF (Limits)	Associated Samples	Flag	A or P
2/4/99	Acetone 2-Butanone 4-Methyl-2-pentanone 2-Hexanone	0.010 (≥0.05) 0.017 (≥0.05) 0.034 (≥0.05) 0.028 (≥0.05)	1710134 1710135 1710127 1710124 1710137 1710123 1710126 1710129 VBLK01	J (all detects) R (all non-detects)	A
2/5/99	Acetone 2-Butanone 4-Methyl-2-pentanone 2-Hexanone	0.011 (≥0.05) 0.014 (≥0.05) 0.040 (≥0.05) 0.030 (≥0.05)	1710132 1710131 1710130 1710133 VBLK02	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.

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.

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Internal Standards

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

XI. Target Compound Identifications

Raw data were not reviewed for this SDG.

XII. Compound Quantitation and CRQLs

Raw data were not reviewed for this SDG.

XIII. Tentatively Identified Compounds (TICs)

Raw data were not reviewed for this SDG.

XIV. System Performance

Raw data were not reviewed for this SDG.

XV. Overall Assessment of Data

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

XVI. Field Duplicates

Samples 1710134 and 1710135 were identified as field duplicates. No volatiles were detected in any of the samples with the following exceptions:

Compound	Concentration (ug/L)		RPD
	1710134	1710135	
Chloroform	0.8	0.9	12

XVII. Field Blanks

Samples 1710137, 1710129, and 1710133 were identified as trip blanks. No volatile contaminants were found in these blanks.

MCAS El Toro, CTO 171
Volatiles - Data Qualification Summary - SDG EL008

SDG	Sample	Compound	Flag	A or P	Reason
EL008	1710134 1710135 1710127 1710124 1710137 1710123 1710126 1710129 1710132 1710131 1710130 1710133	Acetone 2-Butanone 2-Hexanone	J (all detects) R (all non-detects)	A	Initial calibration (RRF)
EL008	1710134 1710135 1710127 1710124 1710137 1710123 1710126 1710129	Acetone 4-Methyl-2-pentanone	J J	A	Continuing calibration (%D)
EL008	1710132 1710131 1710130 1710133	Chloromethane Acetone	J J	A	Continuing calibration (%D)
EL008	1710134 1710135 1710127 1710124 1710137 1710123 1710126 1710129 1710132 1710131 1710130 1710133	Acetone 2-Butanone 4-Methyl-2-pentanone 2-Hexanone	J (all detects) R (all non-detects)	A	Continuing calibration (RRF)

MCAS El Toro, CTO 171
Volatiles - Laboratory Blank Data Qualification Summary - SDG EL008

No Sample Data Qualified in this SDG

SAMPLE NO.

1710134

VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: Laucks Testing Labs

SDG No.: EL008

Matrix: (soil/water) WATER

Lab Sample ID: 9902104-01

Sample wt/vol: 25.0 (g/ml) ML

Lab File ID: O0204016.D

Level: (low/med) LOW

Date Received: 02/03/99

% Moisture: not dec.

Date Analyzed: 02/04/99

GC Column: DB-624 ID: 0.45 (mm)

Dilution Factor: 1.0

Soil Extract Volume (uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q	
74-87-3	Chloromethane	1.0	U	U
75-01-4	Vinyl chloride	1.0	U	
74-83-9	Bromomethane	1.0	U	
75-00-3	Chloroethane	1.0	U	
75-35-4	1,1-Dichloroethene	1.0	U	
67-64-1	Acetone	5.0	U	R (SA,SB)
75-15-0	Carbon disulfide	1.0	U	U
75-09-2	Methylene chloride	1.0	U	
156-60-5	trans-1,2-Dichloroethene	1.0	U	
75-34-3	1,1-Dichloroethane	1.0	U	
156-59-2	cis-1,2-Dichloroethene	1.0	U	
78-93-3	2-Butanone	5.0	U	R (SA,SB)
67-66-3	Chloroform	0.8	J	
71-55-6	1,1,1-Trichloroethane	1.0	U	U
56-23-5	Carbon tetrachloride	1.0	U	
71-43-2	Benzene	1.0	U	
107-06-2	1,2-Dichloroethane	1.0	U	
79-01-6	Trichloroethene	1.0	U	
78-87-5	1,2-Dichloropropane	1.0	U	
75-27-4	Bromodichloromethane	1.0	U	
10061-01-5	cis-1,3-Dichloropropene	1.0	U	
108-10-1	4-Methyl-2-pentanone	5.0	U	R (SB)
108-88-3	Toluene	1.0	U	U
10061-02-6	trans-1,3-Dichloropropene	1.0	U	
79-00-5	1,1,2-Trichloroethane	1.0	U	
127-18-4	Tetrachloroethene	1.0	U	
591-78-6	2-Hexanone	5.0	U	R (SA,SB)
124-48-1	Dibromochloromethane	1.0	U	U
108-90-7	Chlorobenzene	1.0	U	
7816-60-0	m,p-Xylene	1.0	U	
95-47-6	o-Xylene	1.0	U	
100-42-5	Styrene	1.0	U	
75-25-2	Bromoform	1.0	U	
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	
75-71-8	Dichlorodifluoromethane	1.0	U	
75-69-4	Trichlorofluoromethane	1.0	U	
100-41-4	Ethylbenzene	1.0	U	
541-73-1	1,3-Dichlorobenzene	1.0	U	

FORM I VOA

3/16/99

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

1710134

Lab Name: Laucks Testing Labs Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: EL008

Matrix: (soil/water) WATER Lab Sample ID: 9902104-01

Sample wt/vol: 25.0 (g/ml) ML Lab File ID: O0204016.D

Level: (low/med) LOW Date Received: 02/03/99

% Moisture: not dec. _____ Date Analyzed: 02/04/99

GC Column: DB-624 ID: 0.45 (mm) Dilution Factor: 1.0

Soil Extract Volume _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

c31699

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

1710135

Lab Name: Laucks Testing Labs

SDG No.: EL008

Matrix: (soil/water) WATER

Lab Sample ID: 9902104-02

Sample wt/vol: 25.0 (g/ml) ML

Lab File ID: O0204017.D

Level: (low/med) LOW

Date Received: 02/03/99

% Moisture: not dec. _____

Date Analyzed: 02/04/99

GC Column: DB-624 ID: 0.45 (mm)

Dilution Factor: 1.0

Soil Extract Volume _____ (uL)

Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q	
74-87-3	Chloromethane	1.0	U	U
75-01-4	Vinyl chloride	1.0	U	
74-83-9	Bromomethane	1.0	U	
75-00-3	Chloroethane	1.0	U	
75-35-4	1,1-Dichloroethene	1.0	U	
67-64-1	Acetone	5.0	U	R (SA, SB)
75-15-0	Carbon disulfide	1.0	U	U
75-09-2	Methylene chloride	1.0	U	
156-60-5	trans-1,2-Dichloroethene	1.0	U	
75-34-3	1,1-Dichloroethane	1.0	U	
156-59-2	cis-1,2-Dichloroethene	1.0	U	
78-93-3	2-Butanone	5.0	U	R (SA, SB)
67-66-3	Chloroform	0.9	J	J
71-55-6	1,1,1-Trichloroethane	1.0	U	U
56-23-5	Carbon tetrachloride	1.0	U	
71-43-2	Benzene	1.0	U	
107-06-2	1,2-Dichloroethane	1.0	U	
79-01-6	Trichloroethene	1.0	U	
78-87-5	1,2-Dichloropropane	1.0	U	
75-27-4	Bromodichloromethane	1.0	U	
10061-01-5	cis-1,3-Dichloropropene	1.0	U	
108-10-1	4-Methyl-2-pentanone	5.0	U	R (SB)
108-88-3	Toluene	1.0	U	U
10061-02-6	trans-1,3-Dichloropropene	1.0	U	
79-00-5	1,1,2-Trichloroethane	1.0	U	
127-18-4	Tetrachloroethene	1.0	U	
591-78-6	2-Hexanone	5.0	U	R (SA, SB)
124-48-1	Dibromochloromethane	1.0	U	U
108-90-7	Chlorobenzene	1.0	U	
7816-60-0	m,p-Xylene	1.0	U	
95-47-6	o-Xylene	1.0	U	
100-42-5	Styrene	1.0	U	
75-25-2	Bromoform	1.0	U	
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	
75-71-8	Dichlorodifluoromethane	1.0	U	
75-69-4	Trichlorofluoromethane	1.0	U	
100-41-4	Ethylbenzene	1.0	U	
541-73-1	1,3-Dichlorobenzene	1.0	U	

FORM I VOA

2/3/99

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

1710135

Lab Name: Laucks Testing Labs Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: EL008

Matrix: (soil/water) WATER Lab Sample ID: 9902104-02

Sample wt/vol: 25.0 (g/ml) ML Lab File ID: O0204017.D

Level: (low/med) LOW Date Received: 02/03/99

% Moisture: not dec. _____ Date Analyzed: 02/04/99

GC Column: DB-624 ID: 0.45 (mm) Dilution Factor: 1.0

Soil Extract Volume _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

3/16/99

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

1710127

Lab Name: Laucks Testing Labs

SDG No.: EL008

Matrix: (soil/water) WATER

Lab Sample ID: 9902104-03

Sample wt/vol: 25.0 (g/ml) ML

Lab File ID: O0204018.D

Level: (low/med) LOW

Date Received: 02/03/99

% Moisture: not dec. _____

Date Analyzed: 02/04/99

GC Column: DB-624 ID: 0.45 (mm)

Dilution Factor: 1.0

Soil Extract Volume _____ (uL)

Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q	
74-87-3	Chloromethane	1.0	U	U
75-01-4	Vinyl chloride	1.0	U	
74-83-9	Bromomethane	1.0	U	
75-00-3	Chloroethane	1.0	U	
75-35-4	1,1-Dichloroethene	1.0	U	
67-64-1	Acetone	5.0	U	R (5A, 5B)
75-15-0	Carbon disulfide	1.0	U	U
75-09-2	Methylene chloride	1.0	U	
156-60-5	trans-1,2-Dichloroethene	1.0	U	
75-34-3	1,1-Dichloroethane	1.0	U	
156-59-2	cis-1,2-Dichloroethene	1.0	U	
78-93-3	2-Butanone	5.0	U	R (5A, 5B)
67-66-3	Chloroform	1.0	U	U
71-55-6	1,1,1-Trichloroethane	1.0	U	
56-23-5	Carbon tetrachloride	1.0	U	
71-43-2	Benzene	1.0	U	
107-06-2	1,2-Dichloroethane	1.0	U	
79-01-6	Trichloroethene	1.0	U	
78-87-5	1,2-Dichloropropane	1.0	U	
75-27-4	Bromodichloromethane	1.0	U	
10061-01-5	cis-1,3-Dichloropropene	1.0	U	
108-10-1	4-Methyl-2-pentanone	5.0	U	R (5B)
108-88-3	Toluene	1.0	U	U
10061-02-6	trans-1,3-Dichloropropene	1.0	U	
79-00-5	1,1,2-Trichloroethane	1.0	U	
127-18-4	Tetrachloroethene	1.0	U	
591-78-6	2-Hexanone	5.0	U	R (5A, 5B)
124-48-1	Dibromochloromethane	1.0	U	U
108-90-7	Chlorobenzene	1.0	U	
7816-60-0	m,p-Xylene	1.0	U	
95-47-6	o-Xylene	1.0	U	
100-42-5	Styrene	1.0	U	
75-25-2	Bromoform	1.0	U	
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	
75-71-8	Dichlorodifluoromethane	1.0	U	
75-69-4	Trichlorofluoromethane	1.0	U	
100-41-4	Ethylbenzene	1.0	U	
541-73-1	1,3-Dichlorobenzene	1.0	U	

3/1/99

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

1710127

Lab Name: Laucks Testing Labs Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: EL008

Matrix: (soil/water) WATER Lab Sample ID: 9902104-03

Sample wt/vol: 25.0 (g/ml) ML Lab File ID: O0204018.D

Level: (low/med) LOW Date Received: 02/03/99

% Moisture: not dec. _____ Date Analyzed: 02/04/99

GC Column: DB-624 ID: 0.45 (mm) Dilution Factor: 1.0

Soil Extract Volume _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

431699

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

1710124

Lab Name: Laucks Testing Labs

SDG No.: EL008

Matrix: (soil/water) WATER

Lab Sample ID: 9902104-04

Sample wt/vol: 25.0 (g/ml) ML

Lab File ID: O0204019.D

Level: (low/med) LOW

Date Received: 02/03/99

% Moisture: not dec.

Date Analyzed: 02/04/99

GC Column: DB-624 ID: 0.45 (mm)

Dilution Factor: 1.0

Soil Extract Volume (uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NO.	COMPOUND		Q
74-87-3	Chloromethane	1.0	U
75-01-4	Vinyl chloride	1.0	U
74-83-9	Bromomethane	1.0	U
75-00-3	Chloroethane	1.0	U
75-35-4	1,1-Dichloroethene	1.0	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	1.0	U
75-09-2	Methylene chloride	1.0	U
156-60-5	trans-1,2-Dichloroethene	1.0	U
75-34-3	1,1-Dichloroethane	1.0	U
156-59-2	cis-1,2-Dichloroethene	1.0	U
78-93-3	2-Butanone	5.0	U
67-66-3	Chloroform	1.0	U
71-55-6	1,1,1-Trichloroethane	1.0	U
56-23-5	Carbon tetrachloride	1.0	U
71-43-2	Benzene	1.0	U
107-06-2	1,2-Dichloroethane	1.0	U
79-01-6	Trichloroethene	1.0	U
78-87-5	1,2-Dichloropropane	1.0	U
75-27-4	Bromodichloromethane	1.0	U
10061-01-5	cis-1,3-Dichloropropene	1.0	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	1.0	U
10061-02-6	trans-1,3-Dichloropropene	1.0	U
79-00-5	1,1,2-Trichloroethane	1.0	U
127-18-4	Tetrachloroethene	1.0	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	1.0	U
108-90-7	Chlorobenzene	1.0	U
7816-60-0	m,p-Xylene	1.0	U
95-47-6	o-Xylene	1.0	U
100-42-5	Styrene	1.0	U
75-25-2	Bromoform	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U
75-71-8	Dichlorodifluoromethane	1.0	U
75-69-4	Trichlorofluoromethane	1.0	U
100-41-4	Ethylbenzene	1.0	U
541-73-1	1,3-Dichlorobenzene	1.0	U

R (SA, SB)

R (SA, SB)

R (SB)

R (SA, SB)

3/6/99

FORM I VOA

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

1710124

Lab Name: Laucks Testing Labs Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: EL008

Matrix: (soil/water) WATER Lab Sample ID: 9902104-04

Sample wt/vol: 25.0 (g/ml) ML Lab File ID: O0204019.D

Level: (low/med) LOW Date Received: 02/03/99

% Moisture: not dec. _____ Date Analyzed: 02/04/99

GC Column: DB-624 ID: 0.45 (mm) Dilution Factor: 1.0

Soil Extract Volume _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

FORM I VOA-TIC

-a 3/6/99

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

1710137, TB

Lab Name: Laucks Testing Labs

SDG No.: EL008

Matrix: (soil/water) WATER

Lab Sample ID: 9902104-05

Sample wt/vol: 25.0 (g/ml) ML

Lab File ID: O0204012.D

Level: (low/med) LOW

Date Received: 02/03/99

% Moisture: not dec. _____

Date Analyzed: 02/04/99

GC Column: DB-624 ID: 0.45 (mm)

Dilution Factor: 1.0

Soil Extract Volume _____ (uL)

Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q	
74-87-3	Chloromethane	1.0	U	U
75-01-4	Vinyl chloride	1.0	U	
74-83-9	Bromomethane	1.0	U	
75-00-3	Chloroethane	1.0	U	
75-35-4	1,1-Dichloroethene	1.0	U	
67-64-1	Acetone	5.0	U	R (SA, SB)
75-15-0	Carbon disulfide	1.0	U	U
75-09-2	Methylene chloride	1.0	U	
156-60-5	trans-1,2-Dichloroethene	1.0	U	
75-34-3	1,1-Dichloroethane	1.0	U	
156-59-2	cis-1,2-Dichloroethene	1.0	U	
78-93-3	2-Butanone	5.0	U	R (SA, SB)
67-66-3	Chloroform	1.0	U	U
71-55-6	1,1,1-Trichloroethane	1.0	U	
56-23-5	Carbon tetrachloride	1.0	U	
71-43-2	Benzene	1.0	U	
107-06-2	1,2-Dichloroethane	1.0	U	
79-01-6	Trichloroethene	1.0	U	
78-87-5	1,2-Dichloropropane	1.0	U	
75-27-4	Bromodichloromethane	1.0	U	
10061-01-5	cis-1,3-Dichloropropene	1.0	U	
108-10-1	4-Methyl-2-pentanone	5.0	U	R (SB)
108-88-3	Toluene	1.0	U	U
10061-02-6	trans-1,3-Dichloropropene	1.0	U	
79-00-5	1,1,2-Trichloroethane	1.0	U	
127-18-4	Tetrachloroethene	1.0	U	
591-78-6	2-Hexanone	5.0	U	R (SA, SB)
124-48-1	Dibromochloromethane	1.0	U	U
108-90-7	Chlorobenzene	1.0	U	
7816-60-0	m,p-Xylene	1.0	U	
95-47-6	o-Xylene	1.0	U	
100-42-5	Styrene	1.0	U	
75-25-2	Bromoform	1.0	U	
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	
75-71-8	Dichlorodifluoromethane	1.0	U	
75-69-4	Trichlorofluoromethane	1.0	U	
100-41-4	Ethylbenzene	1.0	U	
541-73-1	1,3-Dichlorobenzene	1.0	U	

3/6/99

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

1710137, TB

Lab Name: Laucks Testing Labs Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: EL008

Matrix: (soil/water) WATER Lab Sample ID: 9902104-05

Sample wt/vol: 25.0 (g/ml) ML Lab File ID: O0204012.D

Level: (low/med) LOW Date Received: 02/03/99

% Moisture: not dec. _____ Date Analyzed: 02/04/99

GC Column: DB-624 ID: 0.45 (mm) Dilution Factor: 1.0

Soil Extract Volume _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

2/3/99

258

SAMPLE NO.

1710123

VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: Laucks Testing Labs

SDG No.: EL008

Matrix: (soil/water) WATER

Lab Sample ID: 9902133-01

Sample wt/vol: 25.0 (g/ml) ML

Lab File ID: O0204020.D

Level: (low/med) LOW

Date Received: 02/04/99

% Moisture: not dec. _____

Date Analyzed: 02/04/99

GC Column: DB-624 ID: 0.45 (mm)

Dilution Factor: 1.0

Soil Extract Volume _____ (uL)

Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	1.0	U
75-01-4	Vinyl chloride	1.0	U
74-83-9	Bromomethane	1.0	U
75-00-3	Chloroethane	1.0	U
75-35-4	1,1-Dichloroethene	1.0	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	1.0	U
75-09-2	Methylene chloride	1.0	U
156-60-5	trans-1,2-Dichloroethene	1.0	U
75-34-3	1,1-Dichloroethane	1.0	U
156-59-2	cis-1,2-Dichloroethene	1.0	U
78-93-3	2-Butanone	5.0	U
67-66-3	Chloroform	1.0	U
71-55-6	1,1,1-Trichloroethane	1.0	U
56-23-5	Carbon tetrachloride	1.0	U
71-43-2	Benzene	1.0	U
107-06-2	1,2-Dichloroethane	1.0	U
79-01-6	Trichloroethene	1.0	U
78-87-5	1,2-Dichloropropane	1.0	U
75-27-4	Bromodichloromethane	1.0	U
10061-01-5	cis-1,3-Dichloropropene	1.0	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	1.0	U
10061-02-6	trans-1,3-Dichloropropene	1.0	U
79-00-5	1,1,2-Trichloroethane	1.0	U
127-18-4	Tetrachloroethene	1.0	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	1.0	U
108-90-7	Chlorobenzene	1.0	U
7816-60-0	m,p-Xylene	1.0	U
95-47-6	o-Xylene	1.0	U
100-42-5	Styrene	1.0	U
75-25-2	Bromoform	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U
75-71-8	Dichlorodifluoromethane	1.0	U
75-69-4	Trichlorofluoromethane	1.0	U
100-41-4	Ethylbenzene	1.0	U
541-73-1	1,3-Dichlorobenzene	1.0	U

U

R (SA, SB)

U

R (SA, SB)

U

R (SB)

U

R (SA, SB)

U

FORM I VOA

4/31/99

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

1710123

Lab Name: Laucks Testing Labs Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: EL008

Matrix: (soil/water) WATER Lab Sample ID: 9902133-01

Sample wt/vol: 25.0 (g/ml) ML Lab File ID: O0204020.D

Level: (low/med) LOW Date Received: 02/04/99

% Moisture: not dec. _____ Date Analyzed: 02/04/99

GC Column: DB-624 ID: 0.45 (mm) Dilution Factor: 1.0

Soil Extract Volume _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

13189

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

1710126

Lab Name: Laucks Testing Labs

SDG No.: EL008

Matrix: (soil/water) WATER

Lab Sample ID: 9902133-02

Sample wt/vol: 25.0 (g/ml) ML

Lab File ID: O0204021.D

Level: (low/med) LOW

Date Received: 02/04/99

% Moisture: not dec.

Date Analyzed: 02/04/99

GC Column: DB-624 ID: 0.45 (mm)

Dilution Factor: 1.0

Soil Extract Volume (uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	1.0	U
75-01-4	Vinyl chloride	1.0	U
74-83-9	Bromomethane	1.0	U
75-00-3	Chloroethane	1.0	U
75-35-4	1,1-Dichloroethene	1.0	U
67-64-1	Acetone	0.8	J
75-15-0	Carbon disulfide	1.0	U
75-09-2	Methylene chloride	1.0	U
156-60-5	trans-1,2-Dichloroethene	1.0	U
75-34-3	1,1-Dichloroethane	1.0	U
156-59-2	cis-1,2-Dichloroethene	1.0	U
78-93-3	2-Butanone	5.0	U
67-66-3	Chloroform	1.0	U
71-55-6	1,1,1-Trichloroethane	1.0	U
56-23-5	Carbon tetrachloride	1.0	U
71-43-2	Benzene	1.0	U
107-06-2	1,2-Dichloroethane	1.0	U
79-01-6	Trichloroethene	1.0	J
78-87-5	1,2-Dichloropropane	1.0	U
75-27-4	Bromodichloromethane	1.0	U
10061-01-5	cis-1,3-Dichloropropene	1.0	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	1.0	U
10061-02-6	trans-1,3-Dichloropropene	1.0	U
79-00-5	1,1,2-Trichloroethane	1.0	U
127-18-4	Tetrachloroethene	1.3	
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	1.0	U
108-90-7	Chlorobenzene	1.0	U
7816-60-0	m,p-Xylene	1.0	U
95-47-6	o-Xylene	1.0	U
100-42-5	Styrene	1.0	U
75-25-2	Bromoform	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U
75-71-8	Dichlorodifluoromethane	1.0	U
75-69-4	Trichlorofluoromethane	1.0	U
100-41-4	Ethylbenzene	1.0	U
541-73-1	1,3-Dichlorobenzene	1.0	U

(5A,5B)

R (5A,5B)

R (5B)

R (5A,5B)

03/01/99

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

1710126

Lab Name: Laucks Testing Labs Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: EL008

Matrix: (soil/water) WATER Lab Sample ID: 9902133-02

Sample wt/vol: 25.0 (g/ml) ML Lab File ID: O0204021.D

Level: (low/med) LOW Date Received: 02/04/99

% Moisture: not dec. _____ Date Analyzed: 02/04/99

GC Column: DB-624 ID: 0.45 (mm) Dilution Factor: 1.0

Soil Extract Volume _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

A 31699

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

1710129, TB

Lab Name: Laucks Testing Labs

SDG No.: EL008

Matrix: (soil/water) WATER

Lab Sample ID: 9902133-03

Sample wt/vol: 25.0 (g/ml) ML

Lab File ID: O0204013.D

Level: (low/med) LOW

Date Received: 02/04/99

% Moisture: not dec.

Date Analyzed: 02/04/99

GC Column: DB-624 ID: 0.45 (mm)

Dilution Factor: 1.0

Soil Extract Volume (uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	1.0	U
75-01-4	Vinyl chloride	1.0	U
74-83-9	Bromomethane	1.0	U
75-00-3	Chloroethane	1.0	U
75-35-4	1,1-Dichloroethene	1.0	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	1.0	U
75-09-2	Methylene chloride	1.0	U
156-60-5	trans-1,2-Dichloroethene	1.0	U
75-34-3	1,1-Dichloroethane	1.0	U
156-59-2	cis-1,2-Dichloroethene	1.0	U
78-93-3	2-Butanone	5.0	U
67-66-3	Chloroform	1.0	U
71-55-6	1,1,1-Trichloroethane	1.0	U
56-23-5	Carbon tetrachloride	1.0	U
71-43-2	Benzene	1.0	U
107-06-2	1,2-Dichloroethane	1.0	U
79-01-6	Trichloroethene	1.0	U
78-87-5	1,2-Dichloropropane	1.0	U
75-27-4	Bromodichloromethane	1.0	U
10061-01-5	cis-1,3-Dichloropropene	1.0	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	1.0	U
10061-02-6	trans-1,3-Dichloropropene	1.0	U
79-00-5	1,1,2-Trichloroethane	1.0	U
127-18-4	Tetrachloroethene	1.0	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	1.0	U
108-90-7	Chlorobenzene	1.0	U
7816-60-0	m,p-Xylene	1.0	U
95-47-6	o-Xylene	1.0	U
100-42-5	Styrene	1.0	U
75-25-2	Bromoform	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U
75-71-8	Dichlorodifluoromethane	1.0	U
75-69-4	Trichlorofluoromethane	1.0	U
100-41-4	Ethylbenzene	1.0	U
541-73-1	1,3-Dichlorobenzene	1.0	U

U

R (SA, SB)

U

R (SA, SB)

U

R (SB)

U

R (SA, SB)

U

U 3/6/99

FORM I VOA

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

1710129, TB

Lab Name: Laucks Testing Labs Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: EL008

Matrix: (soil/water) WATER Lab Sample ID: 9902133-03

Sample wt/vol: 25.0 (g/ml) ML Lab File ID: O0204013.D

Level: (low/med) LOW Date Received: 02/04/99

% Moisture: not dec. _____ Date Analyzed: 02/04/99

GC Column: DB-624 ID: 0.45 (mm) Dilution Factor: 1.0

Soil Extract Volume _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

43189

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

1710132

Lab Name: Laucks Testing Labs

SDG No.: EL008

Matrix: (soil/water) WATER

Lab Sample ID: 9902163-01

Sample wt/vol: 25.0 (g/ml) ML

Lab File ID: O0205008.D

Level: (low/med) LOW

Date Received: 02/05/99

% Moisture: not dec. _____

Date Analyzed: 02/05/99

GC Column: DB-624 ID: 0.45 (mm)

Dilution Factor: 1.0

Soil Extract Volume _____ (uL)

Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q	
74-87-3	Chloromethane	1.0	U	U (5B)
75-01-4	Vinyl chloride	1.0	U	U
74-83-9	Bromomethane	1.0	U	
75-00-3	Chloroethane	1.0	U	
75-35-4	1,1-Dichloroethene	1.0	U	
67-64-1	Acetone	5.0	U	R (5A,5B)
75-15-0	Carbon disulfide	1.0	U	U
75-09-2	Methylene chloride	1.0	U	
156-60-5	trans-1,2-Dichloroethene	1.0	U	
75-34-3	1,1-Dichloroethane	1.0	U	
156-59-2	cis-1,2-Dichloroethene	1.0	U	
78-93-3	2-Butanone	5.0	U	R (5A,5B)
67-66-3	Chloroform	1.0	U	U
71-55-6	1,1,1-Trichloroethane	1.0	U	
56-23-5	Carbon tetrachloride	1.0	U	
71-43-2	Benzene	1.0	U	
107-06-2	1,2-Dichloroethane	1.0	U	
79-01-6	Trichloroethene	1.0	U	
78-87-5	1,2-Dichloropropane	1.0	U	
75-27-4	Bromodichloromethane	1.0	U	
10061-01-5	cis-1,3-Dichloropropene	1.0	U	
108-10-1	4-Methyl-2-pentanone	5.0	U	R (5B)
108-88-3	Toluene	1.0	U	U
10061-02-6	trans-1,3-Dichloropropene	1.0	U	
79-00-5	1,1,2-Trichloroethane	1.0	U	
127-18-4	Tetrachloroethene	1.0	U	
591-78-6	2-Hexanone	5.0	U	R (5A,5B)
124-48-1	Dibromochloromethane	1.0	U	U
108-90-7	Chlorobenzene	1.0	U	
7816-60-0	m,p-Xylene	1.0	U	
95-47-6	o-Xylene	1.0	U	
100-42-5	Styrene	1.0	U	
75-25-2	Bromoform	1.0	U	
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	
75-71-8	Dichlorodifluoromethane	1.0	U	
75-69-4	Trichlorofluoromethane	1.0	U	
100-41-4	Ethylbenzene	1.0	U	
541-73-1	1,3-Dichlorobenzene	1.0	U	

4/3/99

FORM I VOA

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

1710132

Lab Name: Laucks Testing Labs Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: EL008

Matrix: (soil/water) WATER Lab Sample ID: 9902163-01

Sample wt/vol: 25.0 (g/ml) ML Lab File ID: O0205008.D

Level: (low/med) LOW Date Received: 02/05/99

% Moisture: not dec. _____ Date Analyzed: 02/05/99

GC Column: DB-624 ID: 0.45 (mm) Dilution Factor: 1.0

Soil Extract Volume _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

FORM I VOA-TIC

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

1710131

Lab Name: Laucks Testing Labs

SDG No.: EL008

Matrix: (soil/water) WATER

Lab Sample ID: 9902163-02

Sample wt/vol: 25.0 (g/ml) ML

Lab File ID: O0205010.D

Level: (low/med) LOW

Date Received: 02/05/99

% Moisture: not dec.

Date Analyzed: 02/05/99

GC Column: DB-624 ID: 0.45 (mm)

Dilution Factor: 1.0

Soil Extract Volume (uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	1.0	U
75-01-4	Vinyl chloride	1.0	U
74-83-9	Bromomethane	1.0	U
75-00-3	Chloroethane	1.0	U
75-35-4	1,1-Dichloroethene	1.0	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	1.0	U
75-09-2	Methylene chloride	1.0	U
156-60-5	trans-1,2-Dichloroethene	1.0	U
75-34-3	1,1-Dichloroethane	1.0	U
156-59-2	cis-1,2-Dichloroethene	1.0	U
78-93-3	2-Butanone	5.0	U
67-66-3	Chloroform	1.0	U
71-55-6	1,1,1-Trichloroethane	1.0	U
56-23-5	Carbon tetrachloride	1.0	U
71-43-2	Benzene	1.0	U
107-06-2	1,2-Dichloroethane	1.0	U
79-01-6	Trichloroethene	1.0	U
78-87-5	1,2-Dichloropropane	1.0	U
75-27-4	Bromodichloromethane	1.0	U
10061-01-5	cis-1,3-Dichloropropene	1.0	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	1.0	U
10061-02-6	trans-1,3-Dichloropropene	1.0	U
79-00-5	1,1,2-Trichloroethane	1.0	U
127-18-4	Tetrachloroethene	1.0	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	1.0	U
108-90-7	Chlorobenzene	1.0	U
7816-60-0	m,p-Xylene	1.0	U
95-47-6	o-Xylene	1.0	U
100-42-5	Styrene	1.0	U
75-25-2	Bromoform	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U
75-71-8	Dichlorodifluoromethane	1.0	U
75-69-4	Trichlorofluoromethane	1.0	U
100-41-4	Ethylbenzene	1.0	U
541-73-1	1,3-Dichlorobenzene	1.0	U

U (SB)

R (SA, SB)

R (SA, SB)

R (SB)

R (SA, SB)

FORM I VOA

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

1710131

Lab Name: Laucks Testing Labs Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: EL008

Matrix: (soil/water) WATER Lab Sample ID: 9902163-02

Sample wt/vol: 25.0 (g/ml) ML Lab File ID: O0205010.D

Level: (low/med) LOW Date Received: 02/05/99

% Moisture: not dec. _____ Date Analyzed: 02/05/99

GC Column: DB-624 ID: 0.45 (mm) Dilution Factor: 1.0

Soil Extract Volume _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

43/699

FORM I VOA-TIC

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

1710130

Lab Name: Laucks Testing Labs

SDG No.: EL008

Matrix: (soil/water) WATER

Lab Sample ID: 9902163-03

Sample wt/vol: 25.0 (g/ml) ML

Lab File ID: O0205009.D

Level: (low/med) LOW

Date Received: 02/05/99

% Moisture: not dec.

Date Analyzed: 02/05/99

GC Column: DB-624 ID: 0.45 (mm)

Dilution Factor: 1.0

Soil Extract Volume (uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q	
74-87-3	Chloromethane	1.0	U	U(5B)
75-01-4	Vinyl chloride	1.0	U	U
74-83-9	Bromomethane	1.0	U	
75-00-3	Chloroethane	1.0	U	
75-35-4	1,1-Dichloroethene	1.0	U	R(5A,5B)
67-64-1	Acetone	5.0	U	
75-15-0	Carbon disulfide	1.0	U	U
75-09-2	Methylene chloride	1.0	U	
156-60-5	trans-1,2-Dichloroethene	1.0	U	
75-34-3	1,1-Dichloroethane	1.0	U	
156-59-2	cis-1,2-Dichloroethene	1.0	U	R(5A,5B)
78-93-3	2-Butanone	5.0	U	
67-66-3	Chloroform	1.0	U	U
71-55-6	1,1,1-Trichloroethane	1.0	U	
56-23-5	Carbon tetrachloride	1.0	U	
71-43-2	Benzene	1.0	U	
107-06-2	1,2-Dichloroethane	1.0	U	
79-01-6	Trichloroethene	1.0	U	
78-87-5	1,2-Dichloropropane	1.0	U	
75-27-4	Bromodichloromethane	1.0	U	
10061-01-5	cis-1,3-Dichloropropene	1.0	U	U R(5B)
108-10-1	4-Methyl-2-pentanone	5.0	U	
108-88-3	Toluene	1.0	U	U
10061-02-6	trans-1,3-Dichloropropene	1.0	U	
79-00-5	1,1,2-Trichloroethane	1.0	U	
127-18-4	Tetrachloroethene	1.0	U	
591-78-6	2-Hexanone	5.0	U	R(5A,5B)
124-48-1	Dibromochloromethane	1.0	U	U
108-90-7	Chlorobenzene	1.0	U	
7816-60-0	m,p-Xylene	1.0	U	
95-47-6	o-Xylene	1.0	U	
100-42-5	Styrene	1.0	U	
75-25-2	Bromoform	1.0	U	
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	
75-71-8	Dichlorodifluoromethane	1.0	U	
75-69-4	Trichlorofluoromethane	1.0	U	
100-41-4	Ethylbenzene	1.0	U	
541-73-1	1,3-Dichlorobenzene	1.0	U	

P23689

FORM I VOA

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

1710130

Lab Name: Laucks Testing Labs Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: EL008

Matrix: (soil/water) WATER Lab Sample ID: 9902163-03

Sample wt/vol: 25.0 (g/ml) ML Lab File ID: O0205009.D

Level: (low/med) LOW Date Received: 02/05/99

% Moisture: not dec. _____ Date Analyzed: 02/05/99

GC Column: DB-624 ID: 0.45 (mm) Dilution Factor: 1.0

Soil Extract Volume _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

FORM I VOA-TIC

431699

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

1710133, TB

Lab Name: Laucks Testing Labs

SDG No.: EL008

Matrix: (soil/water) WATER

Lab Sample ID: 9902163-04

Sample wt/vol: 25.0 (g/ml) ML

Lab File ID: O0205011.D

Level: (low/med) LOW

Date Received: 02/05/99

% Moisture: not dec.

Date Analyzed: 02/05/99

GC Column: DB-624 ID: 0.45 (mm)

Dilution Factor: 1.0

Soil Extract Volume (uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q	
74-87-3	Chloromethane	1.0	U	U (SB)
75-01-4	Vinyl chloride	1.0	U	U
74-83-9	Bromomethane	1.0	U	
75-00-3	Chloroethane	1.0	U	
75-35-4	1,1-Dichloroethene	1.0	U	
67-64-1	Acetone	5.0	U	R (SA, SB)
75-15-0	Carbon disulfide	1.0	U	U
75-09-2	Methylene chloride	1.0	U	
156-60-5	trans-1,2-Dichloroethene	1.0	U	
75-34-3	1,1-Dichloroethane	1.0	U	
156-59-2	cis-1,2-Dichloroethene	1.0	U	
78-93-3	2-Butanone	5.0	U	R (SA, SB)
67-66-3	Chloroform	1.0	U	U
71-55-6	1,1,1-Trichloroethane	1.0	U	
56-23-5	Carbon tetrachloride	1.0	U	
71-43-2	Benzene	1.0	U	
107-06-2	1,2-Dichloroethane	1.0	U	
79-01-6	Trichloroethene	1.0	U	
78-87-5	1,2-Dichloropropane	1.0	U	
75-27-4	Bromodichloromethane	1.0	U	
10061-01-5	cis-1,3-Dichloropropene	1.0	U	
108-10-1	4-Methyl-2-pentanone	5.0	U	R (SB)
108-88-3	Toluene	1.0	U	U
10061-02-6	trans-1,3-Dichloropropene	1.0	U	
79-00-5	1,1,2-Trichloroethane	1.0	U	
127-18-4	Tetrachloroethene	1.0	U	
591-78-6	2-Hexanone	5.0	U	R (SA, SB)
124-48-1	Dibromochloromethane	1.0	U	U
108-90-7	Chlorobenzene	1.0	U	
7816-60-0	m,p-Xylene	1.0	U	
95-47-6	o-Xylene	1.0	U	
100-42-5	Styrene	1.0	U	
75-25-2	Bromoform	1.0	U	
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	
75-71-8	Dichlorodifluoromethane	1.0	U	
75-69-4	Trichlorofluoromethane	1.0	U	
100-41-4	Ethylbenzene	1.0	U	
541-73-1	1,3-Dichlorobenzene	1.0	U	

K31899

FORM I VOA

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

1710133, TB

Lab Name: Laucks Testing Labs Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: EL008

Matrix: (soil/water) WATER Lab Sample ID: 9902163-04

Sample wt/vol: 25.0 (g/ml) ML Lab File ID: O0205011.D

Level: (low/med) LOW Date Received: 02/05/99

% Moisture: not dec. _____ Date Analyzed: 02/05/99

GC Column: DB-624 ID: 0.45 (mm) Dilution Factor: 1.0

Soil Extract Volume _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

U31699

FORM I VOA-TIC

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: MCAS El Toro, CTO 171

Collection Date: January 21 through February 1, 1999

LDC Report Date: March 11, 1999

Matrix: Water

Parameters: Volatiles

Validation Level: Level III & IV

Laboratory: Laucks Testing Laboratories

Sample Delivery Group (SDG): EL009

Sample Identification

1710100	1710118
1710101**	1710122
1710105	1710102
1710106	1710103
1710121	1710104
1710120	1710116MS
1710107	1710116MSD
1710109**	1710136MS
1710110	1710136MSD
1710108	
1710108DL	
1710111**	
1710113	
1710112	
1710114	
1710116**	
1710115	
1710117	
1710136	
1710119**	

**Indicates sample underwent Level IV review

Introduction

This data review covers 29 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8260B 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.

Samples indicated by a double asterisk on the front cover underwent a Level IV review. A Level III review was performed on all of the other samples. Raw data were not evaluated for the samples reviewed by Level III criteria since this review is 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

Instrument performance was checked at 12 hour intervals.

All ion abundance requirements were met.

III. Initial Calibration

Initial calibration was performed using required standard concentrations.

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

Average relative response factors (RRF) for all 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
12/8/98	Acetone 2-Butanone 2-Hexanone	0.016 (≥0.05) 0.018 (≥0.05) 0.037 (≥0.05)	All samples in SDG EL009	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% with the following exceptions:

Date	Compound	%D	Associated Samples	Flag	A or P
1/26/99	Acetone 4-Methyl-2-pentanone 2-Hexanone	27.1 36.6 31.6	1710100 1710101** 1710105 1710106 1710121 1710120 1710107 1710109** 1710110 1710108 1710111** VBLK01	J J J	A
1/27/99	Acetone 2-Hexanone	25.8 35.5	1710108DL VBLK02	J J	A
1/29/99	2-Hexanone	37.4	1710113 1710112 1710114 1710116** 1710115 1710117 1710116MS 1710116MSD	J	A
2/3/99	Acetone 4-Methyl-2-pentanone 2-Hexanone	26.5 28.4 29.2	1710136 1710119** 1710118 1710136MS 1710136MSD	J J J	A
2/4/99	Acetone 4-Methyl-2-pentanone	35.5 34.4	1710122 1710102 1710103 1710104 VBLK05	J J	A

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

Date	Compound	RRF (Limits)	Associated Samples	Flag	A or P
1/26/99	Acetone 2-Butanone 4-Methyl-2-pentanone 2-Hexanone	0.011 (≥0.05) 0.014 (≥0.05) 0.033 (≥0.05) 0.025 (≥0.05)	1710100 1710101** 1710105 1710106 1710121 1710120 1710107 1710109** 1710110 1710108 1710111** VBLK01	J (all detects) R (all non-detects)	A
1/27/99	Acetone 2-Butanone 4-Methyl-2-pentanone 2-Hexanone	0.012 (≥0.05) 0.018 (≥0.05) 0.046 (≥0.05) 0.024 (≥0.05)	1710108DL VBLK02	J (all detects) R (all non-detects)	A
1/29/99	Acetone 2-Butanone 4-Methyl-2-pentanone 2-Hexanone	0.014 (≥0.05) 0.020 (≥0.05) 0.048 (≥0.05) 0.023 (≥0.05)	1710113 1710112 1710114 1710116** 1710115 1710117 1710116MS 1710116MSD	J (all detects) R (all non-detects)	A
2/3/99	Acetone 2-Butanone 4-Methyl-2-pentanone 2-Hexanone	0.011 (≥0.05) 0.015 (≥0.05) 0.037 (≥0.05) 0.026 (≥0.05)	1710136 1710119** 1710118 1710136MS 1710136MSD	J (all detects) R (all non-detects)	A
2/4/99	Acetone 2-Butanone 4-Methyl-2-pentanone 2-Hexanone	0.010 (≥0.05) 0.017 (≥0.05) 0.034 (≥0.05) 0.028 (≥0.05)	1710122 1710102 1710103 1710104 VBLK05	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.

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.

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Internal Standards

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

XI. Target Compound Identifications

All target compound identifications were within validation criteria for samples on which a Level IV review was performed. Raw data were not evaluated for the samples reviewed by Level III criteria.

XII. Compound Quantitation and CRQLs

All compound quantitation and CRQLs were within validation criteria for samples on which a Level IV review was performed with the following exceptions:

Sample	Compound	Finding	Criteria	Flag	A or P
1710108	Trichloroethene	Sample result exceeded calibration range.	Reported result should be within calibration range.	J (all detects)	A

Raw data were not evaluated for the samples reviewed by Level III criteria.

XIII. Tentatively Identified Compounds (TICs)

All tentatively identified compounds were within validation criteria for samples on which a Level IV review was performed. Raw data were not evaluated for the samples reviewed by Level III criteria.

XIV. System Performance

The system performance was within validation criteria for samples on which a Level IV review was performed. Raw data were not evaluated for the samples reviewed by Level III criteria.

XV. Overall Assessment of Data

The overall assessment of data was acceptable with the following exceptions:

Sample	Compound	Finding	Flag	A or P
1710108	Trichloroethene	For database purposes this compound was rejected.	R	A
1710108DL	All TCL compounds except Trichloroethene	For database purposes these compounds were rejected.	R	A

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

XVI. Field Duplicates

Samples 1710120 and 1710109** and samples 1710108 and 1710113 were identified as field duplicates. No volatiles were detected in any of the samples with the following exceptions:

Compound	Concentration (ug/L)		RPD
	1710108	1710113	
Trichloroethene	0.5	ND	Not calculable
Tetrachloroethene	6.2	6.2	0

XVII. Field Blanks

Samples 1710105, 1710110, 1710111**, 1710114, 1710117, 1710122, and 1710104 were identified as trip blanks. No volatile contaminants were found in these blanks with the following exceptions:

Trip Blank ID	Compound	Concentration (ug/L)
1710114	Methylene chloride	0.6

MCAS El Toro, CTO 171
Volatiles - Data Qualification Summary - SDG EL009

SDG	Sample	Compound	Flag	A or P	Reason
EL009	1710100 1710101** 1710105 1710106 1710121 1710120 1710107 1710109** 1710110 1710108 1710108DL 1710111** 1710113 1710112 1710114 1710116** 1710115 1710117 1710136 1710119** 1710118 1710122 1710102 1710103 1710104	Acetone 2-Butanone 2-Hexanone	J (all detects) R (all non-detects)	A	Initial calibration (RRF)
EL009	1710100 1710101** 1710105 1710106 1710121 1710120 1710107 1710109** 1710110 1710108 1710111** 1710136 1710119** 1710118	Acetone 4-Methyl-2-pentanone 2-Hexanone	J J J	A	Continuing calibration (%D)
EL009	1710108DL	Acetone 2-Hexanone	J J	A	Continuing calibration (%D)
EL009	1710113 1710112 1710114 1710116** 1710115 1710117	2-Hexanone	J	A	Continuing calibration (%D)

SDG	Sample	Compound	Flag	A or P	Reason
EL009	1710122 1710102 1710103 1710104	Acetone 4-Methyl-2-pentanone	J J	A	Continuing calibration (%D)
EL009	1710100 1710101** 1710105 1710106 1710121 1710120 1710107 1710109** 1710110 1710108 1710111** 1710108DL 1710113 1710112 1710114 1710116** 1710115 1710117 1710136 1710119** 1710118 1710122 1710102 1710103 1710104	Acetone 2-Butanone 4-Methyl-2-pentanone 2-Hexanone	J (all detects) R (all non-detects)	A	Continuing calibration (RRF)
EL009	1710108	Trichloroethene	J (all detects)	A	Compound quantitation and CRQLs
EL009	1710108	Trichloroethene	R	A	Overall assessment of data
EL009	1710108DL	All TCL compounds except Trichloroethene	R	A	Overall assessment of data

MCAS El Toro, CTO 171
Volatiles - Laboratory Blank Data Qualification Summary - SDG EL009

No Sample Data Qualified in this SDG

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

1710100

Lab Name: Laucks Testing Labs

SDG No.: EL007

Matrix: (soil/water) WATER

Lab Sample ID: 9901482-01

Sample wt/vol: 25.0 (g/ml) ML

Lab File ID: O0126009.D

Level: (low/med) LOW

Date Received: 01/22/99

% Moisture: not dec.

Date Analyzed: 01/26/99

GC Column: DB-624 ID: 0.45 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q	
74-87-3	Chloromethane	1.0	U	
75-01-4	Vinyl chloride	1.0	U	
74-83-9	Bromomethane	1.0	U	
75-00-3	Chloroethane	1.0	U	
75-35-4	1,1-Dichloroethene	1.0	U	R (SA, SB)
67-64-1	Acetone	5.0	U	
75-15-0	Carbon disulfide	1.0	U	
75-09-2	Methylene chloride	1.0	U	
156-60-5	trans-1,2-Dichloroethene	1.0	U	
75-34-3	1,1-Dichloroethane	1.0	U	
156-59-2	cis-1,2-Dichloroethene	1.0	U	R (SA, SB)
78-93-3	2-Butanone	5.0	U	
67-66-3	Chloroform	1.0	U	
71-55-6	1,1,1-Trichloroethane	1.0	U	
56-23-5	Carbon tetrachloride	1.0	U	
71-43-2	Benzene	1.0	U	
107-06-2	1,2-Dichloroethane	1.0	U	
79-01-6	Trichloroethene	1.0	U	
78-87-5	1,2-Dichloropropane	1.0	U	
75-27-4	Bromodichloromethane	1.0	U	
10061-01-5	cis-1,3-Dichloropropene	1.0	U	R (SB)
108-10-1	4-Methyl-2-pentanone	5.0	U	
108-88-3	Toluene	1.0	U	
10061-02-6	trans-1,3-Dichloropropene	1.0	U	
79-00-5	1,1,2-Trichloroethane	1.0	U	
127-18-4	Tetrachloroethene	1.0	U	R (SA, SB)
591-78-6	2-Hexanone	5.0	U	
124-48-1	Dibromochloromethane	1.0	U	
108-90-7	Chlorobenzene	1.0	U	
7816-60-0	m,p-Xylene	1.0	U	
95-47-6	o-Xylene	1.0	U	
100-42-5	Styrene	1.0	U	
75-25-2	Bromoform	1.0	U	
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	
75-71-8	Dichlorodifluoromethane	1.0	U	
75-69-4	Trichlorofluoromethane	1.0	U	
100-41-4	Ethylbenzene	1.0	U	
541-73-1	1,3-Dichlorobenzene	1.0	U	

FORM I VOA

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

1710100

Lab Name: Laucks Testing Labs Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: EL007

Matrix: (soil/water) WATER Lab Sample ID: 9901482-01

Sample wt/vol: 25.0 (g/ml) ML Lab File ID: O0126009.D

Level: (low/med) LOW Date Received: 01/22/99

% Moisture: not dec. _____ Date Analyzed: 01/26/99

GC Column: DB-624 ID: 0.45 (mm) Dilution Factor: 1.0

Soil Extract Volume _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

3/6/99
707

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

1710101, TB

Lab Name: Laucks Testing Labs

SDG No.: EL007

Matrix: (soil/water) WATER

Lab Sample ID: 9901482-02

Sample wt/vol: 25.0 (g/ml) ML

Lab File ID: O0126010.D

Level: (low/med) LOW

Date Received: 01/22/99

% Moisture: not dec.

Date Analyzed: 01/26/99

GC Column: DB-624 ID: 0.45 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NO.	COMPOUND		Q	
74-87-3	Chloromethane	1.0	U	U
75-01-4	Vinyl chloride	1.0	U	
74-83-9	Bromomethane	1.0	U	
75-00-3	Chloroethane	1.0	U	
75-35-4	1,1-Dichloroethene	1.0	U	
67-64-1	Acetone	5.0	U	R(SA,SB)
75-15-0	Carbon disulfide	1.0	U	U
75-09-2	Methylene chloride	1.0	U	
156-60-5	trans-1,2-Dichloroethene	1.0	U	
75-34-3	1,1-Dichloroethane	1.0	U	
156-59-2	cis-1,2-Dichloroethene	1.0	U	
78-93-3	2-Butanone	5.0	U	R(SA,SB)
67-66-3	Chloroform	1.0	U	U
71-55-6	1,1,1-Trichloroethane	1.0	U	
56-23-5	Carbon tetrachloride	1.0	U	
71-43-2	Benzene	1.0	U	
107-06-2	1,2-Dichloroethane	1.0	U	
79-01-6	Trichloroethene	1.0	U	
78-87-5	1,2-Dichloropropane	1.0	U	
75-27-4	Bromodichloromethane	1.0	U	
10061-01-5	cis-1,3-Dichloropropene	1.0	U	
108-10-1	4-Methyl-2-pentanone	5.0	U	R(SB)
108-88-3	Toluene	1.0	U	U
10061-02-6	trans-1,3-Dichloropropene	1.0	U	
79-00-5	1,1,2-Trichloroethane	1.0	U	
127-18-4	Tetrachloroethene	1.0	U	
591-78-6	2-Hexanone	5.0	U	R(SA,SB)
124-48-1	Dibromochloromethane	1.0	U	U
108-90-7	Chlorobenzene	1.0	U	
7816-60-0	m,p-Xylene	1.0	U	
95-47-6	o-Xylene	1.0	U	
100-42-5	Styrene	1.0	U	
75-25-2	Bromoform	1.0	U	
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	
75-71-8	Dichlorodifluoromethane	1.0	U	
75-69-4	Trichlorofluoromethane	1.0	U	
100-41-4	Ethylbenzene	1.0	U	
541-73-1	1,3-Dichlorobenzene	1.0	U	

L 3/1/99

FORM I VOA

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

1710101, TB

Lab Name: Laucks Testing Labs Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: EL007

Matrix: (soil/water) WATER Lab Sample ID: 9901482-02

Sample wt/vol: 25.0 (g/ml) ML Lab File ID: O0126010.D

Level: (low/med) LOW Date Received: 01/22/99

% Moisture: not dec. _____ Date Analyzed: 01/26/99

GC Column: DB-624 ID: 0.45 (mm) Dilution Factor: 1.0

Soil Extract Volume _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

a 3189

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

1710105

Lab Name: Laucks Testing Labs

SDG No.: EL007

Matrix: (soil/water) WATER

Lab Sample ID: 9901500-01

Sample wt/vol: 25.0 (g/ml) ML

Lab File ID: O0126011.D

Level: (low/med) LOW

Date Received: 01/25/99

% Moisture: not dec.

Date Analyzed: 01/26/99

GC Column: DB-624 ID: 0.45 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NO.	COMPOUND		Q	
74-87-3	Chloromethane	1.0	U	
75-01-4	Vinyl chloride	1.0	U	
74-83-9	Bromomethane	1.0	U	
75-00-3	Chloroethane	1.0	U	
75-35-4	1,1-Dichloroethene	1.0	U	R (SA, SB)
67-64-1	Acetone	5.0	U	
75-15-0	Carbon disulfide	1.0	U	
75-09-2	Methylene chloride	1.0	U	
156-60-5	trans-1,2-Dichloroethene	1.0	U	
75-34-3	1,1-Dichloroethane	1.0	U	
156-59-2	cis-1,2-Dichloroethene	1.0	U	
78-93-3	2-Butanone	5.0	U	R (SA, SB)
67-66-3	Chloroform	1.0	U	
71-55-6	1,1,1-Trichloroethane	1.0	U	
56-23-5	Carbon tetrachloride	1.0	U	
71-43-2	Benzene	1.0	U	
107-06-2	1,2-Dichloroethane	1.0	U	
79-01-6	Trichloroethene	1.0	U	
78-87-5	1,2-Dichloropropane	1.0	U	
75-27-4	Bromodichloromethane	1.0	U	
10061-01-5	cis-1,3-Dichloropropene	1.0	U	
108-10-1	4-Methyl-2-pentanone	5.0	U	R (SB)
108-88-3	Toluene	1.0	U	
10061-02-6	trans-1,3-Dichloropropene	1.0	U	
79-00-5	1,1,2-Trichloroethane	1.0	U	
127-18-4	Tetrachloroethene	1.0	U	
591-78-6	2-Hexanone	5.0	U	R (SA, SB)
124-48-1	Dibromochloromethane	1.0	U	
108-90-7	Chlorobenzene	1.0	U	
7816-60-0	m,p-Xylene	1.0	U	
95-47-6	o-Xylene	1.0	U	
100-42-5	Styrene	1.0	U	
75-25-2	Bromoform	1.0	U	
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	
75-71-8	Dichlorodifluoromethane	0.9	J	
75-69-4	Trichlorofluoromethane	1.0	U	
100-41-4	Ethylbenzene	1.0	U	
541-73-1	1,3-Dichlorobenzene	1.0	U	

a 3/1/99

FORM I VOA

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

1710106

Lab Name: Laucks Testing Labs Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: EL007

Matrix: (soil/water) WATER Lab Sample ID: 9901500-01

Sample wt/vol: 25.0 (g/ml) ML Lab File ID: O0126011.D

Level: (low/med) LOW Date Received: 01/25/99

% Moisture: not dec. _____ Date Analyzed: 01/26/99

GC Column: DB-624 ID: 0.45 (mm) Dilution Factor: 1.0

Soil Extract Volume _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

FORM I VOA-TIC

4/3/99

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

1710106

Lab Name: Laucks Testing Labs

SDG No.: EL007

Matrix: (soil/water) WATER

Lab Sample ID: 9901500-02

Sample wt/vol: 25.0 (g/ml) ML

Lab File ID: O0126012.D

Level: (low/med) LOW

Date Received: 01/25/99

% Moisture: not dec.

Date Analyzed: 01/26/99

GC Column: DB-624 ID: 0.45 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NO.	COMPOUND		Q	
74-87-3	Chloromethane	1.0	U	
75-01-4	Vinyl chloride	1.0	U	
74-83-9	Bromomethane	1.0	U	
75-00-3	Chloroethane	1.0	U	
75-35-4	1,1-Dichloroethene	1.0	U	R (SA,SB)
67-64-1	Acetone	5.0	U	
75-15-0	Carbon disulfide	1.0	U	
75-09-2	Methylene chloride	1.0	U	
156-60-5	trans-1,2-Dichloroethene	1.0	U	
75-34-3	1,1-Dichloroethane	1.0	U	
156-59-2	cis-1,2-Dichloroethene	1.0	U	R (SA,SB)
78-93-3	2-Butanone	5.0	U	
67-66-3	Chloroform	1.0	U	
71-55-6	1,1,1-Trichloroethane	1.0	U	
56-23-5	Carbon tetrachloride	1.0	U	
71-43-2	Benzene	1.0	U	
107-06-2	1,2-Dichloroethane	1.0	U	
79-01-6	Trichloroethene	1.0	U	
78-87-5	1,2-Dichloropropane	1.0	U	
75-27-4	Bromodichloromethane	1.0	U	
10061-01-5	cis-1,3-Dichloropropene	1.0	U	
108-10-1	4-Methyl-2-pentanone	5.0	U	R (SB)
108-88-3	Toluene	1.0	U	
10061-02-6	trans-1,3-Dichloropropene	1.0	U	
79-00-5	1,1,2-Trichloroethane	1.0	U	
127-18-4	Tetrachloroethene	1.0	U	
591-78-6	2-Hexanone	5.0	U	R (SA,SB)
124-48-1	Dibromochloromethane	1.0	U	
108-90-7	Chlorobenzene	1.0	U	
7816-60-0	m,p-Xylene	1.0	U	
95-47-6	o-Xylene	1.0	U	
100-42-5	Styrene	1.0	U	
75-25-2	Bromoform	1.0	U	
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	
75-71-8	Dichlorodifluoromethane	1.0	U	
75-69-4	Trichlorofluoromethane	1.0	U	
100-41-4	Ethylbenzene	1.0	U	
541-73-1	1,3-Dichlorobenzene	1.0	U	

4/31/99

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

1710106

Lab Name: Laucks Testing Labs Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: EL007

Matrix: (soil/water) WATER Lab Sample ID: 9901500-02

Sample wt/vol: 25.0 (g/ml) ML Lab File ID: O0126012.D

Level: (low/med) LOW Date Received: 01/25/99

% Moisture: not dec. _____ Date Analyzed: 01/26/99

GC Column: DB-624 ID: 0.45 (mm) Dilution Factor: 1.0

Soil Extract Volume _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

FORM I VOA-TIC

a 3/69

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

1710121

Lab Name: Laucks Testing Labs

SDG No.: EL007

Matrix: (soil/water) WATER

Lab Sample ID: 9901500-03

Sample wt/vol: 25.0 (g/ml) ML

Lab File ID: O0126013.D

Level: (low/med) LOW

Date Received: 01/25/99

% Moisture: not dec. _____

Date Analyzed: 01/26/99

GC Column: DB-624 ID: 0.45 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q	
74-87-3	Chloromethane	1.0	U	
75-01-4	Vinyl chloride	1.0	U	
74-83-9	Bromomethane	1.0	U	
75-00-3	Chloroethane	1.0	U	
75-35-4	1,1-Dichloroethene	1.0	U	R (SA,SB)
67-64-1	Acetone	5.0	U	
75-15-0	Carbon disulfide	1.0	U	
75-09-2	Methylene chloride	1.0	U	
156-60-5	trans-1,2-Dichloroethene	1.0	U	
75-34-3	1,1-Dichloroethane	1.0	U	
156-59-2	cis-1,2-Dichloroethene	1.0	U	R (SA,SB)
78-93-3	2-Butanone	5.0	U	
67-66-3	Chloroform	1.0	U	
71-55-6	1,1,1-Trichloroethane	1.0	U	
56-23-5	Carbon tetrachloride	1.0	U	
71-43-2	Benzene	1.0	U	
107-06-2	1,2-Dichloroethane	1.0	U	
79-01-6	Trichloroethene	1.0	U	
78-87-5	1,2-Dichloropropane	1.0	U	
75-27-4	Bromodichloromethane	1.0	U	
10061-01-5	cis-1,3-Dichloropropene	1.0	U	R (SB)
108-10-1	4-Methyl-2-pentanone	5.0	U	
108-88-3	Toluene	1.0	U	
10061-02-6	trans-1,3-Dichloropropene	1.0	U	
79-00-5	1,1,2-Trichloroethane	1.0	U	
127-18-4	Tetrachloroethene	1.0	U	
591-78-6	2-Hexanone	5.0	U	R (SA,SB)
124-48-1	Dibromochloromethane	1.0	U	
108-90-7	Chlorobenzene	1.0	U	
7816-60-0	m,p-Xylene	1.0	U	
95-47-6	o-Xylene	1.0	U	
100-42-5	Styrene	1.0	U	
75-25-2	Bromoform	1.0	U	
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	
75-71-8	Dichlorodifluoromethane	1.0	U	
75-69-4	Trichlorofluoromethane	1.0	U	
100-41-4	Ethylbenzene	1.0	U	
541-73-1	1,3-Dichlorobenzene	1.0	U	

4/31/99

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

1710121

Lab Name: Laucks Testing Labs Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: EL007

Matrix: (soil/water) WATER Lab Sample ID: 9901500-03

Sample wt/vol: 25.0 (g/ml) ML Lab File ID: O0126013.D

Level: (low/med) LOW Date Received: 01/25/99

% Moisture: not dec. _____ Date Analyzed: 01/26/99

GC Column: DB-624 ID: 0.45 (mm) Dilution Factor: 1.0

Soil Extract Volume _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

FORM I VOA-TIC

02/16/99

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

1710120

Lab Name: Laucks Testing Labs

SDG No.: EL007

Matrix: (soil/water) WATER

Lab Sample ID: 9901500-04

Sample wt/vol: 25.0 (g/ml) ML

Lab File ID: O0126014.D

Level: (low/med) LOW

Date Received: 01/25/99

% Moisture: not dec.

Date Analyzed: 01/26/99

GC Column: DB-624 ID: 0.45 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND (ug/L or ug/Kg) UG/L		Q	
74-87-3	Chloromethane	1.0	U	U
75-01-4	Vinyl chloride	1.0	U	
74-83-9	Bromomethane	1.0	U	
75-00-3	Chloroethane	1.0	U	
75-35-4	1,1-Dichloroethene	1.0	U	
67-64-1	Acetone	5.0	U	R (SA, SB)
75-15-0	Carbon disulfide	1.0	U	U
75-09-2	Methylene chloride	1.0	U	
156-60-5	trans-1,2-Dichloroethene	1.0	U	
75-34-3	1,1-Dichloroethane	1.0	U	
156-59-2	cis-1,2-Dichloroethene	1.0	U	
78-93-3	2-Butanone	5.0	U	R (SA, SB)
67-66-3	Chloroform	1.0	U	U
71-55-6	1,1,1-Trichloroethane	1.0	U	
56-23-5	Carbon tetrachloride	1.0	U	
71-43-2	Benzene	1.0	U	
107-06-2	1,2-Dichloroethane	1.0	U	
79-01-6	Trichloroethene	1.0	U	
78-87-5	1,2-Dichloropropane	1.0	U	
75-27-4	Bromodichloromethane	1.0	U	
10061-01-5	cis-1,3-Dichloropropene	1.0	U	
108-10-1	4-Methyl-2-pentanone	5.0	U	R (SB)
108-88-3	Toluene	1.0	U	U
10061-02-6	trans-1,3-Dichloropropene	1.0	U	
79-00-5	1,1,2-Trichloroethane	1.0	U	
127-18-4	Tetrachloroethene	1.0	U	
591-78-6	2-Hexanone	5.0	U	R (SA, SB)
124-48-1	Dibromochloromethane	1.0	U	U
108-90-7	Chlorobenzene	1.0	U	
7816-60-0	m,p-Xylene	1.0	U	
95-47-6	o-Xylene	1.0	U	
100-42-5	Styrene	1.0	U	
75-25-2	Bromoform	1.0	U	
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	
75-71-8	Dichlorodifluoromethane	1.0	U	
75-69-4	Trichlorofluoromethane	1.0	U	
100-41-4	Ethylbenzene	1.0	U	
541-73-1	1,3-Dichlorobenzene	1.0	U	

FORM I VOA

2/1/99

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

1710120

Lab Name: Laucks Testing Labs Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: EL007

Matrix: (soil/water) WATER Lab Sample ID: 9901500-04

Sample wt/vol: 25.0 (g/ml) ML Lab File ID: O0126014.D

Level: (low/med) LOW Date Received: 01/25/99

% Moisture: not dec. _____ Date Analyzed: 01/26/99

GC Column: DB-624 ID: 0.45 (mm) Dilution Factor: 1.0

Soil Extract Volume _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

a3/99

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

1710107, TB

Lab Name: Laucks Testing Labs

SDG No.: EL007

Matrix: (soil/water) WATER

Lab Sample ID: 9901500-05

Sample wt/vol: 25.0 (g/ml) ML

Lab File ID: O0126015.D

Level: (low/med) LOW

Date Received: 01/25/99

% Moisture: not dec.

Date Analyzed: 01/26/99

GC Column: DB-624 ID: 0.45 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	1.0	U
75-01-4	Vinyl chloride	1.0	U
74-83-9	Bromomethane	1.0	U
75-00-3	Chloroethane	1.0	U
75-35-4	1,1-Dichloroethene	1.0	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	1.0	U
75-09-2	Methylene chloride	1.0	U
156-60-5	trans-1,2-Dichloroethene	1.0	U
75-34-3	1,1-Dichloroethane	1.0	U
156-59-2	cis-1,2-Dichloroethene	1.0	U
78-93-3	2-Butanone	5.0	U
67-66-3	Chloroform	1.0	U
71-55-6	1,1,1-Trichloroethane	1.0	U
56-23-5	Carbon tetrachloride	1.0	U
71-43-2	Benzene	1.0	U
107-06-2	1,2-Dichloroethane	1.0	U
79-01-6	Trichloroethene	1.0	U
78-87-5	1,2-Dichloropropane	1.0	U
75-27-4	Bromodichloromethane	1.0	U
10061-01-5	cis-1,3-Dichloropropene	1.0	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	1.0	U
10061-02-6	trans-1,3-Dichloropropene	1.0	U
79-00-5	1,1,2-Trichloroethane	1.0	U
127-18-4	Tetrachloroethene	1.0	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	1.0	U
108-90-7	Chlorobenzene	1.0	U
7816-60-0	m,p-Xylene	1.0	U
95-47-6	o-Xylene	1.0	U
100-42-5	Styrene	1.0	U
75-25-2	Bromoform	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U
75-71-8	Dichlorodifluoromethane	1.0	U
75-69-4	Trichlorofluoromethane	1.0	U
100-41-4	Ethylbenzene	1.0	U
541-73-1	1,3-Dichlorobenzene	1.0	U

R (SA, SB)

R (SA, SB)

R (SB)

R (SA, SB)

FORM I VOA

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

1710107, TB

Lab Name: Laucks Testing Labs Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: EL007

Matrix: (soil/water) WATER Lab Sample ID: 9901500-05

Sample wt/vol: 25.0 (g/ml) ML Lab File ID: O0126015.D

Level: (low/med) LOW Date Received: 01/25/99

% Moisture: not dec. _____ Date Analyzed: 01/26/99

GC Column: DB-624 ID: 0.45 (mm) Dilution Factor: 1.0

Soil Extract Volume _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

FORM I VOA-TIC

L 3/6/99

SAMPLE NO.

1710109

VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: Laucks Testing Labs

SDG No.: EL007

Matrix: (soil/water) WATER

Lab Sample ID: 9901515-01

Sample wt/vol: 25.0 (g/ml) ML

Lab File ID: O0126016.D

Level: (low/med) LOW

Date Received: 01/26/99

% Moisture: not dec.

Date Analyzed: 01/26/99

GC Column: DB-624 ID: 0.45 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND (ug/L or ug/Kg)	UG/L	Q	
74-87-3	Chloromethane	1.0	U	U
75-01-4	Vinyl chloride	1.0	U	
74-83-9	Bromomethane	1.0	U	
75-00-3	Chloroethane	1.0	U	
75-35-4	1,1-Dichloroethene	1.0	U	
67-64-1	Acetone	5.0	U	R (SA,SB)
75-15-0	Carbon disulfide	1.0	U	U
75-09-2	Methylene chloride	1.0	U	
156-60-5	trans-1,2-Dichloroethene	1.0	U	
75-34-3	1,1-Dichloroethane	1.0	U	
156-59-2	cis-1,2-Dichloroethene	1.0	U	
78-93-3	2-Butanone	5.0	U	R (SA,SB)
67-66-3	Chloroform	1.0	U	U
71-55-6	1,1,1-Trichloroethane	1.0	U	
56-23-5	Carbon tetrachloride	1.0	U	
71-43-2	Benzene	1.0	U	
107-06-2	1,2-Dichloroethane	1.0	U	
79-01-6	Trichloroethene	0.5	J	J
78-87-5	1,2-Dichloropropane	1.0	U	U
75-27-4	Bromodichloromethane	1.0	U	
10061-01-5	cis-1,3-Dichloropropene	1.0	U	
108-10-1	4-Methyl-2-pentanone	5.0	U	R (SB)
108-88-3	Toluene	1.0	U	U
10061-02-6	trans-1,3-Dichloropropene	1.0	U	
79-00-5	1,1,2-Trichloroethane	1.0	U	
127-18-4	Tetrachloroethene	6.2		
591-78-6	2-Hexanone	5.0	U	R (SA,SB)
124-48-1	Dibromochloromethane	1.0	U	U
108-90-7	Chlorobenzene	1.0	U	
7816-60-0	m,p-Xylene	1.0	U	
95-47-6	o-Xylene	1.0	U	
100-42-5	Styrene	1.0	U	
75-25-2	Bromoform	1.0	U	
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	
75-71-8	Dichlorodifluoromethane	1.0	U	
75-69-4	Trichlorofluoromethane	1.0	U	
100-41-4	Ethylbenzene	1.0	U	
541-73-1	1,3-Dichlorobenzene	1.0	U	

a3/099

FORM I VOA

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

1710109

Lab Name: Laucks Testing Labs Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: EL007

Matrix: (soil/water) WATER Lab Sample ID: 9901515-01

Sample wt/vol: 25.0 (g/ml) ML Lab File ID: O0126016.D

Level: (low/med) LOW Date Received: 01/26/99

% Moisture: not dec. _____ Date Analyzed: 01/26/99

GC Column: DB-624 ID: 0.45 (mm) Dilution Factor: 1.0

Soil Extract Volume _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

3/6/99

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

1710110

Lab Name: Laucks Testing Labs

SDG No.: EL007

Matrix: (soil/water) WATER

Lab Sample ID: 9901515-02

Sample wt/vol: 25.0 (g/ml) ML

Lab File ID: O0126017.D

Level: (low/med) LOW

Date Received: 01/26/99

% Moisture: not dec.

Date Analyzed: 01/26/99

GC Column: DB-624 ID: 0.45 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND (ug/L or ug/Kg)	UG/L	Q	
74-87-3	Chloromethane	1.0	U	U
75-01-4	Vinyl chloride	1.0	U	
74-83-9	Bromomethane	1.0	U	
75-00-3	Chloroethane	1.0	U	
75-35-4	1,1-Dichloroethene	1.0	U	R(5A,5B)
67-64-1	Acetone	5.0	U	
75-15-0	Carbon disulfide	1.0	U	U
75-09-2	Methylene chloride	1.0	U	
156-60-5	trans-1,2-Dichloroethene	1.0	U	
75-34-3	1,1-Dichloroethane	1.0	U	
156-59-2	cis-1,2-Dichloroethene	1.0	U	R(5A,5B)
78-93-3	2-Butanone	5.0	U	
67-66-3	Chloroform	1.0	U	U
71-55-6	1,1,1-Trichloroethane	1.0	U	
56-23-5	Carbon tetrachloride	1.0	U	
71-43-2	Benzene	1.0	U	
107-06-2	1,2-Dichloroethane	1.0	U	
79-01-6	Trichloroethene	1.0	U	
78-87-5	1,2-Dichloropropane	1.0	U	
75-27-4	Bromodichloromethane	1.0	U	
10061-01-5	cis-1,3-Dichloropropene	1.0	U	R(5B)
108-10-1	4-Methyl-2-pentanone	5.0	U	
108-88-3	Toluene	1.0	U	U
10061-02-6	trans-1,3-Dichloropropene	1.0	U	
79-00-5	1,1,2-Trichloroethane	1.0	U	
127-18-4	Tetrachloroethene	6.2		
591-78-6	2-Hexanone	5.0	U	R(5A,5B)
124-48-1	Dibromochloromethane	1.0	U	U
108-90-7	Chlorobenzene	1.0	U	
7816-60-0	m,p-Xylene	1.0	U	
95-47-6	o-Xylene	1.0	U	
100-42-5	Styrene	1.0	U	
75-25-2	Bromoform	1.0	U	
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	
75-71-8	Dichlorodifluoromethane	1.0	U	
75-69-4	Trichlorofluoromethane	1.0	U	
100-41-4	Ethylbenzene	1.0	U	
541-73-1	1,3-Dichlorobenzene	1.0	U	

FORM I VOA

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

1710110

Lab Name: Laucks Testing Labs Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: EL007

Matrix: (soil/water) WATER Lab Sample ID: 9901515-02

Sample wt/vol: 25.0 (g/ml) ML Lab File ID: O0126017.D

Level: (low/med) LOW Date Received: 01/26/99

% Moisture: not dec. _____ Date Analyzed: 01/26/99

GC Column: DB-624 ID: 0.45 (mm) Dilution Factor: 1.0

Soil Extract Volume _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

FORM I VOA-TIC

3169

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

1710108

Lab Name: Laucks Testing Labs

SDG No.: EL007

Matrix: (soil/water) WATER

Lab Sample ID: 9901515-03

Sample wt/vol: 25.0 (g/ml) ML

Lab File ID: O0126018.D

Level: (low/med) LOW

Date Received: 01/26/99

% Moisture: not dec.

Date Analyzed: 01/26/99

GC Column: DB-624 ID: 0.45 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NO.	COMPOUND		Q	
74-87-3	Chloromethane	1.0	U	U
75-01-4	Vinyl chloride	1.0	U	
74-83-9	Bromomethane	1.0	U	
75-00-3	Chloroethane	1.0	U	
75-35-4	1,1-Dichloroethene	1.0	U	
67-64-1	Acetone	5.0	U	R (SA, SB)
75-15-0	Carbon disulfide	1.0	U	U
75-09-2	Methylene chloride	1.0	U	U
156-60-5	trans-1,2-Dichloroethene	2.1		
75-34-3	1,1-Dichloroethane	1.0	U	U
156-59-2	cis-1,2-Dichloroethene	14		
78-93-3	2-Butanone	5.0	U	R (SA, SB)
67-66-3	Chloroform	18		
71-55-6	1,1,1-Trichloroethane	1.0	U	U
56-23-5	Carbon tetrachloride	1.0	U	
71-43-2	Benzene	1.0	U	
107-06-2	1,2-Dichloroethane	1.8		
79-01-6	Trichloroethene	140	E	R (14)
78-87-5	1,2-Dichloropropane	1.0	U	U
75-27-4	Bromodichloromethane	1.0	U	
10061-01-5	cis-1,3-Dichloropropene	1.0	U	
108-10-1	4-Methyl-2-pentanone	5.0	U	R (SB)
108-88-3	Toluene	1.0	U	U
10061-02-6	trans-1,3-Dichloropropene	1.0	U	U
79-00-5	1,1,2-Trichloroethane	5.9		
127-18-4	Tetrachloroethene	4.6		
591-78-6	2-Hexanone	5.0	U	R (SA, SB)
124-48-1	Dibromochloromethane	1.0	U	U
108-90-7	Chlorobenzene	1.0	U	
7816-60-0	m,p-Xylene	1.0	U	
95-47-6	o-Xylene	1.0	U	
100-42-5	Styrene	1.0	U	
75-25-2	Bromoform	1.0	U	
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	
75-71-8	Dichlorodifluoromethane	1.0	U	
75-69-4	Trichlorofluoromethane	1.0	U	
100-41-4	Ethylbenzene	1.0	U	
541-73-1	1,3-Dichlorobenzene	1.0	U	

a 3/09

FORM I VOA

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

1710108

Lab Name: Laucks Testing Labs Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: EL007

Matrix: (soil/water) WATER Lab Sample ID: 9901515-03

Sample wt/vol: 25.0 (g/ml) ML Lab File ID: O0126018.D

Level: (low/med) LOW Date Received: 01/26/99

% Moisture: not dec. _____ Date Analyzed: 01/26/99

GC Column: DB-624 ID: 0.45 (mm) Dilution Factor: 1.0

Soil Extract Volume _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

u 3/1/99

FORM I VOA-TIC

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

1710108DL

Lab Name: Laucks Testing Labs

SDG No.: EL007

Matrix: (soil/water) WATER

Lab Sample ID: 9901515-03DL

Sample wt/vol: 25.0 (g/ml) ML

Lab File ID: O0127008.D

Level: (low/med) LOW

Date Received: 01/26/99

% Moisture: not dec. _____

Date Analyzed: 01/27/99

GC Column: DB-624 ID: 0.45 (mm)

Dilution Factor: 5.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND (ug/L or ug/Kg)	UG/L	Q
74-87-3	Chloromethane	5.0	U
75-01-4	Vinyl chloride	5.0	U
74-83-9	Bromomethane	5.0	U
75-00-3	Chloroethane	5.0	U
75-35-4	1,1-Dichloroethene	5.0	U
67-64-1	Acetone	25	U
75-15-0	Carbon disulfide	5.0	U
75-09-2	Methylene chloride	5.0	U
156-60-5	trans-1,2-Dichloroethene	5.0	U
75-34-3	1,1-Dichloroethane	5.0	U
156-59-2	cis-1,2-Dichloroethene	12	D
78-93-3	2-Butanone	25	U
67-66-3	Chloroform	17	D
71-55-6	1,1,1-Trichloroethane	5.0	U
56-23-5	Carbon tetrachloride	5.0	U
71-43-2	Benzene	5.0	U
107-06-2	1,2-Dichloroethane	5.0	U
79-01-6	Trichloroethene	130	D
78-87-5	1,2-Dichloropropane	5.0	U
75-27-4	Bromodichloromethane	5.0	U
10061-01-5	cis-1,3-Dichloropropene	5.0	U
108-10-1	4-Methyl-2-pentanone	25	U
108-88-3	Toluene	5.0	U
10061-02-6	trans-1,3-Dichloropropene	5.0	U
79-00-5	1,1,2-Trichloroethane	4.7	JD
127-18-4	Tetrachloroethene	4.8	JD
591-78-6	2-Hexanone	25	U
124-48-1	Dibromochloromethane	5.0	U
108-90-7	Chlorobenzene	5.0	U
7816-60-0	m,p-Xylene	5.0	U
95-47-6	o-Xylene	5.0	U
100-42-5	Styrene	5.0	U
75-25-2	Bromoform	5.0	U
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U
75-71-8	Dichlorodifluoromethane	5.0	U
75-69-4	Trichlorofluoromethane	5.0	U
100-41-4	Ethylbenzene	5.0	U
541-73-1	1,3-Dichlorobenzene	5.0	U

R(14)

R(14)

FORM I VOA

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

1710108DL

Lab Name: Laucks Testing Labs Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: EL007

Matrix: (soil/water) WATER Lab Sample ID: 9901515-03DL

Sample wt/vol: 25.0 (g/ml) ML Lab File ID: O0127008.D

Level: (low/med) LOW Date Received: 01/26/99

% Moisture: not dec. _____ Date Analyzed: 01/27/99

GC Column: DB-624 ID: 0.45 (mm) Dilution Factor: 5.0

Soil Extract Volume _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

a 3/1/99

SAMPLE NO.

1710111, TB

VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: Laucks Testing Labs

SDG No.: EL007

Matrix: (soil/water) WATER

Lab Sample ID: 9901515-04

Sample wt/vol: 25.0 (g/ml) ML

Lab File ID: O0126019.D

Level: (low/med) LOW

Date Received: 01/26/99

% Moisture: not dec.

Date Analyzed: 01/26/99

GC Column: DB-624 ID: 0.45 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND (ug/L or ug/Kg)	UG/L	Q	
74-87-3	Chloromethane	1.0	U	U
75-01-4	Vinyl chloride	1.0	U	
74-83-9	Bromomethane	1.0	U	
75-00-3	Chloroethane	1.0	U	
75-35-4	1,1-Dichloroethene	1.0	U	
67-64-1	Acetone	5.0	U	R (SA, SB)
75-15-0	Carbon disulfide	1.0	U	U
75-09-2	Methylene chloride	1.0	U	
156-60-5	trans-1,2-Dichloroethene	1.0	U	
75-34-3	1,1-Dichloroethane	1.0	U	
156-59-2	cis-1,2-Dichloroethene	1.0	U	
78-93-3	2-Butanone	5.0	U	R (SA, SB)
67-66-3	Chloroform	1.0	U	U
71-55-6	1,1,1-Trichloroethane	1.0	U	
56-23-5	Carbon tetrachloride	1.0	U	
71-43-2	Benzene	1.0	U	
107-06-2	1,2-Dichloroethane	1.0	U	
79-01-6	Trichloroethene	1.0	U	
78-87-5	1,2-Dichloropropane	1.0	U	
75-27-4	Bromodichloromethane	1.0	U	
10061-01-5	cis-1,3-Dichloropropene	1.0	U	
108-10-1	4-Methyl-2-pentanone	5.0	U	R (SB)
108-88-3	Toluene	1.0	U	U
10061-02-6	trans-1,3-Dichloropropene	1.0	U	
79-00-5	1,1,2-Trichloroethane	1.0	U	
127-18-4	Tetrachloroethene	1.0	U	
591-78-6	2-Hexanone	5.0	U	R (SA, SB)
124-48-1	Dibromochloromethane	1.0	U	U
108-90-7	Chlorobenzene	1.0	U	
7816-60-0	m,p-Xylene	1.0	U	
95-47-6	o-Xylene	1.0	U	
100-42-5	Styrene	1.0	U	
75-25-2	Bromoform	1.0	U	
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	
75-71-8	Dichlorodifluoromethane	1.0	U	
75-69-4	Trichlorofluoromethane	1.0	U	
100-41-4	Ethylbenzene	1.0	U	
541-73-1	1,3-Dichlorobenzene	1.0	U	

4/3/99

FORM I VOA

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

1710111, TB

Lab Name: Laucks Testing Labs Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: EL007

Matrix: (soil/water) WATER Lab Sample ID: 9901515-04

Sample wt/vol: 25.0 (g/ml) ML Lab File ID: O0126019.D

Level: (low/med) LOW Date Received: 01/26/99

% Moisture: not dec. _____ Date Analyzed: 01/26/99

GC Column: DB-624 ID: 0.45 (mm) Dilution Factor: 1.0

Soil Extract Volume _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

K 3/1/99

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

1710113

Lab Name: Laucks Testing Labs

SDG No.: EL007

Matrix: (soil/water) WATER

Lab Sample ID: 9901577-01

Sample wt/vol: 25.0 (g/ml) ML

Lab File ID: O0129008.D

Level: (low/med) LOW

Date Received: 01/28/99

% Moisture: not dec.

Date Analyzed: 01/29/99

GC Column: DB-624 ID: 0.45 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND (ug/L or ug/Kg) UG/L		Q	
74-87-3	Chloromethane	1.0	U	
75-01-4	Vinyl chloride	1.0	U	
74-83-9	Bromomethane	1.0	U	
75-00-3	Chloroethane	1.0	U	
75-35-4	1,1-Dichloroethene	1.0	U	
67-64-1	Acetone	5.0	U	R (SA, SB)
75-15-0	Carbon disulfide	1.0	U	
75-09-2	Methylene chloride	1.0	U	
156-60-5	trans-1,2-Dichloroethene	1.0	U	
75-34-3	1,1-Dichloroethane	1.0	U	
156-59-2	cis-1,2-Dichloroethene	1.0	U	
78-93-3	2-Butanone	5.0	U	R (SA, SB)
67-66-3	Chloroform	1.0	U	
71-55-6	1,1,1-Trichloroethane	1.0	U	
56-23-5	Carbon tetrachloride	1.0	U	
71-43-2	Benzene	1.0	U	
107-06-2	1,2-Dichloroethane	1.0	U	
79-01-6	Trichloroethene	1.0	U	
78-87-5	1,2-Dichloropropane	1.0	U	
75-27-4	Bromodichloromethane	1.0	U	
10061-01-5	cis-1,3-Dichloropropene	1.0	U	
108-10-1	4-Methyl-2-pentanone	5.0	U	R (SB)
108-88-3	Toluene	1.0	U	
10061-02-6	trans-1,3-Dichloropropene	1.0	U	
79-00-5	1,1,2-Trichloroethane	1.0	U	
127-18-4	Tetrachloroethene	1.0	U	
591-78-6	2-Hexanone	5.0	U	R (SA, SB)
124-48-1	Dibromochloromethane	1.0	U	
108-90-7	Chlorobenzene	1.0	U	
7816-60-0	m,p-Xylene	1.0	U	
95-47-6	o-Xylene	1.0	U	
100-42-5	Styrene	1.0	U	
75-25-2	Bromoform	1.0	U	
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	
75-71-8	Dichlorodifluoromethane	1.0	U	
75-69-4	Trichlorofluoromethane	1.0	U	
100-41-4	Ethylbenzene	1.0	U	
541-73-1	1,3-Dichlorobenzene	1.0	U	

FORM I VOA

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

1710113

Lab Name: Laucks Testing Labs Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: EL007

Matrix: (soil/water) WATER Lab Sample ID: 9901577-01

Sample wt/vol: 25.0 (g/ml) ML Lab File ID: O0129008.D

Level: (low/med) LOW Date Received: 01/28/99

% Moisture: not dec. _____ Date Analyzed: 01/29/99

GC Column: DB-624 ID: 0.45 (mm) Dilution Factor: 1.0

Soil Extract Volume _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

1710112

Lab Name: Laucks Testing Labs

SDG No.: EL007

Matrix: (soil/water) WATER

Lab Sample ID: 9901577-02

Sample wt/vol: 25.0 (g/ml) ML

Lab File ID: O0129009.D

Level: (low/med) LOW

Date Received: 01/28/99

% Moisture: not dec.

Date Analyzed: 01/29/99

GC Column: DB-624 ID: 0.45 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NO.	COMPOUND		Q
74-87-3	Chloromethane	1.0	U
75-01-4	Vinyl chloride	1.0	U
74-83-9	Bromomethane	1.0	U
75-00-3	Chloroethane	1.0	U
75-35-4	1,1-Dichloroethene	1.0	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	1.0	U
75-09-2	Methylene chloride	1.0	U
156-60-5	trans-1,2-Dichloroethene	1.0	U
75-34-3	1,1-Dichloroethane	1.0	U
156-59-2	cis-1,2-Dichloroethene	1.0	U
78-93-3	2-Butanone	5.0	U
67-66-3	Chloroform	1.0	U
71-55-6	1,1,1-Trichloroethane	1.0	U
56-23-5	Carbon tetrachloride	1.0	U
71-43-2	Benzene	1.0	U
107-06-2	1,2-Dichloroethane	1.0	U
79-01-6	Trichloroethene	1.0	U
78-87-5	1,2-Dichloropropane	1.0	U
75-27-4	Bromodichloromethane	1.0	U
10061-01-5	cis-1,3-Dichloropropene	1.0	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	1.0	U
10061-02-6	trans-1,3-Dichloropropene	1.0	U
79-00-5	1,1,2-Trichloroethane	1.0	U
127-18-4	Tetrachloroethene	1.0	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	1.0	U
108-90-7	Chlorobenzene	1.0	U
7816-60-0	m,p-Xylene	1.0	U
95-47-6	o-Xylene	1.0	U
100-42-5	Styrene	1.0	U
75-25-2	Bromoform	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U
75-71-8	Dichlorodifluoromethane	1.0	U
75-69-4	Trichlorofluoromethane	1.0	U
100-41-4	Ethylbenzene	1.0	U
541-73-1	1,3-Dichlorobenzene	1.0	U

R (SA, SB)

R (SA, SB)

R (SB)

R (SA, SB)

FORM I VOA

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

1710112

Lab Name: Laucks Testing Labs Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: EL007

Matrix: (soil/water) WATER Lab Sample ID: 9901577-02

Sample wt/vol: 25.0 (g/ml) ML Lab File ID: O0129009.D

Level: (low/med) LOW Date Received: 01/28/99

% Moisture: not dec. _____ Date Analyzed: 01/29/99

GC Column: DB-624 ID: 0.45 (mm) Dilution Factor: 1.0

Soil Extract Volume _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

4/3/99

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

1710114, TB

Lab Name: Laucks Testing Labs

SDG No.: EL007

Matrix: (soil/water) WATER

Lab Sample ID: 9901577-03

Sample wt/vol: 25.0 (g/ml) ML

Lab File ID: O0129010.D

Level: (low/med) LOW

Date Received: 01/28/99

% Moisture: not dec.

Date Analyzed: 01/29/99

GC Column: DB-624 ID: 0.45 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NO.	COMPOUND		Q	
74-87-3	Chloromethane	1.0	U	
75-01-4	Vinyl chloride	1.0	U	
74-83-9	Bromomethane	1.0	U	
75-00-3	Chloroethane	1.0	U	
75-35-4	1,1-Dichloroethene	1.0	U	
67-64-1	Acetone	5.0	U	R (SA,SB)
75-15-0	Carbon disulfide	1.0	U	
75-09-2	Methylene chloride	0.6	J	
156-60-5	trans-1,2-Dichloroethene	1.0	U	
75-34-3	1,1-Dichloroethane	1.0	U	
156-59-2	cis-1,2-Dichloroethene	1.0	U	
78-93-3	2-Butanone	5.0	U	R (SA,SB)
67-66-3	Chloroform	1.0	U	
71-55-6	1,1,1-Trichloroethane	1.0	U	
56-23-5	Carbon tetrachloride	1.0	U	
71-43-2	Benzene	1.0	U	
107-06-2	1,2-Dichloroethane	1.0	U	
79-01-6	Trichloroethene	1.0	U	
78-87-5	1,2-Dichloropropane	1.0	U	
75-27-4	Bromodichloromethane	1.0	U	
10061-01-5	cis-1,3-Dichloropropene	1.0	U	
108-10-1	4-Methyl-2-pentanone	5.0	U	R (SB)
108-88-3	Toluene	1.0	U	
10061-02-6	trans-1,3-Dichloropropene	1.0	U	
79-00-5	1,1,2-Trichloroethane	1.0	U	
127-18-4	Tetrachloroethene	1.0	U	
591-78-6	2-Hexanone	5.0	U	R (SA,SB)
124-48-1	Dibromochloromethane	1.0	U	
108-90-7	Chlorobenzene	1.0	U	
7816-60-0	m,p-Xylene	1.0	U	
95-47-6	o-Xylene	1.0	U	
100-42-5	Styrene	1.0	U	
75-25-2	Bromoform	1.0	U	
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	
75-71-8	Dichlorodifluoromethane	1.0	U	
75-69-4	Trichlorofluoromethane	1.0	U	
100-41-4	Ethylbenzene	1.0	U	
541-73-1	1,3-Dichlorobenzene	1.0	U	

FORM I VOA

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

1710114, TB

Lab Name: Laucks Testing Labs Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: EL007

Matrix: (soil/water) WATER Lab Sample ID: 9901577-03

Sample wt/vol: 25.0 (g/ml) ML Lab File ID: O0129010.D

Level: (low/med) LOW Date Received: 01/28/99

% Moisture: not dec. _____ Date Analyzed: 01/29/99

GC Column: DB-624 ID: 0.45 (mm) Dilution Factor: 1.0

Soil Extract Volume _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

u 3/1/99

SAMPLE NO.

1710116

VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: Laucks Testing Labs

SDG No.: EL007

Matrix: (soil/water) WATER

Lab Sample ID: 9901591-01

Sample wt/vol: 25.0 (g/ml) ML

Lab File ID: O0129011.D

Level: (low/med) LOW

Date Received: 01/29/99

% Moisture: not dec.

Date Analyzed: 01/29/99

GC Column: DB-624 ID: 0.45 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NO.	COMPOUND		Q	
74-87-3	Chloromethane	1.0	U	
75-01-4	Vinyl chloride	1.0	U	
74-83-9	Bromomethane	1.0	U	
75-00-3	Chloroethane	1.0	U	
75-35-4	1,1-Dichloroethene	1.0	U	R (SA,SB)
67-64-1	Acetone	5.0	U	
75-15-0	Carbon disulfide	1.0	U	
75-09-2	Methylene chloride	1.0	U	
156-60-5	trans-1,2-Dichloroethene	1.0	U	
75-34-3	1,1-Dichloroethane	1.0	U	
156-59-2	cis-1,2-Dichloroethene	1.0	U	
78-93-3	2-Butanone	5.0	U	R (SA,SB)
67-66-3	Chloroform	1.0	U	
71-55-6	1,1,1-Trichloroethane	1.0	U	
56-23-5	Carbon tetrachloride	1.0	U	
71-43-2	Benzene	1.0	U	
107-06-2	1,2-Dichloroethane	1.0	U	
79-01-6	Trichloroethene	1.0	U	
78-87-5	1,2-Dichloropropane	1.0	U	
75-27-4	Bromodichloromethane	1.0	U	
10061-01-5	cis-1,3-Dichloropropene	1.0	U	R (SB)
108-10-1	4-Methyl-2-pentanone	5.0	U	
108-88-3	Toluene	1.0	U	
10061-02-6	trans-1,3-Dichloropropene	1.0	U	
79-00-5	1,1,2-Trichloroethane	1.0	U	
127-18-4	Tetrachloroethene	13		
591-78-6	2-Hexanone	5.0	U	R (SA,SB)
124-48-1	Dibromochloromethane	1.0	U	
108-90-7	Chlorobenzene	1.0	U	
7816-60-0	m,p-Xylene	1.0	U	
95-47-6	o-Xylene	1.0	U	
100-42-5	Styrene	1.0	U	
75-25-2	Bromoform	1.0	U	
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	
75-71-8	Dichlorodifluoromethane	1.0	U	
75-69-4	Trichlorofluoromethane	1.0	U	
100-41-4	Ethylbenzene	1.0	U	
541-73-1	1,3-Dichlorobenzene	1.0	U	

2/3/99

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

1710116

Lab Name: Laucks Testing Labs Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: EL007

Matrix: (soil/water) WATER Lab Sample ID: 9901591-01

Sample wt/vol: 25.0 (g/ml) ML Lab File ID: O0129011.D

Level: (low/med) LOW Date Received: 01/29/99

% Moisture: not dec. _____ Date Analyzed: 01/29/99

GC Column: DB-624 ID: 0.45 (mm) Dilution Factor: 1.0

Soil Extract Volume _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

2/1/99

FORM I VOA-TIC

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

1710115

Lab Name: Laucks Testing Labs

SDG No.: EL007

Matrix: (soil/water) WATER

Lab Sample ID: 9901591-02

Sample wt/vol: 25.0 (g/ml) ML

Lab File ID: O0129014.D

Level: (low/med) LOW

Date Received: 01/29/99

% Moisture: not dec.

Date Analyzed: 01/29/99

GC Column: DB-624 ID: 0.45 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NO.	COMPOUND		Q
74-87-3	Chloromethane	1.0	U
75-01-4	Vinyl chloride	1.0	U
74-83-9	Bromomethane	1.0	U
75-00-3	Chloroethane	1.0	U
75-35-4	1,1-Dichloroethene	1.0	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	1.0	U
75-09-2	Methylene chloride	1.0	U
156-60-5	trans-1,2-Dichloroethene	1.0	U
75-34-3	1,1-Dichloroethane	1.0	U
156-59-2	cis-1,2-Dichloroethene	1.0	U
78-93-3	2-Butanone	5.0	U
67-66-3	Chloroform	1.0	U
71-55-6	1,1,1-Trichloroethane	1.0	U
56-23-5	Carbon tetrachloride	1.0	U
71-43-2	Benzene	1.0	U
107-06-2	1,2-Dichloroethane	1.0	U
79-01-6	Trichloroethene	1.0	U
78-87-5	1,2-Dichloropropane	1.0	U
75-27-4	Bromodichloromethane	1.0	U
10061-01-5	cis-1,3-Dichloropropene	1.0	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	1.0	U
10061-02-6	trans-1,3-Dichloropropene	1.0	U
79-00-5	1,1,2-Trichloroethane	1.0	U
127-18-4	Tetrachloroethene	1.0	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	1.0	U
108-90-7	Chlorobenzene	1.0	U
7816-60-0	m,p-Xylene	1.0	U
95-47-6	o-Xylene	1.0	U
100-42-5	Styrene	1.0	U
75-25-2	Bromoform	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U
75-71-8	Dichlorodifluoromethane	1.0	U
75-69-4	Trichlorofluoromethane	1.0	U
100-41-4	Ethylbenzene	1.0	U
541-73-1	1,3-Dichlorobenzene	1.0	U

R(SA,SB)

R(SA,SB)

R(SB)

R(SA,SB)

3/1/99

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

1710115

Lab Name: Laucks Testing Labs Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: EL007

Matrix: (soil/water) WATER Lab Sample ID: 9901591-02

Sample wt/vol: 25.0 (g/ml) ML Lab File ID: O0129014.D

Level: (low/med) LOW Date Received: 01/29/99

% Moisture: not dec. _____ Date Analyzed: 01/29/99

GC Column: DB-624 ID: 0.45 (mm) Dilution Factor: 1.0

Soil Extract Volume _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

2/3/99

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

1710117, TB

Lab Name: Laucks Testing Labs

SDG No.: EL007

Matrix: (soil/water) WATER

Lab Sample ID: 9901591-03

Sample wt/vol: 25.0 (g/ml) ML

Lab File ID: O0129015.D

Level: (low/med) LOW

Date Received: 01/29/99

% Moisture: not dec.

Date Analyzed: 01/29/99

GC Column: DB-624 ID: 0.45 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NO.	COMPOUND		Q	
74-87-3	Chloromethane	1.0	U	
75-01-4	Vinyl chloride	1.0	U	
74-83-9	Bromomethane	1.0	U	
75-00-3	Chloroethane	1.0	U	
75-35-4	1,1-Dichloroethene	1.0	U	
67-64-1	Acetone	5.0	U	R(SA,SB)
75-15-0	Carbon disulfide	1.0	U	
75-09-2	Methylene chloride	1.0	U	
156-60-5	trans-1,2-Dichloroethene	1.0	U	
75-34-3	1,1-Dichloroethane	1.0	U	
156-59-2	cis-1,2-Dichloroethene	1.0	U	
78-93-3	2-Butanone	5.0	U	R(SA,SB)
67-66-3	Chloroform	1.0	U	
71-55-6	1,1,1-Trichloroethane	1.0	U	
56-23-5	Carbon tetrachloride	1.0	U	
71-43-2	Benzene	1.0	U	
107-06-2	1,2-Dichloroethane	1.0	U	
79-01-6	Trichloroethene	1.0	U	
78-87-5	1,2-Dichloropropane	1.0	U	
75-27-4	Bromodichloromethane	1.0	U	
10061-01-5	cis-1,3-Dichloropropene	1.0	U	
108-10-1	4-Methyl-2-pentanone	5.0	U	R(SB)
108-88-3	Toluene	1.0	U	
10061-02-6	trans-1,3-Dichloropropene	1.0	U	
79-00-5	1,1,2-Trichloroethane	1.0	U	
127-18-4	Tetrachloroethene	1.0	U	
591-78-6	2-Hexanone	5.0	U	R(SA,SB)
124-48-1	Dibromochloromethane	1.0	U	
108-90-7	Chlorobenzene	1.0	U	
7816-60-0	m,p-Xylene	1.0	U	
95-47-6	o-Xylene	1.0	U	
100-42-5	Styrene	1.0	U	
75-25-2	Bromoform	1.0	U	
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	
75-71-8	Dichlorodifluoromethane	1.0	U	
75-69-4	Trichlorofluoromethane	1.0	U	
100-41-4	Ethylbenzene	1.0	U	
541-73-1	1,3-Dichlorobenzene	1.0	U	

2/3/99

FORM I VOA

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

1710117, TB

Lab Name: Laucks Testing Labs Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: EL007

Matrix: (soil/water) WATER Lab Sample ID: 9901591-03

Sample wt/vol: 25.0 (g/ml) ML Lab File ID: O0129015.D

Level: (low/med) LOW Date Received: 01/29/99

% Moisture: not dec. _____ Date Analyzed: 01/29/99

GC Column: DB-624 ID: 0.45 (mm) Dilution Factor: 1.0

Soil Extract Volume _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

W31697

FORM I VOA-TIC

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

1710136

Lab Name: Laucks Testing Labs

SDG No.: EL007

Matrix: (soil/water) WATER

Lab Sample ID: 9902002-01

Sample wt/vol: 25.0 (g/ml) ML

Lab File ID: O0203007.D

Level: (low/med) LOW

Date Received: 01/30/99

% Moisture: not dec.

Date Analyzed: 02/03/99

GC Column: DB-624 ID: 0.45 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NO.	COMPOUND		Q	
74-87-3	Chloromethane	1.0	U	U
75-01-4	Vinyl chloride	1.0	U	
74-83-9	Bromomethane	1.0	U	
75-00-3	Chloroethane	1.0	U	
75-35-4	1,1-Dichloroethene	1.0	U	R (SA, SB)
67-64-1	Acetone	5.0	U	
75-15-0	Carbon disulfide	1.0	U	U
75-09-2	Methylene chloride	1.0	U	
156-60-5	trans-1,2-Dichloroethene	1.0	U	
75-34-3	1,1-Dichloroethane	1.0	U	
156-59-2	cis-1,2-Dichloroethene	1.0	U	R (SA, SB)
78-93-3	2-Butanone	5.0	U	
67-66-3	Chloroform	0.9	J	
71-55-6	1,1,1-Trichloroethane	1.0	U	U
56-23-5	Carbon tetrachloride	1.0	U	
71-43-2	Benzene	1.0	U	
107-06-2	1,2-Dichloroethane	1.0	U	
79-01-6	Trichloroethene	1.0	U	
78-87-5	1,2-Dichloropropane	1.0	U	
75-27-4	Bromodichloromethane	1.0	U	
10061-01-5	cis-1,3-Dichloropropene	1.0	U	R (SB)
108-10-1	4-Methyl-2-pentanone	5.0	U	
108-88-3	Toluene	1.0	U	U
10061-02-6	trans-1,3-Dichloropropene	1.0	U	
79-00-5	1,1,2-Trichloroethane	1.0	U	
127-18-4	Tetrachloroethene	1.0	U	R (SA, SB)
591-78-6	2-Hexanone	5.0	U	
124-48-1	Dibromochloromethane	1.0	U	U
108-90-7	Chlorobenzene	1.0	U	
7816-60-0	m,p-Xylene	1.0	U	
95-47-6	o-Xylene	1.0	U	
100-42-5	Styrene	1.0	U	
75-25-2	Bromoform	1.0	U	
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	
75-71-8	Dichlorodifluoromethane	1.0	U	
75-69-4	Trichlorofluoromethane	1.0	U	
100-41-4	Ethylbenzene	1.0	U	
541-73-1	1,3-Dichlorobenzene	1.0	U	

2/3/99

FORM I VOA

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

1710136

Lab Name: Laucks Testing Labs Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: EL007

Matrix: (soil/water) WATER Lab Sample ID: 9902002-01

Sample wt/vol: 25.0 (g/ml) ML Lab File ID: O0203007.D

Level: (low/med) LOW Date Received: 01/30/99

% Moisture: not dec. _____ Date Analyzed: 02/03/99

GC Column: DB-624 ID: 0.45 (mm) Dilution Factor: 1.0

Soil Extract Volume _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

2/1/99

FORM I VOA-TIC

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

1710119

Lab Name: Laucks Testing Labs

SDG No.: EL007

Matrix: (soil/water) WATER

Lab Sample ID: 9902002-02

Sample wt/vol: 25.0 (g/ml) ML

Lab File ID: O0203010.D

Level: (low/med) LOW

Date Received: 01/30/99

% Moisture: not dec.

Date Analyzed: 02/03/99

GC Column: DB-624 ID: 0.45 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	1.0	U
75-01-4	Vinyl chloride	1.0	U
74-83-9	Bromomethane	1.0	U
75-00-3	Chloroethane	1.0	U
75-35-4	1,1-Dichloroethene	1.0	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	1.0	U
75-09-2	Methylene chloride	1.0	U
156-60-5	trans-1,2-Dichloroethene	1.0	U
75-34-3	1,1-Dichloroethane	1.0	U
156-59-2	cis-1,2-Dichloroethene	1.0	U
78-93-3	2-Butanone	5.0	U
67-66-3	Chloroform	1.0	U
71-55-6	1,1,1-Trichloroethane	1.0	U
56-23-5	Carbon tetrachloride	1.0	U
71-43-2	Benzene	1.0	U
107-06-2	1,2-Dichloroethane	1.0	U
79-01-6	Trichloroethene	1.0	U
78-87-5	1,2-Dichloropropane	1.0	U
75-27-4	Bromodichloromethane	1.0	U
10061-01-5	cis-1,3-Dichloropropene	1.0	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	1.0	U
10061-02-6	trans-1,3-Dichloropropene	1.0	U
79-00-5	1,1,2-Trichloroethane	1.0	U
127-18-4	Tetrachloroethene	1.0	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	1.0	U
108-90-7	Chlorobenzene	1.0	U
7816-60-0	m,p-Xylene	1.0	U
95-47-6	o-Xylene	1.0	U
100-42-5	Styrene	1.0	U
75-25-2	Bromoform	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U
75-71-8	Dichlorodifluoromethane	1.0	U
75-69-4	Trichlorofluoromethane	1.0	U
100-41-4	Ethylbenzene	1.0	U
541-73-1	1,3-Dichlorobenzene	1.0	U

R(SA,SB)

R(SA,SB)

R(SB)

R(SA,SB)

6/3/99

FORM I VOA

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

1710119

Lab Name: Laucks Testing Labs Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: EL007

Matrix: (soil/water) WATER Lab Sample ID: 9902002-02

Sample wt/vol: 25.0 (g/ml) ML Lab File ID: O0203010.D

Level: (low/med) LOW Date Received: 01/30/99

% Moisture: not dec. _____ Date Analyzed: 02/03/99

GC Column: DB-624 ID: 0.45 (mm) Dilution Factor: 1.0

Soil Extract Volume _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

a3/1/99

FORM I VOA-TIC

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

1710118

Lab Name: Laucks Testing Labs

SDG No.: EL007

Matrix: (soil/water) WATER

Lab Sample ID: 9902002-03

Sample wt/vol: 25.0 (g/ml) ML

Lab File ID: O0203011.D

Level: (low/med) LOW

Date Received: 01/30/99

% Moisture: not dec.

Date Analyzed: 02/03/99

GC Column: DB-624 ID: 0.45 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	1.0	U
75-01-4	Vinyl chloride	1.0	U
74-83-9	Bromomethane	1.0	U
75-00-3	Chloroethane	1.0	U
75-35-4	1,1-Dichloroethene	1.0	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	1.0	U
75-09-2	Methylene chloride	1.0	U
156-60-5	trans-1,2-Dichloroethene	1.0	U
75-34-3	1,1-Dichloroethane	1.0	U
156-59-2	cis-1,2-Dichloroethene	1.0	U
78-93-3	2-Butanone	5.0	U
67-66-3	Chloroform	1.0	U
71-55-6	1,1,1-Trichloroethane	1.0	U
56-23-5	Carbon tetrachloride	1.0	U
71-43-2	Benzene	1.0	U
107-06-2	1,2-Dichloroethane	1.0	U
79-01-6	Trichloroethene	1.0	U
78-87-5	1,2-Dichloropropane	1.0	U
75-27-4	Bromodichloromethane	1.0	U
10061-01-5	cis-1,3-Dichloropropene	1.0	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	1.0	U
10061-02-6	trans-1,3-Dichloropropene	1.0	U
79-00-5	1,1,2-Trichloroethane	1.0	U
127-18-4	Tetrachloroethene	1.0	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	1.0	U
108-90-7	Chlorobenzene	1.0	U
7816-60-0	m,p-Xylene	1.0	U
95-47-6	o-Xylene	1.0	U
100-42-5	Styrene	1.0	U
75-25-2	Bromoform	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U
75-71-8	Dichlorodifluoromethane	1.0	U
75-69-4	Trichlorofluoromethane	1.0	U
100-41-4	Ethylbenzene	1.0	U
541-73-1	1,3-Dichlorobenzene	1.0	U

R(SA,SB)

R(SA,SB)

R(SB)

R(SA,SB)

4/3/99

FORM I VOA

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

1710118

Lab Name: Laucks Testing Labs Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: EL007

Matrix: (soil/water) WATER Lab Sample ID: 9902002-03

Sample wt/vol: 25.0 (g/ml) ML Lab File ID: O0203011.D

Level: (low/med) LOW Date Received: 01/30/99

% Moisture: not dec. _____ Date Analyzed: 02/03/99

GC Column: DB-624 ID: 0.45 (mm) Dilution Factor: 1.0

Soil Extract Volume _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

a 3/6/99

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

1710122, TB

Lab Name: Laucks Testing Labs

SDG No.: EL007

Matrix: (soil/water) WATER

Lab Sample ID: 9902002-04

Sample wt/vol: 25.0 (g/ml) ML

Lab File ID: O0204010.D

Level: (low/med) LOW

Date Received: 01/30/99

% Moisture: not dec.

Date Analyzed: 02/04/99

GC Column: DB-624 ID: 0.45 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND (ug/L or ug/Kg) UG/L		Q	
74-87-3	Chloromethane	1.0	U	
75-01-4	Vinyl chloride	1.0	U	
74-83-9	Bromomethane	1.0	U	
75-00-3	Chloroethane	1.0	U	
75-35-4	1,1-Dichloroethene	1.0	U	
67-64-1	Acetone	5.0	U	R (SA, SB)
75-15-0	Carbon disulfide	1.0	U	
75-09-2	Methylene chloride	1.0	U	
156-60-5	trans-1,2-Dichloroethene	1.0	U	
75-34-3	1,1-Dichloroethane	1.0	U	
156-59-2	cis-1,2-Dichloroethene	1.0	U	
78-93-3	2-Butanone	5.0	U	R (SA, SB)
67-66-3	Chloroform	1.0	U	
71-55-6	1,1,1-Trichloroethane	1.0	U	
56-23-5	Carbon tetrachloride	1.0	U	
71-43-2	Benzene	1.0	U	
107-06-2	1,2-Dichloroethane	1.0	U	
79-01-6	Trichloroethene	1.0	U	
78-87-5	1,2-Dichloropropane	1.0	U	
75-27-4	Bromodichloromethane	1.0	U	
10061-01-5	cis-1,3-Dichloropropene	1.0	U	
108-10-1	4-Methyl-2-pentanone	5.0	U	R (SB)
108-88-3	Toluene	1.0	U	
10061-02-6	trans-1,3-Dichloropropene	1.0	U	
79-00-5	1,1,2-Trichloroethane	1.0	U	
127-18-4	Tetrachloroethene	1.0	U	
591-78-6	2-Hexanone	5.0	U	R (SA, SB)
124-48-1	Dibromochloromethane	1.0	U	
108-90-7	Chlorobenzene	1.0	U	
7816-60-0	m,p-Xylene	1.0	U	
95-47-6	o-Xylene	1.0	U	
100-42-5	Styrene	1.0	U	
75-25-2	Bromoform	1.0	U	
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	
75-71-8	Dichlorodifluoromethane	1.0	U	
75-69-4	Trichlorofluoromethane	1.0	U	
100-41-4	Ethylbenzene	1.0	U	
541-73-1	1,3-Dichlorobenzene	1.0	U	

a 2/6/99

FORM I VOA

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

1710122, TB

Lab Name: Laucks Testing Labs Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: EL007

Matrix: (soil/water) WATER Lab Sample ID: 9902002-04

Sample wt/vol: 25.0 (g/ml) ML Lab File ID: O0204010.D

Level: (low/med) LOW Date Received: 01/30/99

% Moisture: not dec. _____ Date Analyzed: 02/04/99

GC Column: DB-624 ID: 0.45 (mm) Dilution Factor: 1.0

Soil Extract Volume _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

a3169

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

1710102

Lab Name: Laucks Testing Labs

SDG No.: EL007

Matrix: (soil/water) WATER

Lab Sample ID: 9902042-01

Sample wt/vol: 25.0 (g/ml) ML

Lab File ID: O0204014.D

Level: (low/med) LOW

Date Received: 02/02/99

% Moisture: not dec.

Date Analyzed: 02/04/99

GC Column: DB-624 ID: 0.45 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	1.0	U
75-01-4	Vinyl chloride	1.0	U
74-83-9	Bromomethane	1.0	U
75-00-3	Chloroethane	1.0	U
75-35-4	1,1-Dichloroethene	1.0	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	1.0	U
75-09-2	Methylene chloride	1.0	U
156-60-5	trans-1,2-Dichloroethene	1.0	U
75-34-3	1,1-Dichloroethane	1.0	U
156-59-2	cis-1,2-Dichloroethene	1.0	U
78-93-3	2-Butanone	5.0	U
67-66-3	Chloroform	1.0	U
71-55-6	1,1,1-Trichloroethane	1.0	U
56-23-5	Carbon tetrachloride	1.0	U
71-43-2	Benzene	1.0	U
107-06-2	1,2-Dichloroethane	1.0	U
79-01-6	Trichloroethene	1.0	U
78-87-5	1,2-Dichloropropane	1.0	U
75-27-4	Bromodichloromethane	1.0	U
10061-01-5	cis-1,3-Dichloropropene	1.0	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	1.0	U
10061-02-6	trans-1,3-Dichloropropene	1.0	U
79-00-5	1,1,2-Trichloroethane	1.0	U
127-18-4	Tetrachloroethene	1.0	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	1.0	U
108-90-7	Chlorobenzene	1.0	U
7816-60-0	m,p-Xylene	1.0	U
95-47-6	o-Xylene	1.0	U
100-42-5	Styrene	1.0	U
75-25-2	Bromoform	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U
75-71-8	Dichlorodifluoromethane	1.0	U
75-69-4	Trichlorofluoromethane	1.0	U
100-41-4	Ethylbenzene	1.0	U
541-73-1	1,3-Dichlorobenzene	1.0	U

U

R (SA, SB)

U

R (SA, SB)

U

R (SB)

U

R (SA, SB)

U

a 3/09

FORM I VOA

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

1710102

Lab Name: Laucks Testing Labs Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: EL007

Matrix: (soil/water) WATER Lab Sample ID: 9902042-01

Sample wt/vol: 25.0 (g/ml) ML Lab File ID: O0204014.D

Level: (low/med) LOW Date Received: 02/02/99

% Moisture: not dec. _____ Date Analyzed: 02/04/99

GC Column: DB-624 ID: 0.45 (mm) Dilution Factor: 1.0

Soil Extract Volume _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

A31899

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

1710103

Lab Name: Laucks Testing Labs

SDG No.: EL007

Matrix: (soil/water) WATER

Lab Sample ID: 9902042-02

Sample wt/vol: 25.0 (g/ml) ML

Lab File ID: O0204015.D

Level: (low/med) LOW

Date Received: 02/02/99

% Moisture: not dec.

Date Analyzed: 02/04/99

GC Column: DB-624 ID: 0.45 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NO.	COMPOUND		Q
74-87-3	Chloromethane	1.0	U
75-01-4	Vinyl chloride	1.0	U
74-83-9	Bromomethane	1.0	U
75-00-3	Chloroethane	1.0	U
75-35-4	1,1-Dichloroethene	1.0	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	1.0	U
75-09-2	Methylene chloride	1.0	U
156-60-5	trans-1,2-Dichloroethene	1.0	U
75-34-3	1,1-Dichloroethane	1.0	U
156-59-2	cis-1,2-Dichloroethene	1.0	U
78-93-3	2-Butanone	5.0	U
67-66-3	Chloroform	1.0	U
71-55-6	1,1,1-Trichloroethane	1.0	U
56-23-5	Carbon tetrachloride	1.0	U
71-43-2	Benzene	1.0	U
107-06-2	1,2-Dichloroethane	1.0	U
79-01-6	Trichloroethene	1.0	U
78-87-5	1,2-Dichloropropane	1.0	U
75-27-4	Bromodichloromethane	1.0	U
10061-01-5	cis-1,3-Dichloropropene	1.0	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	1.0	U
10061-02-6	trans-1,3-Dichloropropene	1.0	U
79-00-5	1,1,2-Trichloroethane	1.0	U
127-18-4	Tetrachloroethene	1.0	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	1.0	U
108-90-7	Chlorobenzene	1.0	U
7816-60-0	m,p-Xylene	1.0	U
95-47-6	o-Xylene	1.0	U
100-42-5	Styrene	1.0	U
75-25-2	Bromoform	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U
75-71-8	Dichlorodifluoromethane	1.0	U
75-69-4	Trichlorofluoromethane	1.0	U
100-41-4	Ethylbenzene	1.0	U
541-73-1	1,3-Dichlorobenzene	1.0	U

R (SA, SB)

R (SA, SB)

R (SB)

R (SA, SB)

03/09/99

FORM I VOA

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

1710103

Lab Name: Laucks Testing Labs Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: EL007

Matrix: (soil/water) WATER Lab Sample ID: 9902042-02

Sample wt/vol: 25.0 (g/ml) ML Lab File ID: O0204015.D

Level: (low/med) LOW Date Received: 02/02/99

% Moisture: not dec. _____ Date Analyzed: 02/04/99

GC Column: DB-624 ID: 0.45 (mm) Dilution Factor: 1.0

Soil Extract Volume _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

a3189

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

1710104, TB

Lab Name: Laucks Testing Labs

SDG No.: EL007

Matrix: (soil/water) WATER

Lab Sample ID: 9902042-03

Sample wt/vol: 25.0 (g/ml) ML

Lab File ID: O0204011.D

Level: (low/med) LOW

Date Received: 02/02/99

% Moisture: not dec.

Date Analyzed: 02/04/99

GC Column: DB-624 ID: 0.45 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	1.0	U
75-01-4	Vinyl chloride	1.0	U
74-83-9	Bromomethane	1.0	U
75-00-3	Chloroethane	1.0	U
75-35-4	1,1-Dichloroethene	1.0	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	1.0	U
75-09-2	Methylene chloride	1.0	U
156-60-5	trans-1,2-Dichloroethene	1.0	U
75-34-3	1,1-Dichloroethane	1.0	U
156-59-2	cis-1,2-Dichloroethene	1.0	U
78-93-3	2-Butanone	5.0	U
67-66-3	Chloroform	1.0	U
71-55-6	1,1,1-Trichloroethane	1.0	U
56-23-5	Carbon tetrachloride	1.0	U
71-43-2	Benzene	1.0	U
107-06-2	1,2-Dichloroethane	1.0	U
79-01-6	Trichloroethene	1.0	U
78-87-5	1,2-Dichloropropane	1.0	U
75-27-4	Bromodichloromethane	1.0	U
10061-01-5	cis-1,3-Dichloropropene	1.0	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	1.0	U
10061-02-6	trans-1,3-Dichloropropene	1.0	U
79-00-5	1,1,2-Trichloroethane	1.0	U
127-18-4	Tetrachloroethene	1.0	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	1.0	U
108-90-7	Chlorobenzene	1.0	U
7816-60-0	m,p-Xylene	1.0	U
95-47-6	o-Xylene	1.0	U
100-42-5	Styrene	1.0	U
75-25-2	Bromoform	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U
75-71-8	Dichlorodifluoromethane	1.0	U
75-69-4	Trichlorofluoromethane	1.0	U
100-41-4	Ethylbenzene	1.0	U
541-73-1	1,3-Dichlorobenzene	1.0	U

R (SA, SB)

R (SA, SB)

R (SB)

R (SA, SB)

2/6/99

FORM I VOA

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

1710104, TB

Lab Name: Laucks Testing Labs Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: EL007

Matrix: (soil/water) WATER Lab Sample ID: 9902042-03

Sample wt/vol: 25.0 (g/ml) ML Lab File ID: O0204011.D

Level: (low/med) LOW Date Received: 02/02/99

% Moisture: not dec. _____ Date Analyzed: 02/04/99

GC Column: DB-624 ID: 0.45 (mm) Dilution Factor: 1.0

Soil Extract Volume _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

FORM I VOA-TIC

a 31699

LDC Report# 3775C22

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: MCAS El Toro, CTO 171

Collection Date: January 21 through February 4, 1999

LDC Report Date: May 25, 2000

Matrix: Water

Parameters: Gross Alpha and Beta

Validation Level: Level III and IV

Laboratory: Paragon Analytics, Inc.

Sample Delivery Group (SDG): 9902053

Sample Identification

1710128	1710105
1710130**	1710106
1710131	1710113DUP
1710124	1710102DUP
1710126	1710123MS
1710127	
1710102**	
1710103	
1710132	
1710134	
1710136	
1710123**	
1710108	
1710109	
1710110	
1710112	
1710113	
1710116	
1710115	
1710100	

**Indicates sample underwent Level IV review

Introduction

This data review covers 25 water samples listed on the cover sheet. The analyses were per EPA Method 900.0 for Gross Alpha and Beta Radioactivity.

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 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 VII.

Samples indicated by a double asterisk on the front cover underwent a Level IV review. A Level III review was performed on all of the other samples. Raw data were not evaluated for the samples reviewed by Level III criteria since this review is 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

All criteria for the initial calibration were met.

Detector efficiency was determined and a self-absorption curve was generated for each radionuclide of interest. The calibration raw data was not provided and the detector efficiencies could not be verified.

b. Continuing Calibration

Calibration verification and background determination were performed at the required frequencies. Results were within laboratory control limits.

The calibration raw data was not provided and the detector efficiencies could not be verified.

III. Blanks

Method blanks were reviewed for each matrix as applicable. Blank results contained less than the minimum detectable activity (MDA).

IV. Accuracy and Precision Data

a. Matrix Spike/(Matrix Spike) Duplicate

Matrix spike (MS) analyses were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

Duplicate (DUP) sample analyses were reviewed for each matrix as applicable. Results were within QC limits with the following exceptions:

DUP ID (Associated Samples)	Analyte	RPD (Limits)	Difference (Limits)	Flag	A or P
1710113DUP (All samples in SDG 9902053)	Gross alpha	39 (≤20)	-	J	A

DUP ID (Associated Samples)	Analyte	RPD (Limits)	Difference (Limits)	Flag	A or P
1710102DUP (All samples in SDG 9902053)	Gross alpha Gross beta	23.0 (≤20) 28.6 (≤20)	- -	J J	A

b. Laboratory Control Samples

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

V. Minimum Detectable Activity

All minimum detectable activities met required detection limits with the following exceptions:

Sample	Analyte	RDL (units)	MDA (units)	Flag	A or P
1710128	Gross alpha Gross beta	1.0 pCi/L 2.0 pCi/L	2.4 pCi/L 2.6 pCi/L	None None	P
1710130**	Gross alpha Gross beta	1.0 pCi/L 2.0 pCi/L	2.0 pCi/L 2.5 pCi/L	None None	P
1710131	Gross alpha Gross beta	1.0 pCi/L 2.0 pCi/L	2.6 pCi/L 2.7 pCi/L	None None	P
1710124	Gross alpha Gross beta	1.0 pCi/L 2.0 pCi/L	1.8 pCi/L 2.4 pCi/L	None None	P
1710126	Gross alpha Gross beta	1.0 pCi/L 2.0 pCi/L	2.3 pCi/L 2.3 pCi/L	None None	P
1710127	Gross alpha Gross beta	1.0 pCi/L 2.0 pCi/L	2.4 pCi/L 2.8 pCi/L	None None	P
1710102**	Gross alpha Gross beta	1.0 pCi/L 2.0 pCi/L	4.7 pCi/L 4.5 pCi/L	None None	P
1710103	Gross alpha Gross beta	1.0 pCi/L 2.0 pCi/L	3.4 pCi/L 3.3 pCi/L	None None	P
1710132	Gross alpha Gross beta	1.0 pCi/L 2.0 pCi/L	2.3 pCi/L 2.3 pCi/L	None None	P

Sample	Analyte	RDL (units)	MDA (units)	Flag	A or P
1710134	Gross alpha Gross beta	1.0 pCi/L 2.0 pCi/L	2.7 pCi/L 2.7 pCi/L	None None	P
1710136	Gross alpha Gross beta	1.0 pCi/L 2.0 pCi/L	2.7 pCi/L 2.5 pCi/L	None None	P
1710123**	Gross alpha Gross beta	1.0 pCi/L 2.0 pCi/L	2.2 pCi/L 2.6 pCi/L	None None	P
1710108	Gross alpha Gross beta	1.0 pCi/L 2.0 pCi/L	2.7 pCi/L 2.9 pCi/L	None None	P
1710109	Gross alpha Gross beta	1.0 pCi/L 2.0 pCi/L	2.0 pCi/L 2.5 pCi/L	None None	P
1710110	Gross alpha Gross beta	1.0 pCi/L 2.0 pCi/L	2.1 pCi/L 2.5 pCi/L	None None	P
1710112	Gross alpha Gross beta	1.0 pCi/L 2.0 pCi/L	3.8 pCi/L 4.2 pCi/L	None None	P
1710113	Gross alpha Gross beta	1.0 pCi/L 2.0 pCi/L	2.4 pCi/L 2.5 pCi/L	None None	P
1710116	Gross alpha	1.0 pCi/L	1.7 pCi/L	None	P
1710115	Gross alpha Gross beta	1.0 pCi/L 2.0 pCi/L	1.9 pCi/L 2.1 pCi/L	None None	P
1710100	Gross alpha Gross beta	1.0 pCi/L 2.0 pCi/L	1.7 pCi/L 2.1 pCi/L	None None	P
1710105	Gross alpha Gross beta	1.0 pCi/L 2.0 pCi/L	2.5 pCi/L 2.8 pCi/L	None None	P
1710106	Gross alpha Gross beta	1.0 pCi/L 2.0 pCi/L	2.3 pCi/L 2.7 pCi/L	None None	P
1710113DUP	Gross alpha Gross beta	1.0 pCi/L 2.0 pCi/L	2.8 pCi/L 2.6 pCi/L	None None	P
1710102DUP	Gross alpha Gross beta	1.0 pCi/L 2.0 pCi/L	4.6 pCi/L 4.3 pCi/L	None None	P

VI. Sample Result Verification

All sample result verifications were within validation criteria for samples on which a Level IV review was performed. Raw data were not evaluated for the samples reviewed by Level III criteria.

VII. Overall Assessment of Data

Data flags are summarized at the end of this report.

VIII. Field Duplicates

Samples 1710128 and 1710127 and samples 1710109 and 1710110 were identified as field duplicates. No gross alpha or beta was detected in any of the samples with the following exceptions:

Analyte	Activity (pCi/L)		RPD
	1710128	1710127	
Gross alpha	11.3	11.1	2
Grose beta	8.4	11.3	29

Analyte	Activity (pCi/L)		RPD
	1710109	1710110	
Gross alpha	24.3	27.3	11
Gross beta	15.5	17.3	11

IX. Field Blanks

No field blanks were identified in this SDG.

MCAS El Toro, CTO 171
Gross Alpha and Beta - Data Qualification Summary - SDG 9902053

SDG	Sample	Analyte	Flag	A or P	Reason
9902053	1710128 1710130** 1710131 1710124 1710126 1710127 1710102** 1710103 1710132 1710134 1710136 1710123** 1710108 1710109 1710110 1710112 1710113 1710116 1710115 1710100 1710105 1710106	Gross alpha Gross beta	J J	A	Matrix spike/Matrix spike duplicates (RPD)
9902053	1710128 1710130** 1710131 1710124 1710126 1710127 1710102** 1710103 1710132 1710134 1710136 1710123** 1710108 1710109 1710110 1710112 1710113 1710115 1710100 1710105 1710106	Gross alpha Gross beta	None None	P	Minimum detectable activity
9902053	1710116	Gross alpha	None	P	Minimum detectable activity

MCAS El Toro, CTO 171
Gross Alpha and Beta - Laboratory Blank Data Qualification Summary - SDG 9902053

No Sample Data Qualified in this SDG

ALPHA/BETA ANALYSIS RESULTS SUMMARY

Method 900.0/9310 (Modified)

Lab Name: Paragon Analytics, Inc. Date Collected: 02/02/99

Client Name: Laucks Testing Lab Date Analyzed : 03/11/99

Client Project ID: Bechtel/NAVY CLEAN Sample Matrix : Water

Lab Sample ID Series: 99-02-053 Count Duration: 1000 Min.

Analyzed By : JMM

Client Sample ID	Lab Sample ID	Gross Alpha (pCi/liter)	Gross Beta (pCi/liter)
1710128	99-02-053-01	11.3 ± 2.3 J(9)	8.4 ± 1.9 J(9)
1710130	99-02-053-02	13.6 ± 2.3	10.2 ± 1.9
1710131	99-02-053-03	17.8 ± 3.0	12.7 ± 2.2
1710124	99-02-053-04	7.9 ± 1.7	4.8 ± 1.6
1710126	99-02-053-05	14.2 ± 2.4	9.0 ± 1.7
1710127	99-02-053-06	11.1 ± 2.3	11.3 ± 2.1
1710102	99-02-053-07	22.3 ± 4.2	12.0 ± 3.1
1710103	99-02-053-08	20.4 ± 3.5	10.5 ± 2.3
1710132	99-02-053-09	6.4 ± 1.7	7.6 ± 1.6
1710134	99-02-053-10	14.7 ± 2.7	13.3 ± 2.2
1710136	99-02-053-11	16.1 ± 2.8	10.9 ± 2.0
1710123	99-02-053-12	24.2 ± 3.4	12.6 ± 2.1
1710108	99-02-053-13	46.8 ± 5.8	29.5 ± 3.6
1710109	99-02-053-14	24.3 ± 3.3	15.5 ± 2.3
1710110	99-02-053-15	27.1 ± 3.6	17.3 ± 2.4
1710112	99-02-053-16	14.6 ± 3.2	9.0 ± 2.7
1710113	99-02-053-17	15.4 ± 2.5	8.5 ± 1.8
1710116	99-02-053-18	25.8 ± 3.2	14.4 ± 1.9
1710115	99-02-053-19	18.5 ± 2.6	9.8 ± 1.7
1710100	99-02-053-20	7.7 ± 1.6	6.4 ± 1.5
1710105	99-02-053-21	18.4 ± 2.9	11.2 ± 2.1
1710106	99-02-053-22	16.2 ± 2.7	10.5 ± 2.0
1710113	99-02-053-D1	10.4 ± 2.3	7.6 ± 1.8
1710102	99-02-053-D2	17.7 ± 3.9	9.0 ± 2.8

Reported Uncertainties are the Estimated Total Propagated Uncertainties (2σ)
See PAI SOP 743R1 for TPU determinations.

These samples were prepared using PAI SOP 702R12 and analyzed using PAI SOP 724R5.

5/11/99 000004

ALPHA/BETA ANALYSIS MDA SUMMARY

Method 900.0/9310 (Modified)

Lab Name: Paragon Analytics, Inc. Date Collected: 02/02/99

Client Name: Laucks Testing Lab Date Analyzed : 03/11/99

Client Project ID: Bechtel/NAVY CLEAN Sample Matrix : Water

Lab Sample ID Series: 99-02-053 Count Duration: 1000 Min.

Analyzed By : CJM

Client Sample ID	Lab Sample ID	Gross Alpha MDA (pCi/liter)	Gross Beta MDA (pCi/liter)
1710128	02-053-01	2.4	2.6
1710130	02-053-02	2.0	2.5
1710131	02-053-03	2.6	2.7
1710124	02-053-04	1.8	2.4
1710126	02-053-05	2.3	2.3
1710127	02-053-06	2.4	2.8
1710102	02-053-07	4.7	4.5
1710103	02-053-08	3.4	3.3
1710132	02-053-09	2.3	2.3
1710134	02-053-10	2.7	2.7
1710136	02-053-11	2.7	2.5
1710123	02-053-12	2.2	2.6
1710108	02-053-13	2.7	2.9
1710109	02-053-14	2.0	2.5
1710110	02-053-15	2.1	2.5
1710112	02-053-16	3.8	4.2
1710113	02-053-17	2.4	2.5
1710116	02-053-18	1.7	1.8
1710115	02-053-19	1.9	2.1
1710100	02-053-20	1.7	2.1
1710105	02-053-21	2.5	2.8
1710106	02-053-22	2.3	2.7
1710113	02-053-D1	2.8	2.6
1710102	02-053-D2	4.6	4.3

Reported Uncertainties are the Estimated Total Propagated Uncertainties (2σ)
See PAI SOP 743R1 for TPU determinations.

These samples were prepared using PAI SOP 702R12 and analyzed using PAI SOP 724R5.

LDC Report# 3775C29

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: MCAS El Toro, CTO 171

Collection Date: January 21 through February 4, 1999

LDC Report Date: May 25, 2000

Matrix: Water

Parameters: Total Radium

Validation Level: Level III and IV

Laboratory: Paragon Analytics, Inc.

Sample Delivery Group (SDG): 9902053

Sample Identification

1710128	1710105
1710130**	1710106
1710131	1710126DUP
1710124	1710102DUP
1710126	1710113DUP
1710127	1710123MS
1710102**	1710123MSD
1710103	
1710132	
1710134	
1710136	
1710123**	
1710108	
1710109	
1710110	
1710112	
1710113	
1710116	
1710115	
1710100	

**Indicates sample underwent Level IV review

Introduction

This data review covers 27 water samples listed on the cover sheet. The analyses were per EPA Method 903.0 for Total Radium.

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 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 VIII.

Samples indicated by a double asterisk on the front cover underwent a Level IV review. A Level III review was performed on all of the other samples. Raw data were not evaluated for the samples reviewed by Level III criteria since this review is 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

All criteria for the initial calibration were met.

Detector efficiency was determined and a self-absorption curve was generated for each radionuclide of interest. The calibration raw data was not provided and the detector efficiencies could not be verified.

b. Continuing Calibration

Calibration verification and background determination were performed at the required frequencies. Results were within laboratory control limits.

The calibration raw data was not provided and the detector efficiencies could not be verified.

III. Blanks

Method blanks were reviewed for each matrix as applicable. Blank results contained less than the minimum detectable activity (MDA).

IV. Accuracy and Precision Data

a. Matrix Spike/(Matrix Spike) Duplicate

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.

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

b. Laboratory Control Samples

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

V. Minimum Detectable Activity

All minimum detectable activities met required detection limits.

VI. Sample Result Verification

All sample result verifications were within validation criteria for samples on which a Level IV review was performed. Raw data were not evaluated for the samples reviewed by Level III criteria.

VII. Overall Assessment of Data

Data flags are summarized at the end of this report.

VIII. Field Duplicates

Samples 1710128 and 1710127 and samples 1710109 and 1710110 were identified as field duplicates. No total radium was detected in any of the samples with the following exceptions:

Analyte	Activity (pCi/L)		RPD
	1710128	1710127	
Total radium	0.40	0.38	5

Analyte	Activity (pCi/L)		RPD
	1710109	1710110	
Total radium	0.14	0.10	33

IX. Field Blanks

No field blanks were identified in this SDG.

MCAS El Toro, CTO 171
Total Radium - Data Qualification Summary - SDG 9902053

No Sample Data Qualified in this SDG

MCAS El Toro, CTO 171
Total Radium - Laboratory Blank Data Qualification Summary - SDG 9902053

No Sample Data Qualified in this SDG

TOTAL ALPHA-EMITTING RADIUM MDA RESULTS SUMMARY

Method 903.0 (Modified)

Lab Name: Paragon Analytics, Inc. Date Collected: 02/02/99

Client Name: Laucks Testing Lab Date Analyzed : 03/26/99

Client Project ID: Bechtel/NAVY CLEAN Sample Matrix : Water

Lab Sample ID Series: 99-02-053 Count Duration: 45 Min.

Client Sample ID	Lab Sample ID	Total Radium MDA (pCi/l)
1710128	02-053-01	0.12
1710130	02-053-02	0.10
1710131	02-053-03	0.14
1710124	02-053-04	0.14
1710126	02-053-05	0.14
1710127	02-053-06	0.13
1710102	02-053-07	0.13
1710103	02-053-08	0.19
1710132	02-053-09	0.11
1710134	02-053-10	0.13
1710136	02-053-11	0.10
1710123	02-053-12	0.14
1710108	02-053-13	0.10
1710109	02-053-14	0.13
1710110	02-053-15	0.10
1710112	02-053-16	0.11
1710113	02-053-17	0.12
1710116	02-053-18	0.10
1710115	02-053-19	0.11
1710100	02-053-20	0.12
1710105	02-053-21	0.12
1710106	02-053-22	0.10
Blank	02-053-B1	0.12
Blank	02-053-B2	0.11
1710126	02-053-D1	0.10
1710102	02-053-D2	0.10
1710113	02-053-D3	0.15

See PAI SOP 708FC for details of the MDA determination.

TOTAL ALPHA-EMITTING RADIUM ANALYSIS RESULTS SUMMARY

Method 903.0 (Modified)

Lab Name: Paragon Analytics, Inc. Date Collected: 02/02/99

Client Name: Laucks Testing Lab Date Analyzed : 03/26/99

Client Project ID: Bechtel/NAVY CLEAN Sample Matrix : Water

Lab Sample ID Series: 99-02-053 Count Duration: 45 Min.

Client Sample ID	Lab Sample ID	Total Radium (pCi/l)	
1710128	02-053-01	0.40 ± 0.17	
1710130	02-053-02	0.08 ± 0.09	u
1710131	02-053-03	0.03 ± 0.09	
1710124	02-053-04	0.06 ± 0.09	
1710126	02-053-05	0.21 ± 0.13	
1710127	02-053-06	0.38 ± 0.16	
1710102	02-053-07	0.32 ± 0.15	
1710103	02-053-08	0.84 ± 0.32	
1710132	02-053-09	0.24 ± 0.13	
1710134	02-053-10	0.09 ± 0.10	u
1710136	02-053-11	0.08 ± 0.08	u
1710123	02-053-12	0.40 ± 0.17	
1710108	02-053-13	0.07 ± 0.08	u
1710109	02-053-14	0.14 ± 0.11	
1710110	02-053-15	0.10 ± 0.09	
1710112	02-053-16	0.21 ± 0.12	
1710113	02-053-17	0.17 ± 0.12	
1710116	02-053-18	0.11 ± 0.09	
1710115	02-053-19	0.20 ± 0.12	
1710100	02-053-20	0.08 ± 0.09	u
1710105	02-053-21	0.19 ± 0.12	
1710106	02-053-22	0.03 ± 0.07	u
Blank	02-053-B1	0.01 ± 0.08	
Blank	02-053-B2	0.05 ± 0.08	
1710126	02-053-D1	0.08 ± 0.08	
1710102	02-053-D2	0.28 ± 0.13	
1710113	02-053-D3	0.15 ± 0.12	

5/11/99

Reported Uncertainties are the Estimated Total Propagated Uncertainties (2σ
See PAI SOP 743R1 for details of the TPU determination.

LDC Report# 3775B29

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: MCAS El Toro, CTO 171

Collection Date: January 21 through February 4, 1999

LDC Report Date: May 25, 2000

Matrix: Water

Parameters: Radium 228

Validation Level: Level III and IV

Laboratory: Paragon Analytics, Inc.

Sample Delivery Group (SDG): ELR04

Sample Identification

1710128	1710105
1710130**	1710106
1710131	1710102DUP
1710124	1710113DUP
1710126	1710109DUP
1710127	1710123MS
1710102**	1710123MSD
1710103	
1710132	
1710134	
1710136	
1710123**	
1710108	
1710109	
1710110	
1710112	
1710113	
1710116	
1710115	
1710100	

**Indicates sample underwent Level IV review

Introduction

This data review covers 27 water samples listed on the cover sheet. The analyses were per EPA SW 846 Method 9320 for Radium 228.

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 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 VIII.

Samples indicated by a double asterisk on the front cover underwent a Level IV review. A Level III review was performed on all of the other samples. Raw data were not evaluated for the samples reviewed by Level III criteria since this review is 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

All criteria for the initial calibration were met with the following exceptions:

Sample	Isotope	Finding	Criteria	Flag	A or P
All samples in SDG ELR04	Radium 228	The standard was used past its recommended expiration date but was still within a detectable activity.	Standard should be used within recommended expiration date.	J	A

Detector efficiency was determined for each radionuclide of interest. The calibration raw data was not provided and the detector efficiencies could not be verified.

b. Continuing Calibration

Calibration verification and background determination were performed at the required frequencies with the following exceptions:

Sample	Isotope	Finding	Criteria	Flag	A or P
All samples in SDG ELR04	Radium 228	Daily calibration was not performed with isotope of appropriate energy.	Daily calibration must be performed with isotope of appropriate energy.	J	A

Results were within laboratory control limits.

The calibration raw data was not provided and the detector efficiencies could not be verified.

III. Blanks

Method blanks were reviewed for each matrix as applicable. Blank results contained less than the minimum detectable activity (MDA).

IV. Accuracy and Precision Data

a. Matrix Spike/(Matrix Spike) Duplicate

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

Sample	Isotope	Finding	Criteria	Flag	A or P
1710128 1710130** 1710131 1710124 1710126 1710127 1710102** 1710103 1710132 1710134 1710136	Radium 228	No MS/MSD associated with these samples.	MS/MSD required.	None	P

Percent recoveries (%R) and relative percent differences (RPD) were within QC limits with the following exceptions:

Spike ID (Associated Samples)	Isotope	MS (%R) (Limits)	MSD (%R) (Limits)	RPD (Limits)	Flag	A or P
1710032MS/MSD (1710123** 1710108 1710109 1710110 1710112 1710113 1710116 1710115 1710100 1710105 1710106)	Radium 228	-	69.8 (70-130)	-	J	A

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

b. Laboratory Control Samples

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

V. Sample Carrier Recovery

All sample carrier recoveries were within validation criteria.

VI. Minimum Detectable Activity

All minimum detectable activities met required detection limits with the following exceptions:

Sample	Isotope	RDL (units)	MDA (units)	Flag	A or P
1710110	Radium 228	1.0 pCi/L	1.01 pCi/L	None	P

VII. Sample Result Verification

All sample result verifications were within validation criteria for samples on which a Level IV review was performed. Raw data were not evaluated for the samples reviewed by Level III criteria.

IX. Overall Assessment of Data

Data flags are summarized at the end of this report.

X. Field Duplicates

Samples 1710128 and 1710127 and samples 1710109 and 1710110 were identified as field duplicates. No radium 228 was detected in any of the samples.

XI. Field Blanks

No field blanks were identified in this SDG.

MCAS El Toro, CTO 171
Radium 228 - Data Qualification Summary - SDG ELR04

SDG	Sample	Isotope	Flag	A or P	Reason
ELR04	1710128 1710130** 1710131 1710124 1710126 1710127 1710102** 1710103 1710132 1710134 1710136 1710123** 1710108 1710109 1710110 1710112 1710113 1710116 1710115 1710100 1710105 1710106	Radium 228	J	A	Initial calibration
ELR04	1710128 1710130** 1710131 1710124 1710126 1710127 1710102** 1710103 1710132 1710134 1710136 1710123** 1710108 1710109 1710110 1710112 1710113 1710116 1710115 1710100 1710105 1710106	Radium 228	J	A	Continuing calibration
ELR04	1710128 1710130** 1710131 1710124 1710126 1710127 1710102** 1710103 1710132 1710134 1710136	Radium 228	None	P	Matrix spike/Matrix spike duplicates

SDG	Sample	Isotope	Flag	A or P	Reason
ELR04	1710123** 1710108 1710109 1710110 1710112 1710113 1710116 1710115 1710100 1710105 1710106	Radium 228	J	A	Matrix spike/Matrix spike duplicates (%R)
ELR04	1710110	Radium 228	None	P	Minimum detectable activity

MCAS El Toro, CTO 171
Radium 228 - Laboratory Blank Data Qualification Summary - SDG ELR04

No Sample Data Qualified in this SDG

Ra-228 ANALYSIS RESULTS SUMMARY

Lab Name: Paragon Analytics, Inc.

Date Collected: 02/02/99

Client Name: Laucks Testing Lab

Date Analyzed : 04/14/99

Client Project ID: Bechtel/NAVY CLEAN

Sample Matrix : Water

Lab Sample ID Series: 99-02-053

Count Duration: 250 Min.

Analyzed by: CJM

Client Sample ID	Lab Sample ID	(pCi/l)	MDA
1710128	02-053-01	0.16 ± 0.49	0.81
1710130	02-053-02	1.10 ± 0.52	0.79
1710131	02-053-03	0.34 ± 0.46	0.75
1710124	02-053-04	0.25 ± 0.46	0.77
1710126	02-053-05	0.47 ± 0.46	0.74
1710127	02-053-06	0.59 ± 0.46	0.74
1710102	02-053-07	0.47 ± 0.40	0.65
1710103	02-053-08	0.36 ± 0.45	0.74
1710132	02-053-09	0.26 ± 0.52	0.86
1710134	02-053-10	0.48 ± 0.49	0.79
1710136	02-053-11	0.31 ± 0.52	0.85
1710123	02-053-12	0.91 ± 0.52	0.81
1710108	02-053-13	0.18 ± 0.50	0.83
1710109	02-053-14	0.30 ± 0.49	0.80
1710110	02-053-15	0.18 ± 0.61	1.01
1710112	02-053-16	0.15 ± 0.59	0.98
1710113	02-053-17	-0.19 ± 0.57	0.97
1710116	02-053-18	0.41 ± 0.56	0.92
1710115	02-053-19	0.76 ± 0.60	0.96
1710100	02-053-20	0.00 ± 0.53	0.88
1710105	02-053-21	0.33 ± 0.57	0.94
1710106	02-053-22	0.21 ± 0.54	0.90
1710102	02-053-D1	0.46 ± 0.52	0.84
1710113	02-053-D2	0.34 ± 0.55	0.91
1710109	02-053-D3	0.27 ± 0.49	0.81

UJ (5A,5B)
J
UJ
J
(8)
UJ

Reported Uncertainties are the Estimated Total Propagated Uncertainties (2σ)
See PAI SOP743R1 for details of TPU determinations.

These samples were prepared using PAI SOP746R1 and analyzed using PAI SOP724R5.

5/11/99

Ra-228 ANALYSIS RESULTS SUMMARY

Lab Name: Paragon Analytics, Inc. Date Collected: 10/14/98

Client Name: Laucks Testing Lab Date Analyzed : 04/12/99

Client Project ID: Bechtel/NAVY CLEAN Sample Matrix : Water

Lab Sample ID Series: 98-11-014 Count Duration: 250 Min.

Analyzed by: CJM

Client Sample ID	Lab Sample ID	(pCi/l)	MDA
1710022	11-014-01	1.25 ± 0.85	1.34
1710017	11-014-02	0.62 ± 0.82	1.34
1710007	11-014-03	-0.03 ± 0.47	0.79
1710015	11-014-04	0.61 ± 0.58	0.94
1710026	11-014-05	0.18 ± 0.46	0.76
1710023	11-014-06	0.45 ± 0.53	0.86
1710025	11-014-07	0.48 ± 0.54	0.88
1710001	11-014-08	0.32 ± 0.49	0.80
1710005	11-014-09	-0.19 ± 0.93	1.58
1710021	11-014-10	-0.27 ± 0.78	1.32
Blank	11-014-B1	0.01 ± 0.72	1.21
1710022	11-014-D1	1.48 ± 0.90	1.41
1710007	11-014-D4	0.04 ± 0.49	0.82

ws (5A, 5B)

Reported Uncertainties are the Estimated Total Propagated Uncertainties (2σ
See PAI SOP743R1 for details of TPU determinations.

These samples were prepared using PAI SOP746R1 and analyzed using PAI SOP724R5.

Remarks:

Sample 98-11-014-D1 is a duplicate of 98-11-014-01.
Sample 98-11-014-D4 is a duplicate of 98-11-014-03.

5/11/99

LDC Report# 3775C59

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: MCAS El Toro, CTO 171

Collection Date: January 21 through February 4, 1999

LDC Report Date: May 25, 2000

Matrix: Water

Parameters: Total Uranium

Validation Level: Level III and IV

Laboratory: Paragon Analytics, Inc.

Sample Delivery Group (SDG): 9902053

Sample Identification

1710128	1710105
1710130**	1710106
1710131	1710123MS
1710124	1710123MSD
1710126	1710130DUP
1710127	1710102DUP
1710102**	1710113DUP
1710103	1710116DUP
1710132	
1710134	
1710136	
1710123**	
1710108	
1710109	
1710110	
1710112	
1710113	
1710116	
1710115	
1710100	

**Indicates sample underwent Level IV review

Introduction

This data review covers 28 water samples listed on the cover sheet. The analyses were per ASTM Method D3972-90M for Total Uranium.

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 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.

Samples indicated by a double asterisk on the front cover underwent a Level IV review. A Level III review was performed on all of the other samples. Raw data were not evaluated for the samples reviewed by Level III criteria since this review is 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

All criteria for the initial calibration were met.

Detector efficiency was determined and a self-absorption curve was generated for each radionuclide of interest. The calibration raw data was not provided and the detector efficiencies could not be verified.

b. Continuing Calibration

Calibration verification and background determination were performed at the required frequencies. Results were within laboratory control limits.

The calibration raw data was not provided and the detector efficiencies could not be verified.

III. Blanks

Method blanks were reviewed for each matrix as applicable. Blank results contained less than the minimum detectable activity (MDA) with the following exceptions:

Method Blank ID	Analyte	Activity (pCi/L)	Associated Samples
AS02115BLK1	Total uranium	0.081	All samples in SDG 9902053

No sample data were qualified based on the contaminants found in the method blanks.

IV. Accuracy and Precision Data

a. Matrix Spike/(Matrix Spike) Duplicate

Matrix spike (MS) analyses were reviewed for each matrix as applicable with the following exceptions:

Sample	Analyte	Finding	Criteria	Flag	A or P
1710128 1710130** 1710131 1710124 1710126 1710127 1710102** 1710103 1710132 1710134 1710136	Total uranium	No MS associated with these samples.	MS required.	None	P

Percent recoveries (%R) were within QC limits.

Duplicate (DUP) sample analyses were reviewed for each matrix as applicable. Results were within QC limits with the following exceptions:

DUP ID (Associated Samples)	Analyte	RPD (Limits)	Difference (Limits)	Flag	A or P
1710130DUP (1710128 1710130** 1710131 1710124 1710126 1710127 1710102** 1710103 1710132 1710134 1710136)	Total uranium	57.7 (≤20)	-	J	A

b. Laboratory Control Samples

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

V. Sample Specific Chemical Recovery

All sample specific chemical recoveries were within validation criteria.

VI. Minimum Detectable Activity

All minimum detectable activities met required detection limits.

VII. Sample Result Verification

All sample result verifications were within validation criteria for samples on which a Level

IV review was performed. Raw data were not evaluated for the samples reviewed by Level III criteria.

VIII. Overall Assessment of Data

Data flags are summarized at the end of this report.

IX. Field Duplicates

Samples 1710128 and 1710127 and samples 1710109 and 1710110 were identified as field duplicates. No total uranium was detected in any of the samples with the following exceptions:

Analyte	Activity (pCi/L)		RPD
	1710128	1710127	
Total uranium	10.17	10.21	0.4

Analyte	Activity (pCi/L)		RPD
	1710109	1710110	
Total uranium	24.4	23.5	4

X. Field Blanks

No field blanks were identified in this SDG.

MCAS El Toro, CTO 171
Total Uranium - Data Qualification Summary - SDG 9902053

SDG	Sample	Analyte	Flag	A or P	Reason
9902053	1710128 1710130** 1710131 1710124 1710126 1710127 1710102** 1710103 1710132 1710134 1710136	Total uranium	None	P	Matrix spike/Matrix spike duplicates
9902053	1710128 1710130** 1710131 1710124 1710126 1710127 1710102** 1710103 1710132 1710134 1710136	Total uranium	J	A	Matrix spike/Matrix spike duplicates (RPD)

MCAS El Toro, CTO 171
Total Uranium - Laboratory Blank Data Qualification Summary - SDG 9902053

No Sample Data Qualified in this SDG

Total Uranium by Alpha Spectroscopy

Method ASTM D3972-90(M)

Sample Results

Reported on: Monday, April 05, 1999 12:29:09

Client Name: Laucks Testing Laboratories, Inc.

Client Project Name: Bechtel/NAVY CLEAN

Client Project Number:

Laboratory Name: Paragon Analytics, Inc.

PAI Work Order: 9902053

Field ID: 1710128
Lab ID: 9902053-1

Sample Matrix: Water
Date Prepared: 10-Feb-99
Prep SOP: PAI 778R3
Prep Batch: AS02115

Date Collected: 02-Feb-99
Date Analyzed: 17-Feb-99
Analytical SOP: PAISOP714R4

Final Aliquot: 1.000
Aliquot Units: l
Report Basis: Total
Count Time (min.): 400

Target Nuclide	Result +/- 2s TPU	MDC	Reporting Units	Lab Qualifier
TOTALU	10.17 +/- 0.94	0.040	pCi/l	J (9)

Chemical Yield Summary

Tracer Nuclide	Tracer Known	Tracer Measured	Units	Tracer Yield	Control Limits
U-232	4.67	3.49	pCi/l	75%	

RU 5/11/99

Comments:

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)

MDC - Minimum Detectable Concentration (see PAI SOP 709)

Qualifiers/Flags:

J - Result is less than the sample specific minimum detectable activity.

Y2 - Chemical Yield outside default limits.

* - Duplicate DER not within control limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

Total Uranium by Alpha Spectroscopy

Method ASTM D3972-90(M)

Sample Results

Reported on: Monday, April 05, 1999 12:29:09

Client Name: Laucks Testing Laboratories, Inc.

Client Project Name: Bechtel/NAVY CLEAN

Client Project Number:

Laboratory Name: Paragon Analytics, Inc.

PAI Work Order: 9902053

Field ID: 1710130
Lab ID: 9902053-2

Sample Matrix: Water
Date Prepared: 10-Feb-99
Prep SOP: PAI 778R3
Prep Batch: AS02115

Date Collected: 04-Feb-99
Date Analyzed: 17-Feb-99
Analytical SOP: PAISOP714R4

Final Aliquot: 1.000
Aliquot Units: l
Report Basis: Total
Count Time (min.): 400

Target Nuclide	Result +/- 2s TPU	MDC	Reporting Units	Lab Qualifier
TOTALU	13.6 +/- 1.2	0.044	pCi/l	J (9)

Chemical Yield Summary

Tracer Nuclide	Tracer Known	Tracer Measured	Units	Tracer Yield	Control Limits
U-232	4.67	4.14	pCi/l	89%	

5/11/99

Comments:

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)

MDC - Minimum Detectable Concentration (see PAI SOP 709)

Qualifiers/Flags:

U - Result is less than the sample specific minimum detectable activity.

Y2 - Chemical Yield outside default limits.

* - Duplicate DER not within control limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

Total Uranium by Alpha Spectroscopy

Method ASTM D3972-90(M)

Sample Results

Reported on: Monday, April 05, 1999 12:29:09

Client Name: Laucks Testing Laboratories, Inc.

Client Project Name: Bechtel/NAVY CLEAN

Client Project Number:

Laboratory Name: Paragon Analytics, Inc.

PAI Work Order: 9902053

Field ID: 11710131
Lab ID: 9902053-3

Sample Matrix: Water
Date Prepared: 10-Feb-99
Prep SOP: PAI 778R3
Prep Batch: AS02115

Date Collected: 04-Feb-99
Date Analyzed: 17-Feb-99
Analytical SOP: PAISOP714R4

Final Aliquot: 1.000
Aliquot Units: l
Report Basis: Total
Count Time (min.): 400

Target Nuclide	Result +/- 2s TPU	MDC	Reporting Units	Lab Qualifier
TOTALU	19.4 +/- 1.7	0.038	pCi/l	J(9)

Chemical Yield Summary

Tracer Nuclide	Tracer Known	Tracer Measured	Units	Tracer Yield	Control Limits
U-232	4.67	3.59	pCi/l	77%	

pe 5/11/99

Comments:

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)

MDC - Minimum Detectable Concentration (see PAI SOP 709)

Qualifiers/Flags:

U - Result is less than the sample specific minimum detectable activity.

Y2 - Chemical Yield outside default limits.

* - Duplicate DER not within control limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

Total Uranium by Alpha Spectroscopy

Method ASTM D3972-90(M)

Sample Results

Reported on: Monday, April 05, 1999 12:29:09

Client Name: Laucks Testing Laboratories, Inc.

Client Project Name: Bechtel/NAVY CLEAN

Client Project Number:

Laboratory Name: Paragon Analytics, Inc.

PAI Work Order: 9902053

Field ID: 1710124	Sample Matrix: Water	Date Collected: 02-Feb-99	Final Aliquot: 1.000
Lab ID: 9902053-4	Date Prepared: 10-Feb-99	Date Analyzed: 17-Feb-99	Aliquot Units: l
	Prep SOP: PAI 778R3	Analytical SOP: PAISOP714R4	Report Basis: Total
	Prep Batch: AS02115		Count Time (min.): 400

Target Nuclide	Result +/- 2s TPU	MDC	Reporting Units	Lab Qualifier
TOTALU	5.74 +/- 0.58	0.059	pCi/l	J(9)

Chemical Yield Summary

Tracer Nuclide	Tracer Known	Tracer Measured	Units	Tracer Yield	Control Limits
U-232	4.67	3.67	pCi/l	78%	

5/11/99

Comments:

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)

MDC - Minimum Detectable Concentration (see PAI SOP 709)

Qualifiers/Flags:

U - Result is less than the sample specific minimum detectable activity.

Y2 - Chemical Yield outside default limits.

* - Duplicate DER not within control limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

Total Uranium by Alpha Spectroscopy

Method ASTM D3972-90(M)

Sample Results

Reported on: Monday, April 05, 1999 12:29:09

Client Name: Laucks Testing Laboratories, Inc.

Client Project Name: Bechtel/NAVY CLEAN

Client Project Number:

Laboratory Name: Paragon Analytics, Inc.

PAI Work Order: 9902053

Field ID:	1710126
Lab ID:	9902053-5

Sample Matrix: Water
Date Prepared: 10-Feb-99
Prep SOP: PAI 778R3
Prep Batch: AS02115

Date Collected: 03-Feb-99
Date Analyzed: 17-Feb-99
Analytical SOP: PAISOP714R4

Final Aliquot: 1.000
Aliquot Units: l
Report Basis: Total
Count Time (min.): 400

Target Nuclide	Result +/- 2s TPU	MDC	Reporting Units	Lab Qualifier
TOTALU	12.5 +/- 1.1	0.047	pCi/l	J(9)

Chemical Yield Summary

Tracer Nuclide	Tracer Known	Tracer Measured	Units	Tracer Yield	Control Limits
U-232	4.67	4.05	pCi/l	87%	

5/11/99

Comments:

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)

MDC - Minimum Detectable Concentration (see PAI SOP 709)

Qualifiers/Flags:

U - Result is less than the sample specific minimum detectable activity.

Y2 - Chemical Yield outside default limits.

* - Duplicate DER not within control limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

Total Uranium by Alpha Spectroscopy

Method ASTM D3972-90(M)

Sample Results

Reported on: Monday, April 05, 1999 12:29:09

Client Name: Laucks Testing Laboratories, Inc.

Client Project Name: Bechtel/NAVY CLEAN

Client Project Number:

Laboratory Name: Paragon Analytics, Inc.

PAI Work Order: 9902053

Field ID	1710127
Lab ID	9902053-6

Sample Matrix: Water
Date Prepared: 10-Feb-99
Prep SOP: PAI 778R3
Prep Batch: AS02115

Date Collected: 02-Feb-99
Date Analyzed: 18-Feb-99
Analytical SOP: PAISOP714R4

Final Aliquot: 0.978
Aliquot Units: l
Report Basis: Total
Count Time (min.): 400

Target Nuclide	Result +/- 2s TPU	MDC	Reporting Units	Lab Qualifier
TOTALU	10.21 +/- 0.94	0.043	pCi/l	J (9)

Chemical Yield Summary

Tracer Nuclide	Tracer Known	Tracer Measured	Units	Tracer Yield	Control Limits
U-232	4.78	3.76	pCi/l	79%	

5/11/99

Comments:

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)

MDC - Minimum Detectable Concentration (see PAI SOP 709)

Qualifiers/Flags:

U - Result is less than the sample specific minimum detectable activity.

Y2 - Chemical Yield outside default limits.

* - Duplicate DER not within control limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

Total Uranium by Alpha Spectroscopy

Method ASTM D3972-90(M)

Sample Results

Reported on: Monday, April 05, 1999 12:29:09

Client Name: Laucks Testing Laboratories, Inc.

Client Project Name: Bechtel/NAVY CLEAN

Client Project Number:

Laboratory Name: Paragon Analytics, Inc.

PAI Work Order: 9902053

Field ID:	1710102
Lab ID:	9902053-7

Sample Matrix: Water
Date Prepared: 10-Feb-99
Prep SOP: PAI 778R3
Prep Batch: AS02115

Date Collected: 01-Feb-99
Date Analyzed: 18-Feb-99
Analytical SOP: PAISOP714R4

Final Aliquot: 1.000
Aliquot Units: l
Report Basis: Total
Count Time (min.): 400

Target Nuclide	Result +/- 2s TPU	MDC	Reporting Units	Lab Qualifier
TOTALU	19.4 +/- 1.7	0.038	pCi/l	J (9)

Chemical Yield Summary

Tracer Nuclide	Tracer Known	Tracer Measured	Units	Tracer Yield	Control Limits
U-232	4.67	3.61	pCi/l	77%	

pr 5/11/99

Comments:

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)

MDC - Minimum Detectable Concentration (see PAI SOP 709)

Qualifiers/Flags:

U - Result is less than the sample specific minimum detectable activity.

Y2 - Chemical Yield outside default limits.

* - Duplicate DER not within control limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

Total Uranium by Alpha Spectroscopy

Method ASTM D3972-90(M)

Sample Results

Reported on: Monday, April 05, 1999 12:29:10

Client Name: Laucks Testing Laboratories, Inc.

Client Project Name: Bechtel/NAVY CLEAN

Client Project Number:

Laboratory Name: Paragon Analytics, Inc.

PAI Work Order: 9902053

Field ID: 1710103
Lab ID: 9902053-8

Sample Matrix: Water
Date Prepared: 10-Feb-99
Prep SOP: PAI 778R3
Prep Batch: AS02115

Date Collected: 01-Feb-99
Date Analyzed: 18-Feb-99
Analytical SOP: PAISOP714R4

Final Aliquot: 1.000
Aliquot Units: l
Report Basis: Total
Count Time (min.): 400

Target Nuclide	Result +/- 2s TPU	MDC	Reporting Units	Lab Qualifier
TOTALU	13.6 +/- 1.2	0.016	pCi/l	J (9)

Chemical Yield Summary

Tracer Nuclide	Tracer Known	Tracer Measured	Units	Tracer Yield	Control Limits
U-232	4.67	3.57	pCi/l	76%	

pc 5/11/99

Comments:

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)

MDC - Minimum Detectable Concentration (see PAI SOP 709)

Qualifiers/Flags:

J - Result is less than the sample specific minimum detectable activity

Y2 - Chemical Yield outside default limits.

[illegible] - Duplicate DER not within control limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

Total Uranium by Alpha Spectroscopy

Method ASTM D3972-90(M)

Sample Results

Reported on: Monday, April 05, 1999 12:29:10

Client Name: Laucks Testing Laboratories, Inc.

Client Project Name: Bechtel/NAVY CLEAN

Client Project Number:

Laboratory Name: Paragon Analytics, Inc.

PAI Work Order: 9902053

Field ID: 1710132
Lab ID: 9902053-9

Sample Matrix: Water
Date Prepared: 10-Feb-99
Prep SOP: PAI 778R3
Prep Batch: AS02115

Date Collected: 04-Feb-99
Date Analyzed: 18-Feb-99
Analytical SOP: PAISOP714R4

Final Aliquot: 1.000
Aliquot Units: l
Report Basis: Total
Count Time (min.): 400

Target Nuclide	Result +/- 2s TPU	MDC	Reporting Units	Lab Qualifier
TOTALU	6.92 +/- 0.67	0.042	pCi/l	J(9)

Chemical Yield Summary

Tracer Nuclide	Tracer Known	Tracer Measured	Units	Tracer Yield	Control Limits
U-232	4.67	3.74	pCi/l	80%	

PV 5/11/99

Comments:

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)

MDC - Minimum Detectable Concentration (see PAI SOP 708)

Qualifiers/Flags:

U - Result is less than the sample specific minimum detectable activity.

Y2 - Chemical Yield outside default limits.

* - Duplicate DER not within control limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

Total Uranium by Alpha Spectroscopy

Method ASTM D3972-90(M)

Sample Results

Reported on: Monday, April 05, 1999 12:29:09

Client Name: Laucks Testing Laboratories, Inc.

Client Project Name: Bechtel/NAVY CLEAN

Client Project Number:

Laboratory Name: Paragon Analytics, Inc.

PAI Work Order: 9902053

Field ID: 1710134
Lab ID: 9902053-10

Sample Matrix: Water
Date Prepared: 10-Feb-99
Prep SOP: PAI 778R3
Prep Batch: AS02115

Date Collected: 02-Feb-99
Date Analyzed: 18-Feb-99
Analytical SOP: PAISOP714R4

Final Aliquot: 1.000
Aliquot Units: l
Report Basis: Total
Count Time (min.): 400

Target Nuclide	Result +/- 2s TPU	MDC	Reporting Units	Lab Qualifier
TOTALU	18.9 +/- 1.6	0.055	pCi/l	J (9)

Chemical Yield Summary

Tracer Nuclide	Tracer Known	Tracer Measured	Units	Tracer Yield	Control Limits
U-232	4.67	3.31	pCi/l	71%	

MW 5/11/99

Comments:

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)

MDC - Minimum Detectable Concentration (see PAI SOP 709)

Qualifiers/Flags:

U - Result is less than the sample specific minimum detectable activity.

Y2 - Chemical Yield outside default limits.

* - Duplicate DER not within control limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

Total Uranium by Alpha Spectroscopy

Method ASTM D3972-90(M)

Sample Results

Reported on: Monday, April 05, 1999 12:29:09

Client Name: Laucks Testing Laboratories, Inc.

Client Project Name: Bechtel/NAVY CLEAN

Client Project Number:

Laboratory Name: Paragon Analytics, Inc.

PAI Work Order: 9902053

Field ID: 1710136
Lab ID: 9902053-11

Sample Matrix: Water
Date Prepared: 10-Feb-99
Prep SOP: PAI 778R3
Prep Batch: AS02115

Date Collected: 29-Jan-99
Date Analyzed: 18-Feb-99
Analytical SOP: PAISOP714R4

Final Aliquot: 0.989
Aliquot Units: l
Report Basis: Total
Count Time (min.): 400

Target Nuclide	Result +/- 2s TPU	MDC	Reporting Units	Lab Qualifier
TOTALU	16.4 +/- 1.5	0.016	pCi/l	J(9)

Chemical Yield Summary

Tracer Nuclide	Tracer Known	Tracer Measured	Units	Tracer Yield	Control Limits
U-232	4.72	3.98	pCi/l	84%	

5/11/99

Comments:

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)

MDC - Minimum Detectable Concentration (see PAI SOP 709)

Qualifiers/Flags:

U - Result is less than the sample specific minimum detectable activity.

Y2 - Chemical Yield outside default limits.

* - Duplicate DER not within control limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

Total Uranium by Alpha Spectroscopy

Method ASTM D3972-90(M)

Sample Results

Reported on: Monday, April 05, 1999 12:29:09

Client Name: Laucks Testing Laboratories, Inc.

Client Project Name: Bechtel/NAVY CLEAN

Client Project Number:

Laboratory Name: Paragon Analytics, Inc.

PAI Work Order: 9902053

Field ID:	1710123
Lab ID:	9902053-12

Sample Matrix: Water
Date Prepared: 10-Feb-99
Prep SOP: PAI 778R3
Prep Batch: AS02116

Date Collected: 03-Feb-99
Date Analyzed: 18-Feb-99
Analytical SOP: PAISOP714R4

Final Aliquot: 0.970
Aliquot Units: l
Report Basis: Total
Count Time (min.): 400

Target Nuclide	Result +/- 2s TPU	MDC	Reporting Units	Lab Qualifier
TOTALU	22.8 +/- 2.0	0.061	pCi/l	

Chemical Yield Summary

Tracer Nuclide	Tracer Known	Tracer Measured	Units	Tracer Yield	Control Limits
U-232	4.82	3.69	pCi/l	77%	

MJ 5/11/99

Comments:

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)

MDC - Minimum Detectable Concentration (see PAI SOP 709)

Qualifiers/Flags:

U - Result is less than the sample specific minimum detectable activity.

Y2 - Chemical Yield outside default limits.

* - Duplicate DER not within control limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

Total Uranium by Alpha Spectroscopy

Method ASTM D3972-90(M)

Sample Results

Reported on: Monday, April 05, 1999 12:29:09

Client Name: Laucks Testing Laboratories, Inc.

Client Project Name: Bechtel/NAVY CLEAN

Client Project Number:

Laboratory Name: Paragon Analytics, Inc.

PAI Work Order: 9902053

Field ID:	1710108
Lab ID:	9902053-13

Sample Matrix: Water
Date Prepared: 10-Feb-99
Prep SOP: PAI 778R3
Prep Batch: AS02116

Date Collected: 25-Jan-99
Date Analyzed: 19-Feb-99
Analytical SOP: PAISOP714R4

Final Aliquot: 1.000
Aliquot Units: l
Report Basis: Total
Count Time (min.): 400

Target Nuclide	Result +/- 2s TPU	MDC	Reporting Units	Lab Qualifier
TOTALU	45.1 +/- 3.8	0.064	pCi/l	

Chemical Yield Summary

Tracer Nuclide	Tracer Known	Tracer Measured	Units	Tracer Yield	Control Limits
U-232	4.67	3.77	pCi/l	81%	

5/11/99

Comments:

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)

MDC - Minimum Detectable Concentration (see PAI SOP 709)

Qualifiers/Flags:

U - Result is less than the sample specific minimum detectable activity.

Y2 - Chemical Yield outside default limits.

* - Duplicate DER not within control limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

Total Uranium by Alpha Spectroscopy

Method ASTM D3972-90(M)

Sample Results

Reported on: Monday, April 05, 1999 12:29:09

Client Name: Laucks Testing Laboratories, Inc.

Client Project Name: Bechtel/NAVY CLEAN

Client Project Number:

Laboratory Name: Paragon Analytics, Inc.

PAI Work Order: 9902053

Field ID: 1710109	Sample Matrix: Water	Date Collected: 25-Jan-99	Final Aliquot: 1.000
Lab ID: 9902053-14	Date Prepared: 10-Feb-99	Date Analyzed: 19-Feb-99	Aliquot Units: l
	Prep SOP: PAI 778R3	Analytical SOP: PAISOP714R4	Report Basis: Total
	Prep Batch: AS02116		Count Time (min.): 400

Target Nuclide	Result +/- 2s TPU	MDC	Reporting Units	Lab Qualifier
TOTALU	24.4 +/- 2.1	0.030	pCi/l	

Chemical Yield Summary

Tracer Nuclide	Tracer Known	Tracer Measured	Units	Tracer Yield	Control Limits
U-232	4.67	3.81	pCi/l	81%	

ev 5/11/99

Comments:

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)

MDC - Minimum Detectable Concentration (see PAI SOP 709)

Qualifiers/Flags:

U - Result is less than the sample specific minimum detectable activity.

Y2 - Chemical Yield outside default limits.

* - Duplicate DER not within control limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

Total Uranium by Alpha Spectroscopy

Method ASTM D3972-90(M)

Sample Results

Reported on: Monday, April 05, 1999 12:29:09

Client Name: Laucks Testing Laboratories, Inc.

Client Project Name: Bechtel/NAVY CLEAN

Client Project Number:

Laboratory Name: Paragon Analytics, Inc.

PAI Work Order: 9902053

Field ID: 1710110
Lab ID: 9902053-15

Sample Matrix: Water
Date Prepared: 10-Feb-99
Prep SOP: PAI 778R3
Prep Batch: AS02116

Date Collected: 25-Jan-99
Date Analyzed: 19-Feb-99
Analytical SOP: PAISOP714R4

Final Aliquot: 1.000
Aliquot Units: l
Report Basis: Total
Count Time (min.): 400

Target Nuclide	Result +/- 2s TPU	MDC	Reporting Units	Lab Qualifier
TOTALU	23.5 +/- 2.0	0.039	pCi/l	

Chemical Yield Summary

Tracer Nuclide	Tracer Known	Tracer Measured	Units	Tracer Yield	Control Limits
U-232	4.67	3.89	pCi/l	83%	

pw 5/11/99

Comments:

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)

MDC - Minimum Detectable Concentration (see PAI SOP 709)

Qualifiers/Flags:

U - Result is less than the sample specific minimum detectable activity.

Y2 - Chemical Yield outside default limits.

* - Duplicate DER not within control limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

Total Uranium by Alpha Spectroscopy

Method ASTM D3972-90(M)

Sample Results

Reported on: Monday, April 05, 1999 12:29:09

Client Name: Laucks Testing Laboratories, Inc.

Client Project Name: Bechtel/NAVY CLEAN

Client Project Number:

Laboratory Name: Paragon Analytics, Inc.

PAI Work Order: 9902053

Field ID: 1710112

Lab ID: 9902053-16

Sample Matrix: Water

Date Prepared: 10-Feb-99

Prep SOP: PAI 778R3

Prep Batch: AS02116

Date Collected: 27-Jan-99

Date Analyzed: 19-Feb-99

Analytical SOP: PAISOP714R4

Final Aliquot: 1.000

Aliquot Units: l

Report Basis: Total

Count Time (min.): 400

Target Nuclide	Result +/- 2s TPU	MDC	Reporting Units	Lab Qualifier
TOTALU	11.2 +/- 1.0	0.035	pCi/l	

Chemical Yield Summary

Tracer Nuclide	Tracer Known	Tracer Measured	Units	Tracer Yield	Control Limits
U-232	4.67	3.82	pCi/l	82%	

pw 6/11/99

Comments:

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)

MDC - Minimum Detectable Concentration (see PAI SOP 709)

Qualifiers/Flags:

U - Result is less than the sample specific minimum detectable activity.

Y2 - Chemical Yield outside default limits.

* - Duplicate DER not within control limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

Total Uranium by Alpha Spectroscopy

Method ASTM D3972-90(M)

Sample Results

Reported on: Monday, April 05, 1999 12:29:09

Client Name: Laucks Testing Laboratories, Inc.

Client Project Name: Bechtel/NAVY CLEAN

Client Project Number:

Laboratory Name: Paragon Analytics, Inc.

PAI Work Order: 9902053

Field ID: 1710113
Lab ID: 9902053-17

Sample Matrix: Water
Date Prepared: 10-Feb-99
Prep SOP: PAI 778R3
Prep Batch: AS02116

Date Collected: 27-Jan-99
Date Analyzed: 19-Feb-99
Analytical SOP: PAISOP714R4

Final Aliquot: 1.000
Aliquot Units: l
Report Basis: Total
Count Time (min.): 400

Target Nuclide	Result +/- 2s TPU	MDC	Reporting Units	Lab Qualifier
TOTALU	15.2 +/- 1.3	0.036	pCi/l	

Chemical Yield Summary

Tracer Nuclide	Tracer Known	Tracer Measured	Units	Tracer Yield	Control Limits
U-232	4.67	3.59	pCi/l	77%	

PJ 5/11/99

Comments:

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)

MDC - Minimum Detectable Concentration (see PAI SOP 709)

Qualifiers/Flags:

U - Result is less than the sample specific minimum detectable activity.

Y2 - Chemical Yield outside default limits.

* - Duplicate DER not within control limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

Total Uranium by Alpha Spectroscopy

Method ASTM D3972-90(M)

Sample Results

Reported on: Monday, April 05, 1999 12:29:09

Client Name: Laucks Testing Laboratories, Inc.

Client Project Name: Bechtel/NAVY CLEAN

Client Project Number:

Laboratory Name: Paragon Analytics, Inc.

PAI Work Order: 9902053

Client ID:	1710116
Lab ID:	9902053-18

Sample Matrix: Water
Date Prepared: 10-Feb-99
Prep SOP: PAI 778R3
Prep Batch: AS02116

Date Collected: 28-Jan-99
Date Analyzed: 19-Feb-99
Analytical SOP: PAISOP714R4

Final Aliquot: 1.000
Aliquot Units: l
Report Basis: Total
Count Time (min.): 400

Target Nuclide	Result +/- 2s TPU	MDC	Reporting Units	Lab Qualifier
TOTALU	23.5 +/- 2.1	0.050	pCi/l	

Chemical Yield Summary

Tracer Nuclide	Tracer Known	Tracer Measured	Units	Tracer Yield	Control Limits
U-232	4.67	3.82	pCi/l	82%	

5/11/99

Comments:

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)

MDC - Minimum Detectable Concentration (see PAI SOP 709)

Qualifiers/Flags:

U - Result is less than the sample specific minimum detectable activity.

Y2 - Chemical-Yield outside default limits.

* - Duplicate DER not within control limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

Total Uranium by Alpha Spectroscopy

Method ASTM D3972-90(M)

Sample Results

Reported on: Monday, April 05, 1999 12:29:09

Client Name: Laucks Testing Laboratories, Inc.

Client Project Name: Bechtel/NAVY CLEAN

Client Project Number:

Laboratory Name: Paragon Analytics, Inc.

PAI Work Order: 9902053

Field ID: 1710115
Lab ID: 9902053-19

Sample Matrix: Water
Date Prepared: 10-Feb-99
Prep SOP: PAI 778R3
Prep Batch: AS02116

Date Collected: 28-Jan-99
Date Analyzed: 19-Feb-99
Analytical SOP: PAISOP714R4

Final Aliquot: 0.950
Aliquot Units: l
Report Basis: Total
Count Time (min.): 400

Target Nuclide	Result +/- 2s TPU	MDC	Reporting Units	Lab Qualifier
TOTALU	16.7 +/- 1.5	0.057	pCi/l	

Chemical Yield Summary

Tracer Nuclide	Tracer Known	Tracer Measured	Units	Tracer Yield	Control Limits
U-232	4.92	3.84	pCi/l	78%	

PT 5/11/99

Comments:

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)

MDC - Minimum Detectable Concentration (see PAI SOP 709)

Qualifiers/Flags:

U - Result is less than the sample specific minimum detectable activity.

Y2 - Chemical Yield outside default limits.

* - Duplicate DER not within control limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

Total Uranium by Alpha Spectroscopy

Method ASTM D3972-90(M)

Sample Results

Reported on: Monday, April 05, 1999 12:29:09

Client Name: Laucks Testing Laboratories, Inc.

Client Project Name: Bechtel/NAVY CLEAN

Client Project Number:

Laboratory Name: Paragon Analytics, Inc.

PAI Work Order: 9902053

Field ID: 1710100
Lab ID: 9902053-20

Sample Matrix: Water
Date Prepared: 10-Feb-99
Prep SOP: PAI 778R3
Prep Batch: AS02116

Date Collected: 21-Jan-99
Date Analyzed: 19-Feb-99
Analytical SOP: PAISOP714R4

Final Aliquot: 1.000
Aliquot Units: l
Report Basis: Total
Count Time (min.): 400

Target Nuclide	Result +/- 2s TPU	MDC	Reporting Units	Lab Qualifier
TOTALU	14.0 +/- 1.3	0.052	pCi/l	

Chemical Yield Summary

Tracer Nuclide	Tracer Known	Tracer Measured	Units	Tracer Yield	Control Limits
U-232	4.67	3.71	pCi/l	79%	

PV 5/11/99

Comments:

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)

MDC - Minimum Detectable Concentration (see PAI SOP 709)

Qualifiers/Flags:

U - Result is less than the sample specific minimum detectable activity.

Y2 - Chemical Yield outside default limits.

* - Duplicate DER not within control limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

Total Uranium by Alpha Spectroscopy

Method ASTM D3972-90(M)

Sample Results

Reported on: Monday, April 05, 1999 12:29:09

Client Name: Laucks Testing Laboratories, Inc.

Client Project Name: Bechtel/NAVY CLEAN

Client Project Number:

Laboratory Name: Paragon Analytics, Inc.

PAI Work Order: 9902053

Field ID: 1710105
Lab ID: 9902053-21

Sample Matrix: Water
Date Prepared: 10-Feb-99
Prep SOP: PAI 778R3
Prep Batch: AS02116

Date Collected: 22-Jan-99
Date Analyzed: 19-Feb-99
Analytical SOP: PAISOP714R4

Final Aliquot: 0.905
Aliquot Units: l
Report Basis: Total
Count Time (min.): 400

Target Nuclide	Result +/- 2s TPU	MDC	Reporting Units	Lab Qualifier
TOTALU	16.4 +/- 1.5	0.050	pCi/l	

Chemical Yield Summary

Tracer Nuclide	Tracer Known	Tracer Measured	Units	Tracer Yield	Control Limits
U-232	5.16	3.74	pCi/l	72%	

RU 5/11/99

Comments:

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)

MDC - Minimum Detectable Concentration (see PAI SOP 709)

Qualifiers/Flags:

U - Result is less than the sample specific minimum detectable activity.

Y2 - Chemical Yield outside default limits.

* - Duplicate DER not within control limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

Total Uranium by Alpha Spectroscopy

Method ASTM D3972-90(M)

Sample Results

Reported on: Monday, April 05, 1999 12:29:09

Client Name: Laucks Testing Laboratories, Inc.

Client Project Name: Bechtel/NAVY CLEAN

Client Project Number:

Laboratory Name: Paragon Analytics, Inc.

PAI Work Order: 9902053

Field ID: 1710106	Sample Matrix: Water	Date Collected: 22-Jan-99	Final Aliquot: 0.936
Lab ID: 9902053-22	Date Prepared: 10-Feb-99	Date Analyzed: 19-Feb-99	Aliquot Units: l
	Prep SOP: PAI 778R3	Analytical SOP: PAISOP714R4	Report Basis: Total
	Prep Batch: AS02116		Count Time (min.): 400

Target Nuclide	Result +/- 2s TPU	MDC	Reporting Units	Lab Qualifier
TOTALU	15.9 +/- 1.4	0.035	pCi/l	

Chemical Yield Summary

Tracer Nuclide	Tracer Known	Tracer Measured	Units	Tracer Yield	Control Limits
U-232	4.99	3.77	pCi/l	75%	

MY 5/11/99

Comments:

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)

MDC - Minimum Detectable Concentration (see PAI SOP 709)

Qualifiers/Flags:

U - Result is less than the sample specific minimum detectable activity.

Y2 - Chemical Yield outside default limits.

* - Duplicate DER not within control limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: MCAS El Toro, CTO 171

Collection Date: February 3 through February 4, 1999

LDC Report Date: March 11, 1999

Matrix: Water

Parameters: Wet Chemistry

Validation Level: Level III

Laboratory: Laucks Testing Laboratories

Sample Delivery Group (SDG): EL008

Sample Identification

1710134
1710135
1710127
1710124
1710123
1710126
1710132
1710131
1710130
1710134MS
1710134DUP

Introduction

This data review covers 11 water samples listed on the cover sheet. The analyses were per EPA Method 300.0 for Sulfate and EPA Method 376.1 for Sulfide.

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

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

Blank results are summarized in Section III.

Field duplicates are summarized in Section VII.

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

The following are definitions of the data qualifiers:

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

J Indicates an estimated value.

R Quality control indicates the data is not usable.

N Presumptive evidence of presence of the constituent.

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

A Indicates the finding is based upon technical validation criteria.

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

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

I. Technical Holding Times

All technical holding time requirements were met.

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

II. Calibration

a. Initial Calibration

All criteria for the initial calibration of each method were met.

b. Calibration Verification

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

III. Blanks

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

IV. Accuracy and Precision Data

a. Matrix Spike/(Matrix Spike) Duplicates

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

Sample	Analyte	Finding	Criteria	Flag	A or P
All samples in SDG EL008	Sulfide	No MS/MSD associated with these samples.	MS/MSD required.	None	P

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

b. Laboratory Control Samples

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

V. Sample Result Verification

Raw data were not reviewed for this SDG.

VI. Overall Assessment of Data

Data flags are summarized at the end of this report.

VII. Field Duplicates

No field duplicates were identified in this SDG.

VIII. Field Blanks

No field blanks were identified in this SDG.

MCAS El Toro, CTO 171
Wet Chemistry - Data Qualification Summary - SDG EL008

SDG	Sample	Analyte	Flag	A or P	Reason
EL008	1710134 1710135 1710127 1710124 1710123 1710126 1710132 1710131 1710130	Sulfide	None	P	Matrix spike/Matrix spike duplicates

MCAS El Toro, CTO 171
Wet Chemistry - Laboratory Blank Data Qualification Summary - SDG EL008

No Sample Data Qualified in this SDG

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INORGANICS ANALYSIS DATA SHEET

Lab Name: Laucks Testing Labs Sample ID : 1710134

SDG No. : EL003 Lab Sample ID: 9902104-01

Matrix : WATER Date Received: 02/03/99

Analyte	Result		Units	Prepped	Analyzed	Limit	Method
Sulfide, total	1.	U U	mg/L	02/03/99	02/03/99	1.	EPA 376.1
Sulfate (SO4	180.		mg/L	02/11/99	02/11/99	50.	EPA 300.0

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INORGANICS ANALYSIS DATA SHEET

Lab Name: Laucks Testing Labs Sample ID : 1710135
SDG No. : EL008 Lab Sample ID: 9902104-02
Matrix : WATER Date Received: 02/03/99

Analyte	Result		Units	Prepped	Analyzed	Limit	Method
Sulfide, total	1.	U U	mg/L	02/03/99	02/03/99	1.	EPA 376.1
Sulfate SO4	170.		mg/L	02/11/99	02/11/99	50	EPA 300.0

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INORGANICS ANALYSIS DATA SHEET

Lab Name: Laucks Testing Labs Sample ID : 1710107

SDG No. : EL008 Lab Sample ID: 9902104-03

Matrix : WATER Date Received: 02/03/99

Analyte	Result		Units	Prepped	Analyzed	Limit	Method
Sulfide, total	1.	U U	mg/L	02/03/99	02/03/99	1	EPA 376.1
Sulfate SO4	221.		mg/L	02/11/99	02/11/99	50	EPA 300.0

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INORGANICS ANALYSIS DATA SHEET

Lab Name: Laucks Testing Labs Sample ID : [illegible]
SDG No. : EL008 Lab Sample ID: 9902104-04
Matrix : WATER Date Received: 02/03/99

Analyte	Result		Units	Prepped	Analyzed	Limit	Method
Sulfide, total	1.	U U	mg/L	02/03/99	02/03/99	1.	EPA 376.1
Sulfate SO4	190.		mg/L	02/11/99	02/11/99	50	EPA 300.0

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INORGANICS ANALYSIS DATA SHEET

Lab Name: Laucks Testing Labs Sample ID : 1710123

SDG No. : EL009 Lab Sample ID: 9902133-01

Matrix : WATER Date Received: 02/04/99

Analyte	Result		Units	Prepped	Analyzed	Limit	Method
Sulfide, total	1.	U	mg/L	02/10/99	02/10/99	1.	EPA 376.1
Sulfate (SO4	330.		mg/L	02/11/99	02/11/99	50	EPA 300.0

2/3/99

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INORGANICS ANALYSIS DATA SHEET

Lab Name	Laucks Testing Labs	Sample ID	[illegible]
FDG N	EL [illegible]	Lab Sample ID	[illegible]
Matrix	WATER	Date Received	[illegible]

Analyte	Result		Units	Prepped	Analyzed	Limit	Method
Sulfide, total	1.	U	mg/L	[illegible]	[illegible]	1	EPA 376.1
Sulfate SO4	11.		mg/L	[illegible]	[illegible]	5	EPA [illegible]

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INORGANICS ANALYSIS DATA SHEET

Lab Name: [illegible] Testing Labs Sample ID: [illegible]
SDG No.: [illegible] Lab Sample ID: [illegible]
Matrix: WATER Date Received: [illegible]

Analyte	Result		Units	Prepped	Analyzed	Limit	Method
Sulfide, total	[illegible]	U	mg/L	[illegible]	[illegible]	[illegible]	EPA [illegible]
Sulfate, SO4	[illegible]		mg/L	[illegible]	[illegible]	[illegible]	EPA [illegible]

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INORGANICS ANALYSIS DATA SHEET

Lab Name: Laucks Testing Labs Sample ID: [illegible]

SDG No: [illegible] Lab Sample ID: [illegible]

Matrix: WATER Date Received: [illegible]

Analyte	Result		Units	Prepped	Analyzed	Limit	Method
Sulfide, total	[illegible]	U	mg/L	[illegible]	[illegible]	[illegible]	EPA 376.1
Sulfate, SO4	[illegible]		mg/L	[illegible]	[illegible]	[illegible]	EPA [illegible]

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INORGANICS ANALYSIS DATA SHEET

Lab Name: Laucks Testing Labs Sample ID : 1710130
SDG No. : EL009 Lab Sample ID: 9902163-03
Matrix : WATER Date Received: 02/05/99

Analyte	Result		Units	Prepped	Analyzed	Limit	Method
Sulfide, total	1.	U	mg/L	02/10/99	02/10/99	1.	EPA 376.1
Sulfate (SO4)	94.		mg/L	02/11/99	02/11/99	50.	EPA 300.0

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Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: MCAS El Toro, CTO 171

Collection Date: January 21 through February 1, 1999

LDC Report Date: March 16, 1999

Matrix: Water

Parameters: Wet Chemistry

Validation Level: Level III & IV

Laboratory: Laucks Testing Laboratory

Sample Delivery Group (SDG): EL009

Sample Identification

1710100	1710109DUP
1710105	1710113MS
1710106	1710113DUP
1710121	1710116MS
1710120	1710116MSD
1710109**	1710116DUP
1710110	1710102MS
1710108	1710102DUP
1710113	
1710112	
1710116**	
1710115	
1710136	
1710119*	
1710118	
1710102	
1710103	
1710100MS	
1710100DUP	
1710109MS	

* Level IV for Sulfide only
**Indicates sample underwent Level IV review

Introduction

This data review covers 28 water samples listed on the cover sheet. The analyses were per EPA Method 300.0 for Chloride, Sulfate, Nitrate as Nitrogen, Fluoride, EPA Method 310.1 for Alkalinity, EPA Method 376.1 for Sulfide, EPA Method 415.1 for Total Organic Carbon, and SM 3500 EF for Ferrous Iron.

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

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

Blank results are summarized in Section III.

Field duplicates are summarized in Section VII.

Samples indicated by a double asterisk on the front cover underwent a Level IV review. A Level III review was performed on all of the other samples. Raw data were not evaluated for the samples reviewed by Level III criteria since this review is 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

All criteria for the initial calibration of each method were met with the following exceptions:

Sample	Analyte	Finding	Criteria	Flag	A or P
1710100 1710109** 1710110 1710108 1710113 1710112 1710116** 1710115 1710116DUP	Alkalinity	Initial calibration was not performed for this analyte.	Initial calibration must be performed for this analyte.	J	P

b. Calibration Verification

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

III. Blanks

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

Method Blank ID	Analyte	Concentration	Associated Samples
MB	Alkalinity	2.0 mg/L	1710100 1710109** 1710110 1710108 1710113 1710112 1710116** 1710115

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.

IV. Accuracy and Precision Data

a. Matrix Spike/(Matrix Spike) Duplicates

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

Sample	Analyte	Finding	Criteria	Flag	A or P
1710100 1710109** 1710110 1710108 1710113 1710112 1710116** 1710115 1710102 1710103	Ferrous iron	No MS associated with these samples.	MS required.	None	P
1710100 1710105 1710106 1710121 1710120 1710109** 1710110 1710108 1710113 1710112 1710116** 1710115 1710136 1710119* 1710118 1710102 1710103	Sulfide	No MS associated with these samples.	MS required.	None	P

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

b. Laboratory Control Samples

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

Sample	Analyte	Finding	Criteria	Flag	A or P
1710100 1710105 1710106 1710121 1710120 1710109** 1710110 1710108 1710113 1710112 1710116** 1710115 1710136 1710119* 1710118 1710102 1710103	Sulfide	No LCS analysis associated with these samples.	LCS analysis required.	J	P

The samples and associated blanks are qualified as estimated (J) due to the lack of associated laboratory control samples, matrix spikes, and matrix spike duplicates.

V. Sample Result Verification

All sample result verifications were within validation criteria for samples on which a Level IV review was performed. Raw data were not evaluated for the samples reviewed by Level III criteria.

VI. Overall Assessment of Data

Data flags are summarized at the end of this report.

VII. Field Duplicates

Samples 1710121 and 1710120 and samples 1710109** and 1710110 were identified as field duplicates. No contaminant concentrations were detected in any of the samples with the following exceptions:

Analyte	Concentration (mg/L)		RPD
	1710121	1710120	
Sulfate	35	35	0

Analyte	Concentration (mg/L)		RPD
	1710109**	1710110	
Alkalinity	290	300	3

Analyte	Concentration (mg/L)		RPD
	1710109**	1710110	
Chloride	46	47	2
Ferrous iron	0.37	0.10U	Not calculable
Nitrate as N	8.1	7.9	3
Sulfate	190	190	0
Total organic carbon	2.5	2.3	8

VIII. Field Blanks

No field blanks were identified in this SDG.

MCAS El Toro, CTO 171
Wet Chemistry - Data Qualification Summary - SDG EL009

SDG	Sample	Analyte	Flag	A or P	Reason
EL009	1710100 1710109** 1710110 1710108 1710113 1710112 1710116** 1710115	Alkalinity	J	P	Initial calibration
EL009	1710100 1710109** 1710110 1710108 1710113 1710112 1710116** 1710115 1710102 1710103	Ferrous iron	None	P	Matrix spike/Matrix spike duplicates
EL009	1710100 1710105 1710106 1710121 1710120 1710109** 1710110 1710108 1710113 1710112 1710116** 1710115 1710136 1710119* 1710118 1710102 1710103	Sulfide	None	P	Matrix spike/Matrix spike duplicates
EL009	1710100 1710105 1710106 1710121 1710120 1710109** 1710110 1710108 1710113 1710112 1710116** 1710115 1710136 1710119* 1710118 1710102 1710103	Sulfide	J	P	Laboratory control samples

MCAS El Toro, CTO 171
Wet Chemistry - Laboratory Blank Data Qualification Summary - SDG EL009

No Sample Data Qualified in this SDG

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INORGANICS ANALYSIS DATA SHEET

Lab Name: Laucks Testing Labs Sample ID : 1710100

SDG No. : EL007 Lab Sample ID: 9901482-01

Matrix : WATER Date Received: 01/22/99

Analyte	Result		Units	Prepped	Analyzed	Limit	Method
Bicarb. Alkalinity, HCO3	220.	J	mg/L (SA)	02/04/99	02/04/99	2.	EPA 310 1mod
Carb. Alkalinity, CO3	2.	U W	mg/L	02/04/99	02/04/99	2.	EPA 310 1mod
Alkalinity, Total as CaCO3	220.	J	mg/L	02/04/99	02/04/99	2.	EPA 310.1mod
Chloride	79.		mg/L		01/22/99	1.	EPA 300.0
Iron, Ferrous, as Fe	0.04	U U	mg/L		01/22/99	0.04	SM 3500 FE D
Iron, Ferric, as Fe	0.27		mg/L			0.10	SM 3500 FE D
Fluoride (Method 300.0)	1.	U U	mg/L		01/22/99	1.	EPA 300.0
Nitrate as N (EPA 300.0)	3.		mg/L		01/22/99	0.2	EPA 300.0
Sulfide, total	1.	U W	mg/L (CD)	01/28/99	01/28/99	1.	EPA 376.1
Sulfate (SO4)	180.		mg/L		01/22/99	1.	EPA 300.0
Total Organic Carbon	1.8		mg/L	02/04/99	02/04/99	1.0	EPA 415.1

2/3/99

INORGANICS ANALYSIS DATA SHEET

Lab Name: Laucks Testing Labs
SDG No. : EL007
Matrix : WATER

Sample ID : 1710105
Lab Sample ID: 9901500-01
Date Received: 01/25/99

Analyte	Result		Units	Prepped	Analyzed	Limit	Method
Sulfide, total	1.	U U	mg/L (10)	01/28/99	01/28/99	1.	EPA 376 1
Sulfate (SO4)	240.		mg/L		01/26/99	1.	EPA 300.0

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INORGANICS ANALYSIS DATA SHEET

Lab Name: Laucks Testing Labs
SDG No. : KL007
Matrix : WATER

Sample ID : 1710106
Lab Sample ID: 9901500-02
Date Received: 01/25/99

Analyte	Result		Units	Prepped	Analyzed	Limit	Method
Sulfide, total	1.	U U	mg/L (10)	01/28/99	01/28/99	1.	EPA 376 1
Sulfate (SO4)	260.		mg/L		01/26/99	1.	EPA 300.0

2/6/99

INORGANICS ANALYSIS DATA SHEET

Lab Name: Laucks Testing Labs Sample ID : 1710121
SDG No. : EL007 Lab Sample ID: 9901500-03
Matrix : WATER Date Received: 01/25/99

Analyte	Result		Units	Prepped	Analyzed	Limit	Method
Sulfide, total	1.	U U	mg/L (10)	01/28/99	01/28/99	1.	EPA 376 1
Sulfate (SO4)	35.		mg/L		01/28/99	1.	EPA 300.0

03/09

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INORGANICS ANALYSIS DATA SHEET

Lab Name: Laucks Testing Labs Sample ID : 1710120
SDG No. : EL007 Lab Sample ID: 9901500-04
Matrix : WATER Date Received: 01/25/99

Analyte	Result		Units	Prepped	Analyzed	Limit	Method
Sulfide, total	1.	U U	mg/L 10	01/28/99	01/28/99	1.	EPA 376 1
Sulfate (SO4)	35.		mg/L		01/28/99	1.	EPA 300.0

3/1/99

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INORGANICS ANALYSIS DATA SHEET

Lab Name: Laucks Testing Labs Sample ID : 1710109
SDG No. : KL007 Lab Sample ID: 9901515-01
Matrix : WATER Date Received: 01/26/99

Analyte	Result		Units	Prepped	Analyzed	Limit	Method
Bicarb. Alkalinity, HCO3	290.	J	mg/L (5A)	02/04/99	02/04/99	2.	EPA 310 1mod
Carb. Alkalinity, CO3	2.	U UJ	mg/L	02/04/99	02/04/99	2.	EPA 310 1mod
Alkalinity, Total as CaCO3	290.	J	mg/L	02/04/99	02/04/99	2.	EPA 310.1mod
Chloride	46.		mg/L		01/26/99	1.	EPA 300.0
Iron, Ferrous, as Fe	0.04	U UA	mg/L		01/26/99	0.04	SM 3500 FE D
Iron, Ferric, as Fe	0.37		mg/L			0.10	SM 3500 FE D
Fluoride (Method 300.0)	1.	U UA	mg/L		01/26/99	1.	EPA 300.0
Nitrate as N (EPA 300.0)	8.1		mg/L		01/26/99	0.2	EPA 300.0
Sulfide, total	1.	U UJ	mg/L (10)	01/28/99	01/28/99	1.	EPA 376 1
Sulfate (SO4)	190.		mg/L		01/26/99	1.	EPA 300.0
Total Organic Carbon	2.5		mg/L	02/04/99	02/04/99	1.0	EPA 415.1

a3/09

INORGANICS ANALYSIS DATA SHEET

Lab Name: Laucks Testing Labs
SDG No. : EL007
Matrix : WATER

Sample ID : 1710110
Lab Sample ID: 9901515-02
Date Received: 01/26/99

Analyte	Result		Units	Prepped	Analyzed	Limit	Method
Bicarb. Alkalinity, HCO3	300.	J	mg/L (SA)	02/04/99	02/04/99	2.	EPA 310 1mod
Carb. Alkalinity, CO3	2.	U U	mg/L	02/04/99	02/04/99	2.	EPA 310 1mod
Alkalinity, Total as CaCO3	300.	J	mg/L	02/04/99	02/04/99	2.	EPA 310.1mod
Chloride	47.		mg/L		01/26/99	1.	EPA 300.0
Iron, Ferrous, as Fe	0.04	U U	mg/L		01/26/99	0.04	SM 3500 FE D
Iron, Ferric, as Fe	0.10	U	mg/L			0.10	SM 3500 FE D
Fluoride (Method 300.0)	1.	U	mg/L		01/26/99	1.	EPA 300.0
Nitrate as N (EPA 300.0)	7.9		mg/L		01/26/99	0.2	EPA 300.0
Sulfide, total	1.	U U	mg/L (10)	01/28/99	01/28/99	1.	EPA 376 1
Sulfate (SO4)	190.		mg/L		01/26/99	1.	EPA 300.0
Total Organic Carbon	2.3		mg/L	02/04/99	02/04/99	1.0	EPA 415.1

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INORGANICS ANALYSIS DATA SHEET

Lab Name: Laucks Testing Labs
SDG No. : EL007
Matrix : WATER

Sample ID : 1710108
Lab Sample ID: 9901515-03
Date Received: 01/26/99

Analyte	Result		Units	Prepped	Analyzed	Limit	Method
Bicarb. Alkalinity, HCO3	460.	J	mg/L (5A)	02/04/99	02/04/99	2.	EPA 310 1mod
Carb. Alkalinity, CO3	2.	U U	mg/L	02/04/99	02/04/99	2.	EPA 310 1mod
Alkalinity, Total as CaCO3	460.	J	mg/L	02/04/99	02/04/99	2.	EPA 310.1mod
Chloride	110.		mg/L		01/26/99	1.	EPA 300.0
Iron, Ferrous, as Fe	0.04	U U	mg/L		01/26/99	0.04	SM 3500 FE D
Iron, Ferric, as Fe	0.12		mg/L			0.10	SM 3500 FE D
Fluoride (Method 300.0)	1.6		mg/L		01/26/99	0.2	EPA 300.0
Nitrate as N (EPA 300.0)	16.		mg/L		01/26/99	0.2	EPA 300.0
Sulfide, total	1.	U U	mg/L (10)	01/28/99	01/28/99	1.	EPA 376 1
Sulfate (SO4)	170.		mg/L		01/26/99	1.	EPA 300.0
Total Organic Carbon	3.1		mg/L	02/04/99	02/04/99	1.0	EPA 415.1

03/09

INORGANICS ANALYSIS DATA SHEET

Lab Name: Laucks Testing Labs
SDG No. : EL007
Matrix : WATER

Sample ID : 1710113
Lab Sample ID: 9901577-01
Date Received: 01/28/99

Analyte	Result		Units	Prepped	Analyzed	Limit	Method
Bicarb. Alkalinity, HCO3	260.	J	mg/L (90)	02/04/99	02/04/99	2.	EPA 310 1mod
Carb. Alkalinity, CO3	2.	U UJ	mg/L	02/04/99	02/04/99	2.	EPA 310 1mod
Alkalinity, Total as CaCO3	260.	J	mg/L	02/04/99	02/04/99	2.	EPA 310.1mod
Chloride	84.		mg/L		01/28/99	1.	EPA 300.0
Iron, Ferrous, as Fe	0.04	U	mg/L		01/28/99	0.04	SM 3500 FE D
Iron, Ferric, as Fe	0.10	U	mg/L			0.10	SM 3500 FE D
Fluoride (Method 300.0)	1.	U	mg/L		01/28/99	1.	EPA 300.0
Nitrate as N (EPA 300.0)	6.5		mg/L		01/28/99	0.2	EPA 300.0
Sulfide, total	1.	U UJ	mg/L (10)	01/28/99	01/28/99	1.	EPA 376.1
Sulfate (SO4)	220.		mg/L		01/28/99	1.	EPA 300.0
Total Organic Carbon	2.9		mg/L	02/04/99	02/04/99	1.0	EPA 415.1

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INORGANICS ANALYSIS DATA SHEET

Lab Name: Laucks Testing Labs
SDG No. : KL007
Matrix : WATER

Sample ID : 1710112
Lab Sample ID: 9901577-02
Date Received: 01/28/99

Analyte	Result		Units	Prepped	Analyzed	Limit	Method
Bicarb. Alkalinity, HCO3	230.	J	mg/L (5A)	02/04/99	02/04/99	2.	EPA 310 1mod
Carb. Alkalinity, CO3	2.	U U	mg/L	02/04/99	02/04/99	2.	EPA 310 1mod
Alkalinity, Total as CaCO3	230.	J	mg/L	02/04/99	02/04/99	2.	EPA 310.1mod
Chloride	110.		mg/L		01/28/99	1.	EPA 300.0
Iron, Ferrous, as Fe	0.04	U U	mg/L		01/28/99	0.04	SM 3500 FE D
Iron, Ferric, as Fe	0.10	U	mg/L			0.10	SM 3500 FE D
Fluoride (Method 300.0)	1.	U	mg/L		01/28/99	1.	EPA 300.0
Nitrate as N (EPA 300.0)	4.4		mg/L		01/28/99	0.2	EPA 300.0
Sulfide, total	1.	U U	mg/L (10)	01/28/99	01/28/99	1.	EPA 376 1
Sulfate (SO4)	400.		mg/L		01/28/99	1.	EPA 300.0
Total Organic Carbon	5.1		mg/L	02/04/99	02/04/99	1.0	EPA 415.1

a 3/6/99

INORGANICS ANALYSIS DATA SHEET

Lab Name: Laucks Testing Labs
SDG No. : EL007
Matrix : WATER

Sample ID : 1710116
Lab Sample ID: 9901591-01
Date Received: 01/29/99

Analyte	Result		Units	Prepped	Analyzed	Limit	Method
Bicarb. Alkalinity, HCO3	290.	J	mg/L (5A)	02/04/99	02/04/99	2.	EPA 310 1mod
Carb. Alkalinity, CO3	2.	U UJ	mg/L	02/04/99	02/04/99	2.	EPA 310 1mod
Alkalinity, Total as CaCO3	290.	J	mg/L	02/04/99	02/04/99	2.	EPA 310.1mod
Chloride	45.		mg/L		01/29/99	1.	EPA 300.0
Iron, Ferrous, as Fe	0.04	U	mg/L		01/29/99	0.04	SM 3500 FE D
Iron, Ferric, as Fe	0.10	U	mg/L			0.10	SM 3500 FE D
Fluoride (Method 300.0)	1.	U	mg/L		01/29/99	1.	EPA 300.0
Nitrate as N (EPA 300.0)	9.7		mg/L		01/29/99	0.2	EPA 300.0
Sulfide, total	1.	U UJ	mg/L (10)	02/03/99	02/03/99	1.	EPA 376 1
Sulfate (SO4)	140.		mg/L		01/29/99	1.	EPA 300.0
Total Organic Carbon	2.1		mg/L	02/04/99	02/04/99	1.0	EPA 415.1

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INORGANICS ANALYSIS DATA SHEET

Lab Name: Laucks Testing Labs Sample ID : 1710115
SDG No. : EL007 Lab Sample ID: 9901591-02
Matrix : WATER Date Received: 01/29/99

Analyte	Result		Units	Prepped	Analyzed	Limit	Method
Bicarb. Alkalinity, HCO3	280.	J	mg/L (5A)	02/04/99	02/04/99	2.	EPA 310 1mod
Carb. Alkalinity, CO3	2.	U UJ	mg/L	02/04/99	02/04/99	2.	EPA 310 1mod
Alkalinity, Total as CaCO3	280.	J	mg/L	02/04/99	02/04/99	2.	EPA 310.1mod
Chloride	61.		mg/L		01/29/99	1.	EPA 300.0
Iron, Ferrous, as Fe	0.04	U	mg/L		01/29/99	0.04	SM 3500 FE D
Iron, Ferric, as Fe	0.10	U	mg/L			0.10	SM 3500 FE D
Fluoride (Method 300.0)	1.	U	mg/L		01/29/99	1.	EPA 300.0
Nitrate as N (EPA 300.0)	11.		mg/L		01/29/99	0.2	EPA 300.0
Sulfide, total	1.	U UJ	mg/L (10)	02/03/99	02/03/99	1.	EPA 376.1
Sulfate (SO4)	160.		mg/L		01/29/99	1.	EPA 300.0
Total Organic Carbon	3.2		mg/L	02/04/99	02/04/99	1.0	EPA 415.1

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INORGANICS ANALYSIS DATA SHEET

Lab Name: Laucks Testing Labs
SDG No. : EL007
Matrix : WATER

Sample ID : 1710136
Lab Sample ID: 9902002-01
Date Received: 01/30/99

Analyte	Result		Units	Prepped	Analyzed	Limit	Method
Sulfide, total	1.	U (1.)	mg/L (10)	02/03/99	02/03/99	1.	EPA 376 1
Sulfate (SO4)	99.		mg/L		02/11/99	1.	EPA 300.0

a 3/10/99

INORGANICS ANALYSIS DATA SHEET

Lab Name: Laucks Testing Labs Sample ID : 1710119
SDG No. : EL007 Lab Sample ID: 9902002-02
Matrix : WATER Date Received: 01/30/99

Analyte	Result		Units	Prepped	Analyzed	Limit	Method
Sulfide, total	1.	U 4	mg/L (10)	02/03/99	02/03/99	1.	EPA 376 1
Sulfate (SO4)	130.		mg/L		02/11/99	1.	EPA 300.0

6 3/6/99

INORGANICS ANALYSIS DATA SHEET

Lab Name: Laucks Testing Labs
SDG No. : EL007
Matrix : WATER

Sample ID : 1710118
Lab Sample ID: 9902002-03
Date Received: 01/30/99

Analyte	Result		Units	Prepped	Analyzed	Limit	Method
Sulfide, total	1.	U (1)	mg/L (10)	02/03/99	02/03/99	1.	EPA 376 1
Sulfate (SO4)	36.		mg/L		02/11/99	1.	EPA 300.0

2/3/99

INORGANICS ANALYSIS DATA SHEET

Lab Name: Laucks Testing Labs
SDG No. : EL007
Matrix : WATER

Sample ID : 1710102
Lab Sample ID: 9902042-01
Date Received: 02/02/99

Analyte	Result		Units	Prepped	Analyzed	Limit	Method
Bicarb. Alkalinity, HCO3	330.	J	mg/L (5A)	02/04/99	02/04/99	2.	EPA 310 1mod
Carb. Alkalinity, CO3	2.	U U	mg/L	02/04/99	02/04/99	2.	EPA 310 1mod
Alkalinity, Total as CaCO3	330.	J	mg/L	02/04/99	02/04/99	2.	EPA 310.1mod
Chloride	180.		mg/L		02/11/99	1.	EPA 300.0
Iron, Ferrous, as Fe	0.04	U U	mg/L	02/02/99	02/02/99	0.04	SM 3500 FE D
Iron, Ferric, as Fe	0.10	U	mg/L			0.10	SM 3500 FE D
Fluoride (Method 300.0)	1.	U	mg/L		02/02/99	1.	EPA 300.0
Nitrate as N (EPA 300.0)	14.		mg/L		02/02/99	0.2	EPA 300.0
Sulfide, total	1.	U U	mg/L (10)	02/03/99	02/03/99	1.	EPA 376 1
Sulfate (SO4)	450.		mg/L		02/11/99	1.	EPA 300.0
Total Organic Carbon	5.8		mg/L	02/04/99	02/04/99	1.0	EPA 415.1

4/31/99

INORGANICS ANALYSIS DATA SHEET

Lab Name: Laucks Testing Labs Sample ID : 1710103
SDG No. : EL007 Lab Sample ID: 9902042-02
Matrix : WATER Date Received: 02/02/99

Analyte	Result		Units	Prepped	Analyzed	Limit	Method
Bicarb. Alkalinity, HCO3	260.	J	mg/L (SA)	02/04/99	02/04/99	2.	EPA 310 1mod
Carb. Alkalinity, CO3	2.	U U	mg/L	02/04/99	02/04/99	2.	EPA 310 1mod
Alkalinity, Total as CaCO3	260.	J	mg/L	02/04/99	02/04/99	2.	EPA 310.1mod
Chloride	110.		mg/L		02/11/99	1.	EPA 300.0
Iron, Ferrous, as Fe	0.72		mg/L	02/02/99	02/02/99	0.04	SM 3500 FE D
Iron, Ferric, as Fe	29.		mg/L			0.10	SM 3500 FE D
Fluoride (Method 300.0)	1.	U U	mg/L		02/02/99	1.	EPA 300.0
Nitrate as N (EPA 300.0)	6.1		mg/L		02/02/99	0.2	EPA 300.0
Sulfide, total	1.	U U	mg/L (10)	02/03/99	02/03/99	1.	EPA 376.1
Sulfate (SO4)	350.		mg/L		02/11/99	1.	EPA 300.0
Total Organic Carbon	3.4		mg/L	02/04/99	02/04/99	1.0	EPA 415.1

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MCAS EL TORO
SSIC # 5090.3

ROUND 10

GROUNDWATER MONITORING DATA SUMMARY REPORT 1999 MONITORING ROUNDS 9,10, AND 11

DATED 30 JUNE 2000

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: MCAS El Toro

Collection Date: April 26 through May 7, 1999

LDC Report Date: July 1, 1999

Matrix: Water

Parameters: Volatiles

Validation Level: Level III & IV

Laboratory: Laucks Testing Laboratories

Sample Delivery Group (SDG): EL010

Sample Identification

1710138**	1710159
1710139**	1710160
1710140**	1710161
1710141**	1710163
1710142	1710164
1710143	1710165
1710144	1710166
1710145	1710168
1710146	1710169
1710147	1710170
1710148	1710145MS
1710149	1710145MSD
1710150	
1710151	
1710152	
1710152DL	
1710154	
1710155	
1710156	
1710158	

**Indicates sample underwent Level IV review

Introduction

This data review covers 32 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8260B 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.

Samples indicated by a double asterisk on the front cover underwent a Level IV review. A Level III review was performed on all of the other samples. Raw data were not evaluated for the samples reviewed by Level III criteria since this review is 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

Instrument performance was checked at 12 hour intervals.

All ion abundance requirements were met.

III. Initial Calibration

Initial calibration was performed using required standard concentrations.

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

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

Date	Compound	RRF (Limits)	Associated Samples	Flag	A or P
3/3/99	Acetone 2-Butanone 2-Hexanone	0.012 (≥0.05) 0.019 (≥0.05) 0.039 (≥0.05)	All samples in SDG EL010	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% with the following exceptions:

Date	Compound	%D	Associated Samples	Flag	A or P
4/30/99	Dichlorodifluoromethane 2-Butanone	32.0 32.5	1710138** 1710139** 1710140** 1710141** 1710142 1710143 1710144 VBLKU1	J J	A

Date	Compound	%D	Associated Samples	Flag	A or P
5/4/99	Dichlorodifluoromethane	32.5	1710145 1710146 1710147 1710148 1710149 1710150 1710151 1710152 1710154 1710155 1710145MS 1710145MSD VBLKU2	J	A
5/13/99	2-Butanone	31.4	1710164 1710165 1710166 1710168 1710169 1710170 VBLKU5	J	A

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

Date	Compound	RRF (Limits)	Associated Samples	Flag	A or P
4/30/99	Acetone 2-Butanone 4-Methyl-2-pentanone 2-Hexanone	0.011 0.013 0.043 0.035	1710138** 1710139** 1710140** 1710141** 1710142 1710143 1710144 VBLKU1	J (all detects) R (all non-detects)	A
5/4/99	Acetone 2-Butanone 4-Methyl-2-pentanone 2-Hexanone	0.009 0.017 0.043 0.035	1710145 1710146 1710147 1710148 1710149 1710150 1710151 1710152 1710154 1710155 1710145MS 1710145MSD VBLKU2	J (all detects) R (all non-detects)	A
5/5/99	Acetone 2-Butanone 4-Methyl-2-pentanone 2-Hexanone	0.010 0.018 0.044 0.036	1710152DL 1710156 1710158 1710159 VBLKU3	J (all detects) R (all non-detects)	A

Date	Compound	RRF (Limits)	Associated Samples	Flag	A or P
5/7/99	Acetone 2-Butanone 4-Methyl-2-pentanone 2-Hexanone	0.009 0.015 0.042 0.036	1710160 1710161 1710163 VBLKU4	J (all detects) R (all non-detects)	A
5/13/99	Acetone 2-Butanone 4-Methyl-2-pentanone 2-Hexanone	0.009 0.013 0.040 0.035	1710164 1710165 1710166 1710168 1710169 1710170 VBLKU5	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
VBLKU2	5/4/99	Methylene chloride	0.5 ug/L	1710145 1710146 1710147 1710148 1710149 1710150 1710151 1710152 1710154 1710155
VBLKU3	5/5/99	Methylene chloride	0.4 ug/L	1710152DL 1710156 1710158 1710159
VBLKU4	5/7/99	Methylene chloride	0.4 ug/L	1710160 1710161 1710163
VBLKU5	5/13/99	Methylene chloride	0.2 ug/L	1710164 1710165 1710166 1710168 1710169 1710170

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
1710147	Methylene chloride	1.1 ug/L	1.1U ug/L
1710151	Methylene chloride	0.5 ug/L	1.0U ug/L
1710152DL	Methylene chloride	1.9 ug/L	5.0U ug/L
1710163	Methylene chloride	0.7 ug/L	1.0U ug/L
1710166	Methylene chloride	0.7 ug/L	1.0U ug/L
1710170	Methylene chloride	0.5 ug/L	1.0U 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 with the following exceptions:

Sample	Compound	Finding	Criteria	Flag	A or P
1710138** 1710139** 1710140** 1710141** 1710142 1710143 1710144 1710152DL 1710156 1710158 1710159 1710160 1710161 1710163 1710164 1710165 1710166 1710168 1710169 1710170	All TCL compounds	No MS/MSD associated with these samples.	MS/MSD required.	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. 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

All target compound identifications were within validation criteria for samples on which a Level IV review was performed. Raw data were not evaluated for the samples reviewed by Level III criteria.

XII. Compound Quantitation and CRQLs

All compound quantitation and CRQLs were within validation criteria for samples on which a Level IV review was performed with the following exceptions:

Sample	Compound	Finding	Criteria	Flag	A or P
1710152	Trichloroethene	Sample result exceeded calibration range.	Reported result should be within calibration range.	J (all detects)	A

Raw data were not evaluated for the samples reviewed by Level III criteria.

XIII. Tentatively Identified Compounds (TICs)

All tentatively identified compounds were within validation criteria for samples on which a Level IV review was performed. Raw data were not evaluated for the samples reviewed by Level III criteria.

XIV. System Performance

The system performance was within validation criteria for samples on which a Level IV review was performed. Raw data were not evaluated for the samples reviewed by Level III criteria.

XV. Overall Assessment of Data

The overall assessment of data was acceptable with the following exceptions:

Sample	Compound	Finding	Flag	A or P
1710152	Trichloroethene	For database purposés this compound was rejected.	R	A
1710152DL	All TCL compounds except Trichloroethene	For database purposes these compounds were rejected.	R	A

XVI. Field Duplicates

Samples 1710139** and 1710140** and samples were identified as field duplicates. No volatiles were detected in any of the samples.

XVII. Field Blanks

Samples 1710141**, 1710144, 1710147, 1710151, 1710155 , 1710159, 1710163, 1710166 and 1710170 were identified as trip blanks. No volatile contaminants were found in these blanks with the following exceptions:

Trip Blank ID	Compound	Concentration (ug/L)
1710141**	Methylene chloride	0.2
1710144	Methylene chloride	0.6
1710147	Acetone Methylene chloride	5.7 1.1
1710151	Acetone Methylene chloride	6.1 0.5
1710163	Methylene chloride	0.7
1710166	Methylene chloride	0.7
1710170	Acetone Methylene chloride	6.0 0.5

MCAS El Toro
Volatiles - Data Qualification Summary - SDG EL010

SDG	Sample	Compound	Flag	A or P	Reason
EL010	1710138** 1710139** 1710140** 1710141** 1710142 1710143 1710144 1710145 1710146 1710147 1710148 1710149 1710150 1710151 1710152 1710152DL 1710154 1710155 1710156 1710158 1710159 1710160 1710161 1710163 1710164 1710165 1710166 1710168 1710169 1710170	Acetone 2-Butanone 2-Hexanone	J (all detects) R (all non-detects)	A	Initial calibration (RRF)
EL010	1710138** 1710139** 1710140** 1710141** 1710142 1710143 1710144	Dichlorodifluoromethane 2-Butanone	J J	A	Continuing calibration (%D)
EL010	1710145 1710146 1710147 1710148 1710149 1710150 1710151 1710152 1710154 1710155	Dichlorodifluoromethane	J	A	Continuing calibration (%D)

SDG	Sample	Compound	Flag	A or P	Reason
EL010	1710164 1710165 1710166 1710168 1710169 1710170	2-Butanone	J	A	Continuing calibration (%D)
EL010	1710138** 1710139** 1710140** 1710141** 1710142 1710143 1710144 1710145 1710146 1710147 1710148 1710149 1710150 1710151 1710152 1710154 1710155 1710152DL 1710156 1710158 1710159 1710160 1710161 1710163 1710164 1710165 1710166 1710168 1710169 1710170	Acetone 2-Butanone 4-Methyl-2-pentanone 2-Hexanone	J (all detects) R (all non-detects)	A	Continuing calibration (RRF)
EL010	1710138** 1710139** 1710140** 1710141** 1710142 1710143 1710144 1710152DL 1710156 1710158 1710159 1710160 1710161 1710163 1710164 1710165 1710166 1710168 1710169 1710170	All TCL compounds	None	P	Matrix spike/Matrix spike duplicates

SDG	Sample	Compound	Flag	A or P	Reason
EL010	1710152	Trichloroethene	J (all detects)	A	Compound quantitation and CRQLs
EL010	1710152	Trichloroethene	R	A	Overall assessment of data
EL010	1710152DL	All TCL compounds except Trichloroethene	R	A	Overall assessment of data

MCAS El Toro
Volatiles - Laboratory Blank Data Qualification Summary - SDG EL010

SDG	Sample	Compound TIC (RT in minutes)	Modified Final Concentration	A or P
EL010	1710147	Methylene chloride	1.1U ug/L	A
EL010	1710151	Methylene chloride	1.0U ug/L	A
EL010	1710152DL	Methylene chloride	5.0U ug/L	A
EL010	1710163	Methylene chloride	1.0U ug/L	A
EL010	1710166	Methylene chloride	1.0U ug/L	A
EL010	1710170	Methylene chloride	1.0U ug/L	A

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

1710138

Lab Name: Laucks Testing Labs

SDG No.: EL010

Matrix: (soil/water) WATER

Lab Sample ID: 9904632-01

Sample wt/vol: 25.0 (g/ml) ML

Lab File ID: U0430014.D

Level: (low/med) LOW

Date Received: 04/27/99

% Moisture: not dec.

Date Analyzed: 04/30/99

GC Column: DB624 ID: 0.45 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NO.	COMPOUND		Q	
74-87-3	Chloromethane	1.0	U	U
75-01-4	Vinyl chloride	1.0	U	
74-83-9	Bromomethane	1.0	U	
75-00-3	Chloroethane	1.0	U	
75-35-4	1,1-Dichloroethene	1.0	U	
67-64-1	Acetone	5.0	U	R (SA,SB)
75-15-0	Carbon disulfide	1.0	U	
75-09-2	Methylene chloride	1.0	U	
156-60-5	trans-1,2-Dichloroethene	1.0	U	
75-34-3	1,1-Dichloroethane	1.0	U	
156-59-2	cis-1,2-Dichloroethene	1.0	U	
78-93-3	2-Butanone	5.0	U	R (SA,SB)
67-66-3	Chloroform	1.0	U	
71-55-6	1,1,1-Trichloroethane	1.0	U	
56-23-5	Carbon tetrachloride	1.0	U	
71-43-2	Benzene	1.0	U	
107-06-2	1,2-Dichloroethane	1.0	U	
79-01-6	Trichloroethene	1.0	U	
78-87-5	1,2-Dichloropropane	1.0	U	
75-27-4	Bromodichloromethane	1.0	U	
10061-01-5	cis-1,3-Dichloropropene	1.0	U	
108-10-1	4-Methyl-2-pentanone	5.0	U	R (SB)
108-88-3	Toluene	1.0	U	
10061-02-6	trans-1,3-Dichloropropene	1.0	U	
79-00-5	1,1,2-Trichloroethane	1.0	U	
127-18-4	Tetrachloroethene	1.0	U	
591-78-6	2-Hexanone	5.0	U	R (SA,SB)
124-48-1	Dibromochloromethane	1.0	U	
108-90-7	Chlorobenzene	1.0	U	
7816-60-0	m,p-Xylene	1.0	U	
95-47-6	o-Xylene	1.0	U	
100-42-5	Styrene	1.0	U	
75-25-2	Bromoform	1.0	U	
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	
75-71-8	Dichlorodifluoromethane	1.0	U	W (SB)
75-69-4	Trichlorofluoromethane	1.0	U	
100-41-4	Ethylbenzene	1.0	U	
541-73-1	1,3-Dichlorobenzene	1.0	U	

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

1710138

Lab Name: Laucks Testing Labs Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: EL010

Matrix: (soil/water) WATER Lab Sample ID: 9904632-01

Sample wt/vol: 25.0 (g/ml) ML Lab File ID: U0430014.D

Level: (low/med) LOW Date Received: 04/27/99

% Moisture: not dec. _____ Date Analyzed: 04/30/99

GC Column: DB624 ID: 0.45 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

17759

FORM I VOA-TIC

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

1710139

Lab Name: Laucks Testing Labs

SDG No.: EL010

Matrix: (soil/water) WATER

Lab Sample ID: 9904632-02

Sample wt/vol: 25.0 (g/ml) ML

Lab File ID: U0430015.D

Level: (low/med) LOW

Date Received: 04/27/99

% Moisture: not dec.

Date Analyzed: 04/30/99

GC Column: DB624 ID: 0.45 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q	
74-87-3	Chloromethane	1.0	U	U
75-01-4	Vinyl chloride	1.0	U	
74-83-9	Bromomethane	1.0	U	
75-00-3	Chloroethane	1.0	U	
75-35-4	1,1-Dichloroethene	1.0	U	
67-64-1	Acetone	5.0	U	R (5A, 5B)
75-15-0	Carbon disulfide	1.0	U	U
75-09-2	Methylene chloride	1.0	U	
156-60-5	trans-1,2-Dichloroethene	1.0	U	
75-34-3	1,1-Dichloroethane	1.0	U	
156-59-2	cis-1,2-Dichloroethene	1.0	U	
78-93-3	2-Butanone	5.0	U	R (5A, 5B)
67-66-3	Chloroform	1.0	U	U
71-55-6	1,1,1-Trichloroethane	1.0	U	
56-23-5	Carbon tetrachloride	1.0	U	
71-43-2	Benzene	1.0	U	
107-06-2	1,2-Dichloroethane	1.0	U	
79-01-6	Trichloroethene	1.0	U	
78-87-5	1,2-Dichloropropane	1.0	U	
75-27-4	Bromodichloromethane	1.0	U	
10061-01-5	cis-1,3-Dichloropropene	1.0	U	
108-10-1	4-Methyl-2-pentanone	5.0	U	R (5B)
108-88-3	Toluene	1.0	U	U
10061-02-6	trans-1,3-Dichloropropene	1.0	U	
79-00-5	1,1,2-Trichloroethane	1.0	U	
127-18-4	Tetrachloroethene	1.0	U	
591-78-6	2-Hexanone	5.0	U	R (5A, 5B)
124-48-1	Dibromochloromethane	1.0	U	U
108-90-7	Chlorobenzene	1.0	U	
7816-60-0	m,p-Xylene	1.0	U	
95-47-6	o-Xylene	1.0	U	
100-42-5	Styrene	1.0	U	
75-25-2	Bromoform	1.0	U	
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	
75-71-8	Dichlorodifluoromethane	1.0	U	UJ (5B)
75-69-4	Trichlorofluoromethane	1.0	U	U
100-41-4	Ethylbenzene	1.0	U	
541-73-1	1,3-Dichlorobenzene	1.0	U	

7/99

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FORM I VOA

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

1710139

Lab Name: Laucks Testing Labs Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: EL010

Matrix: (soil/water) WATER Lab Sample ID: 9904632-02

Sample wt/vol: 25.0 (g/ml) ML Lab File ID: U0430015.D

Level: (low/med) LOW Date Received: 04/27/99

% Moisture: not dec. _____ Date Analyzed: 04/30/99

GC Column: DB624 ID: 0.45 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

1799

304

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

1710140

Lab Name: Laucks Testing Labs

SDG No.: EL010

Matrix: (soil/water) WATER

Lab Sample ID: 9904632-03

Sample wt/vol: 25.0 (g/ml) ML

Lab File ID: U0430016.D

Level: (low/med) LOW

Date Received: 04/27/99

% Moisture: not dec.

Date Analyzed: 04/30/99

GC Column: DB624 ID: 0.45 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NO.	COMPOUND		Q	
74-87-3	Chloromethane	1.0	U	
75-01-4	Vinyl chloride	1.0	U	
74-83-9	Bromomethane	1.0	U	
75-00-3	Chloroethane	1.0	U	
75-35-4	1,1-Dichloroethene	1.0	U	R (5A,5B)
67-64-1	Acetone	5.0	U	
75-15-0	Carbon disulfide	1.0	U	
75-09-2	Methylene chloride	1.0	U	
156-60-5	trans-1,2-Dichloroethene	1.0	U	
75-34-3	1,1-Dichloroethane	1.0	U	
156-59-2	cis-1,2-Dichloroethene	1.0	U	
78-93-3	2-Butanone	5.0	U	R (5A,5B)
67-66-3	Chloroform	1.0	U	
71-55-6	1,1,1-Trichloroethane	1.0	U	
56-23-5	Carbon tetrachloride	1.0	U	
71-43-2	Benzene	1.0	U	
107-06-2	1,2-Dichloroethane	1.0	U	
79-01-6	Trichloroethene	1.0	U	
78-87-5	1,2-Dichloropropane	1.0	U	
75-27-4	Bromodichloromethane	1.0	U	
10061-01-5	cis-1,3-Dichloropropene	1.0	U	
108-10-1	4-Methyl-2-pentanone	5.0	U	R (5B)
108-88-3	Toluene	1.0	U	
10061-02-6	trans-1,3-Dichloropropene	1.0	U	
79-00-5	1,1,2-Trichloroethane	1.0	U	
127-18-4	Tetrachloroethene	1.0	U	
591-78-6	2-Hexanone	5.0	U	R (5A,5B)
124-48-1	Dibromochloromethane	1.0	U	
108-90-7	Chlorobenzene	1.0	U	
7816-60-0	m,p-Xylene	1.0	U	
95-47-6	o-Xylene	1.0	U	
100-42-5	Styrene	1.0	U	
75-25-2	Bromoform	1.0	U	
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	UJ (5B)
75-71-8	Dichlorodifluoromethane	1.0	U	
75-69-4	Trichlorofluoromethane	1.0	U	
100-41-4	Ethylbenzene	1.0	U	
541-73-1	1,3-Dichlorobenzene	1.0	U	

A 7/97

FORM I VOA

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

1710140

Lab Name: Laucks Testing Labs Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: EL010

Matrix: (soil/water) WATER Lab Sample ID: 9904632-03

Sample wt/vol: 25.0 (g/ml) ML Lab File ID: U0430016.D

Level: (low/med) LOW Date Received: 04/27/99

% Moisture: not dec. _____ Date Analyzed: 04/30/99

GC Column: DB624 ID: 0.45 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

1789

FORM I VOA-TIC

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

1710141

Lab Name: Laucks Testing Labs

SDG No.: EL010

Matrix: (soil/water) WATER

Lab Sample ID: 9904632-04

Sample wt/vol: 25.0 (g/ml) ML

Lab File ID: U0430010.D

Level: (low/med) LOW

Date Received: 04/27/99

% Moisture: not dec.

Date Analyzed: 04/30/99

GC Column: DB624 ID: 0.45 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NO.	COMPOUND		Q	
74-87-3	Chloromethane	1.0	U	U
75-01-4	Vinyl chloride	1.0	U	
74-83-9	Bromomethane	1.0	U	
75-00-3	Chloroethane	1.0	U	
75-35-4	1,1-Dichloroethene	1.0	U	
67-64-1	Acetone	5.0	U	R (5A 5B)
75-15-0	Carbon disulfide	1.0	U	U
75-09-2	Methylene chloride	0.2	J	J
156-60-5	trans-1,2-Dichloroethene	1.0	U	U
75-34-3	1,1-Dichloroethane	1.0	U	
156-59-2	cis-1,2-Dichloroethene	1.0	U	
78-93-3	2-Butanone	5.0	U	R (5A 5B)
67-66-3	Chloroform	1.0	U	U
71-55-6	1,1,1-Trichloroethane	1.0	U	
56-23-5	Carbon tetrachloride	1.0	U	
71-43-2	Benzene	1.0	U	
107-06-2	1,2-Dichloroethane	1.0	U	
79-01-6	Trichloroethene	1.0	U	
78-87-5	1,2-Dichloropropane	1.0	U	
75-27-4	Bromodichloromethane	1.0	U	
10061-01-5	cis-1,3-Dichloropropene	1.0	U	
108-10-1	4-Methyl-2-pentanone	5.0	U	R (5B)
108-88-3	Toluene	1.0	U	U
10061-02-6	trans-1,3-Dichloropropene	1.0	U	
79-00-5	1,1,2-Trichloroethane	1.0	U	
127-18-4	Tetrachloroethene	1.0	U	
591-78-6	2-Hexanone	5.0	U	R (5A 5B)
124-48-1	Dibromochloromethane	1.0	U	U
108-90-7	Chlorobenzene	1.0	U	
7816-60-0	m,p-Xylene	1.0	U	
95-47-6	o-Xylene	1.0	U	
100-42-5	Styrene	1.0	U	
75-25-2	Bromoform	1.0	U	
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	
75-71-8	Dichlorodifluoromethane	1.0	U	UJ (5B)
75-69-4	Trichlorofluoromethane	1.0	U	U
100-41-4	Ethylbenzene	1.0	U	
541-73-1	1,3-Dichlorobenzene	1.0	U	

-0789

FORM I VOA

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

1710141

Lab Name: Laucks Testing Labs Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: EL010

Matrix: (soil/water) WATER Lab Sample ID: 9904632-04

Sample wt/vol: 25.0 (g/ml) ML Lab File ID: U0430010.D

Level: (low/med) LOW Date Received: 04/27/99

% Moisture: not dec. _____ Date Analyzed: 04/30/99

GC Column: DB624 ID: 0.45 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

a 7899

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

1710142

Lab Name: Laucks Testing Labs

SDG No.: EL010

Matrix: (soil/water) WATER

Lab Sample ID: 9904648-01

Sample wt/vol: 25.0 (g/ml) ML

Lab File ID: U0430017.D

Level: (low/med) LOW

Date Received: 04/28/99

% Moisture: not dec.

Date Analyzed: 04/30/99

GC Column: DB624 ID: 0.45 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q	
74-87-3	Chloromethane	1.0	U	U
75-01-4	Vinyl chloride	1.0	U	
74-83-9	Bromomethane	1.0	U	
75-00-3	Chloroethane	1.0	U	
75-35-4	1,1-Dichloroethene	1.0	U	
67-64-1	Acetone	5.0	U	R (SA, SB)
75-15-0	Carbon disulfide	1.0	U	U
75-09-2	Methylene chloride	1.0	U	
156-60-5	trans-1,2-Dichloroethene	1.0	U	
75-34-3	1,1-Dichloroethane	1.0	U	
156-59-2	cis-1,2-Dichloroethene	1.0	U	
78-93-3	2-Butanone	5.0	U	R (SA, SB)
67-66-3	Chloroform	1.0	U	U
71-55-6	1,1,1-Trichloroethane	1.0	U	
56-23-5	Carbon tetrachloride	1.0	U	
71-43-2	Benzene	1.0	U	
107-06-2	1,2-Dichloroethane	1.0	U	
79-01-6	Trichloroethene	1.0	U	
78-87-5	1,2-Dichloropropane	1.0	U	
75-27-4	Bromodichloromethane	1.0	U	
10061-01-5	cis-1,3-Dichloropropene	1.0	U	
108-10-1	4-Methyl-2-pentanone	5.0	U	R (SB)
108-88-3	Toluene	1.0	U	U
10061-02-6	trans-1,3-Dichloropropene	1.0	U	
79-00-5	1,1,2-Trichloroethane	1.0	U	
127-18-4	Tetrachloroethene	9.3		
591-78-6	2-Hexanone	5.0	U	R (SA, SB)
124-48-1	Dibromochloromethane	1.0	U	U
108-90-7	Chlorobenzene	1.0	U	
7816-60-0	m,p-Xylene	1.0	U	
95-47-6	o-Xylene	1.0	U	
100-42-5	Styrene	1.0	U	
75-25-2	Bromoform	1.0	U	
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	
75-71-8	Dichlorodifluoromethane	0.4	J	J (SB)
75-69-4	Trichlorofluoromethane	1.0	U	U
100-41-4	Ethylbenzene	1.0	U	
541-73-1	1,3-Dichlorobenzene	1.0	U	

FORM I VOA

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

1710142

Lab Name: Laucks Testing Labs Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: EL010

Matrix: (soil/water) WATER Lab Sample ID: 9904648-01

Sample wt/vol: 25.0 (g/ml) ML Lab File ID: U0430017.D

Level: (low/med) LOW Date Received: 04/28/99

% Moisture: not dec. _____ Date Analyzed: 04/30/99

GC Column: DB624 ID: 0.45 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

u 7899

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

1710143

Lab Name: Laucks Testing Labs

SDG No.: EL010

Matrix: (soil/water) WATER

Lab Sample ID: 9904648-02

Sample wt/vol: 25.0 (g/ml) ML

Lab File ID: U0430018.D

Level: (low/med) LOW

Date Received: 04/28/99

% Moisture: not dec.

Date Analyzed: 04/30/99

GC Column: DB624 ID: 0.45 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NO.	COMPOUND		Q	
74-87-3	Chloromethane	1.0	U	U
75-01-4	Vinyl chloride	1.0	U	
74-83-9	Bromomethane	1.0	U	
75-00-3	Chloroethane	1.0	U	
75-35-4	1,1-Dichloroethene	1.0	U	
67-64-1	Acetone	5.0	U	R (5A,5B)
75-15-0	Carbon disulfide	1.0	U	U
75-09-2	Methylene chloride	1.0	U	
156-60-5	trans-1,2-Dichloroethene	1.0	U	
75-34-3	1,1-Dichloroethane	1.0	U	
156-59-2	cis-1,2-Dichloroethene	1.0	U	
78-93-3	2-Butanone	5.0	U	R (5A,5B)
67-66-3	Chloroform	1.0	U	U
71-55-6	1,1,1-Trichloroethane	1.0	U	
56-23-5	Carbon tetrachloride	1.0	U	
71-43-2	Benzene	1.0	U	
107-06-2	1,2-Dichloroethane	1.0	U	
79-01-6	Trichloroethene	0.5	J	U
78-87-5	1,2-Dichloropropane	1.0	U	
75-27-4	Bromodichloromethane	1.0	U	
10061-01-5	cis-1,3-Dichloropropene	1.0	U	
108-10-1	4-Methyl-2-pentanone	5.0	U	R (5B)
108-88-3	Toluene	1.0	U	U
10061-02-6	trans-1,3-Dichloropropene	1.0	U	
79-00-5	1,1,2-Trichloroethane	1.0	U	
127-18-4	Tetrachloroethene	6.0		
591-78-6	2-Hexanone	5.0	U	R (5A,5B)
124-48-1	Dibromochloromethane	1.0	U	U
108-90-7	Chlorobenzene	1.0	U	
7816-60-0	m,p-Xylene	1.0	U	
95-47-6	o-Xylene	1.0	U	
100-42-5	Styrene	1.0	U	
75-25-2	Bromoform	1.0	U	
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	
75-71-8	Dichlorodifluoromethane	1.0	U	UJ (5B)
75-69-4	Trichlorofluoromethane	1.0	U	U
100-41-4	Ethylbenzene	1.0	U	
541-73-1	1,3-Dichlorobenzene	1.0	U	

U 7/7/99

353

FORM I VOA

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

1710143

Lab Name: Laucks Testing Labs Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: EL010

Matrix: (soil/water) WATER Lab Sample ID: 9904648-02

Sample wt/vol: 25.0 (g/ml) ML Lab File ID: U0430018.D

Level: (low/med) LOW Date Received: 04/28/99

% Moisture: not dec. _____ Date Analyzed: 04/30/99

GC Column: DB624 ID: 0.45 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

a 7795

334

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

1710144

Lab Name: Laucks Testing Labs

SDG No.: EL010

Matrix: (soil/water) WATER

Lab Sample ID: 9904648-03

Sample wt/vol: 25.0 (g/ml) ML

Lab File ID: U0430011.D

Level: (low/med) LOW

Date Received: 04/28/99

% Moisture: not dec.

Date Analyzed: 04/30/99

GC Column: DB624 ID: 0.45 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NO.	COMPOUND		Q	
74-87-3	Chloromethane	1.0	U	U
75-01-4	Vinyl chloride	1.0	U	
74-83-9	Bromomethane	1.0	U	
75-00-3	Chloroethane	1.0	U	
75-35-4	1,1-Dichloroethene	1.0	U	R (5A, 5B)
67-64-1	Acetone	5.0	U	
75-15-0	Carbon disulfide	1.0	U	U
75-09-2	Methylene chloride	0.6	J	
156-60-5	trans-1,2-Dichloroethene	1.0	U	U
75-34-3	1,1-Dichloroethane	1.0	U	
156-59-2	cis-1,2-Dichloroethene	1.0	U	R (5A, 5B)
78-93-3	2-Butanone	5.0	U	
67-66-3	Chloroform	1.0	U	U
71-55-6	1,1,1-Trichloroethane	1.0	U	
56-23-5	Carbon tetrachloride	1.0	U	
71-43-2	Benzene	1.0	U	
107-06-2	1,2-Dichloroethane	1.0	U	
79-01-6	Trichloroethene	1.0	U	
78-87-5	1,2-Dichloropropane	1.0	U	
75-27-4	Bromodichloromethane	1.0	U	
10061-01-5	cis-1,3-Dichloropropene	1.0	U	R (5B)
108-10-1	4-Methyl-2-pentanone	5.0	U	
108-88-3	Toluene	1.0	U	U
10061-02-6	trans-1,3-Dichloropropene	1.0	U	
79-00-5	1,1,2-Trichloroethane	1.0	U	
127-18-4	Tetrachloroethene	1.0	U	
591-78-6	2-Hexanone	5.0	U	R (5A, 5B)
124-48-1	Dibromochloromethane	1.0	U	U
108-90-7	Chlorobenzene	1.0	U	
7816-60-0	m,p-Xylene	1.0	U	
95-47-6	o-Xylene	1.0	U	
100-42-5	Styrene	1.0	U	
75-25-2	Bromoform	1.0	U	
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	
75-71-8	Dichlorodifluoromethane	1.0	U	U (5B)
75-69-4	Trichlorofluoromethane	1.0	U	
100-41-4	Ethylbenzene	1.0	U	U
541-73-1	1,3-Dichlorobenzene	1.0	U	

U 7/8/99

FORM I VOA

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

1710144

Lab Name: Laucks Testing Labs Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: EL010

Matrix: (soil/water) WATER Lab Sample ID: 9904648-03

Sample wt/vol: 25.0 (g/ml) ML Lab File ID: U0430011.D

Level: (low/med) LOW Date Received: 04/28/99

% Moisture: not dec. _____ Date Analyzed: 04/30/99

GC Column: DB624 ID: 0.45 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

47299

FORM I VOA-TIC

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

1710145

Lab Name: Laucks Testing Labs

SDG No.: EL010

Matrix: (soil/water) WATER

Lab Sample ID: 9905017-01

Sample wt/vol: 25.0 (g/ml) ML

Lab File ID: U0504013.D

Level: (low/med) LOW

Date Received: 05/01/99

% Moisture: not dec.

Date Analyzed: 05/04/99

GC Column: DB624 ID: 0.45 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NO.	COMPOUND		Q	
74-87-3	Chloromethane	1.0	U	
75-01-4	Vinyl chloride	1.0	U	
74-83-9	Bromomethane	1.0	U	
75-00-3	Chloroethane	1.0	U	
75-35-4	1,1-Dichloroethene	1.0	U	
67-64-1	Acetone	5.0	U	R (SA,SB)
75-15-0	Carbon disulfide	1.0	U	
75-09-2	Methylene chloride	1.0	U	
156-60-5	trans-1,2-Dichloroethene	1.0	U	
75-34-3	1,1-Dichloroethane	1.0	U	
156-59-2	cis-1,2-Dichloroethene	1.0	U	
78-93-3	2-Butanone	5.0	U	R (SA,SB)
67-66-3	Chloroform	1.0	U	
71-55-6	1,1,1-Trichloroethane	1.0	U	
56-23-5	Carbon tetrachloride	1.0	U	
71-43-2	Benzene	1.0	U	
107-06-2	1,2-Dichloroethane	1.0	U	
79-01-6	Trichloroethene	1.0	U	
78-87-5	1,2-Dichloropropane	1.0	U	
75-27-4	Bromodichloromethane	1.0	U	
10061-01-5	cis-1,3-Dichloropropene	1.0	U	
108-10-1	4-Methyl-2-pentanone	5.0	U	R (SB)
108-88-3	Toluene	1.0	U	
10061-02-6	trans-1,3-Dichloropropene	1.0	U	
79-00-5	1,1,2-Trichloroethane	1.0	U	
127-18-4	Tetrachloroethene	1.0	U	
591-78-6	2-Hexanone	5.0	U	R (SA,SB)
124-48-1	Dibromochloromethane	1.0	U	
108-90-7	Chlorobenzene	1.0	U	
7816-60-0	m,p-Xylene	1.0	U	
95-47-6	o-Xylene	1.0	U	
100-42-5	Styrene	1.0	U	
75-25-2	Bromoform	1.0	U	
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	
75-71-8	Dichlorodifluoromethane	1.0	U	W (SB)
75-69-4	Trichlorofluoromethane	1.0	U	
100-41-4	Ethylbenzene	1.0	U	
541-73-1	1,3-Dichlorobenzene	1.0	U	

350

FORM I VOA

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

1710145

Lab Name: Laucks Testing Labs Contract:

Lab Code: Case No.: SAS No.: SDG No.: EL010

Matrix: (soil/water) WATER Lab Sample ID: 9905017-01

Sample wt/vol: 25.0 (g/ml) ML Lab File ID: U0504013.D

Level: (low/med) LOW Date Received: 05/01/99

% Moisture: not dec. Date Analyzed: 05/04/99

GC Column: DB624 ID: 0.45 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

1710146

Lab Name: Laucks Testing Labs

SDG No.: EL010

Matrix: (soil/water) WATER

Lab Sample ID: 9905017-02

Sample wt/vol: 25.0 (g/ml) ML

Lab File ID: U0504016.D

Level: (low/med) LOW

Date Received: 05/01/99

% Moisture: not dec.

Date Analyzed: 05/04/99

GC Column: DB624 ID: 0.45 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q	
74-87-3	Chloromethane	1.0	U	U
75-01-4	Vinyl chloride	1.0	U	
74-83-9	Bromomethane	1.0	U	
75-00-3	Chloroethane	1.0	U	
75-35-4	1,1-Dichloroethene	1.0	U	R(SA,SB)
67-64-1	Acetone	5.0	U	
75-15-0	Carbon disulfide	1.0	U	U
75-09-2	Methylene chloride	1.0	U	
156-60-5	trans-1,2-Dichloroethene	1.0	U	
75-34-3	1,1-Dichloroethane	1.0	U	
156-59-2	cis-1,2-Dichloroethene	0.4	J	J
78-93-3	2-Butanone	5.0	U	R(SA,SB)
67-66-3	Chloroform	1.0	U	U
71-55-6	1,1,1-Trichloroethane	1.0	U	
56-23-5	Carbon tetrachloride	1.0	U	
71-43-2	Benzene	1.0	U	
107-06-2	1,2-Dichloroethane	1.0	U	
79-01-6	Trichloroethene	1.0	U	
78-87-5	1,2-Dichloropropane	1.0	U	
75-27-4	Bromodichloromethane	1.0	U	
10061-01-5	cis-1,3-Dichloropropene	1.0	U	R(SB)
108-10-1	4-Methyl-2-pentanone	5.0	U	
108-88-3	Toluene	1.0	U	U
10061-02-6	trans-1,3-Dichloropropene	1.0	U	
79-00-5	1,1,2-Trichloroethane	1.0	U	
127-18-4	Tetrachloroethene	1.0	U	
591-78-6	2-Hexanone	5.0	U	R(SA,SB)
124-48-1	Dibromochloromethane	1.0	U	U
108-90-7	Chlorobenzene	0.6	J	
7816-60-0	m,p-Xylene	1.0	U	U
95-47-6	o-Xylene	1.0	U	
100-42-5	Styrene	1.0	U	
75-25-2	Bromoform	1.0	U	
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	
75-71-8	Dichlorodifluoromethane	0.5	J	J(SB)
75-69-4	Trichlorofluoromethane	1.0	U	U
100-41-4	Ethylbenzene	1.0	U	
541-73-1	1,3-Dichlorobenzene	1.0	U	

1789

FORM I VOA

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

1710146

Lab Name: Laucks Testing Labs Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: EL010

Matrix: (soil/water) WATER Lab Sample ID: 9905017-02

Sample wt/vol: 25.0 (g/ml) ML Lab File ID: U0504016.D

Level: (low/med) LOW Date Received: 05/01/99

% Moisture: not dec. _____ Date Analyzed: 05/04/99

GC Column: DB624 ID: 0.45 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/L

Number TICs found: 1

CAS NO.	COMPOUND	RT	EST. CONC.	Q
1. 000095-50-1	Benzene, 1,2-dichloro-	24.11	3.5	JN

NJ

0785

358

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

1710147

Lab Name: Laucks Testing Labs

SDG No.: EL010

Matrix: (soil/water) WATER

Lab Sample ID: 9905017-03

Sample wt/vol: 25.0 (g/ml) ML

Lab File ID: U0504010.D

Level: (low/med) LOW

Date Received: 05/01/99

% Moisture: not dec.

Date Analyzed: 05/04/99

GC Column: DB624 ID: 0.45 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q	
74-87-3	Chloromethane	1.0	U	U
75-01-4	Vinyl chloride	1.0	U	
74-83-9	Bromomethane	1.0	U	
75-00-3	Chloroethane	1.0	U	
75-35-4	1,1-Dichloroethene	1.0	U	J (SA,SB)
67-64-1	Acetone	5.7		
75-15-0	Carbon disulfide	1.0	U	U
75-09-2	Methylene chloride	1.1	B	U (7)
156-60-5	trans-1,2-Dichloroethene	1.0	U	
75-34-3	1,1-Dichloroethane	1.0	U	
156-59-2	cis-1,2-Dichloroethene	1.0	U	
78-93-3	2-Butanone	5.0	U	R (SA,SB)
67-66-3	Chloroform	1.0	U	U
71-55-6	1,1,1-Trichloroethane	1.0	U	
56-23-5	Carbon tetrachloride	1.0	U	
71-43-2	Benzene	1.0	U	
107-06-2	1,2-Dichloroethane	1.0	U	
79-01-6	Trichloroethene	1.0	U	
78-87-5	1,2-Dichloropropane	1.0	U	
75-27-4	Bromodichloromethane	1.0	U	
10061-01-5	cis-1,3-Dichloropropene	1.0	U	
108-10-1	4-Methyl-2-pentanone	5.0	U	R (SB)
108-88-3	Toluene	1.0	U	U
10061-02-6	trans-1,3-Dichloropropene	1.0	U	
79-00-5	1,1,2-Trichloroethane	1.0	U	
127-18-4	Tetrachloroethene	1.0	U	
591-78-6	2-Hexanone	5.0	U	R (SA,SB)
124-48-1	Dibromochloromethane	1.0	U	U
108-90-7	Chlorobenzene	1.0	U	
7816-60-0	m,p-Xylene	1.0	U	
95-47-6	o-Xylene	1.0	U	
100-42-5	Styrene	1.0	U	
75-25-2	Bromoform	1.0	U	
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	
75-71-8	Dichlorodifluoromethane	1.0	U	UN (SB)
75-69-4	Trichlorofluoromethane	1.0	U	U
100-41-4	Ethylbenzene	1.0	U	
541-73-1	1,3-Dichlorobenzene	1.0	U	

FORM I VOA

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

1710147

Lab Name: Laucks Testing Labs Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: EL010

Matrix: (soil/water) WATER Lab Sample ID: 9905017-03

Sample wt/vol: 25.0 (g/ml) ML Lab File ID: U0504010.D

Level: (low/med) LOW Date Received: 05/01/99

% Moisture: not dec. _____ Date Analyzed: 05/04/99

GC Column: DB624 ID: 0.45 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

371

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

1710148

Lab Name: Laucks Testing Labs

SDG No.: EL010

Matrix: (soil/water) WATER

Lab Sample ID: 9905019-01

Sample wt/vol: 25.0 (g/ml) ML

Lab File ID: U0504017.D

Level: (low/med) LOW

Date Received: 05/01/99

% Moisture: not dec.

Date Analyzed: 05/04/99

GC Column: DB624 ID: 0.45 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q	
74-87-3	Chloromethane	1.0	U	U
75-01-4	Vinyl chloride	1.0	U	
74-83-9	Bromomethane	1.0	U	
75-00-3	Chloroethane	1.0	U	
75-35-4	1,1-Dichloroethene	1.0	U	
67-64-1	Acetone	5.0	U	R (SA, SB)
75-15-0	Carbon disulfide	1.0	U	U
75-09-2	Methylene chloride	1.0	U	
156-60-5	trans-1,2-Dichloroethene	1.0	U	
75-34-3	1,1-Dichloroethane	1.0	U	
156-59-2	cis-1,2-Dichloroethene	1.0	U	
78-93-3	2-Butanone	5.0	U	R (SA, SB)
67-66-3	Chloroform	1.0	U	U
71-55-6	1,1,1-Trichloroethane	1.0	U	
56-23-5	Carbon tetrachloride	1.0	U	
71-43-2	Benzene	1.0	U	
107-06-2	1,2-Dichloroethane	1.0	U	
79-01-6	Trichloroethene	1.0	U	
78-87-5	1,2-Dichloropropane	1.0	U	
75-27-4	Bromodichloromethane	1.0	U	
10061-01-5	cis-1,3-Dichloropropene	1.0	U	
108-10-1	4-Methyl-2-pentanone	5.0	U	R (SB)
108-88-3	Toluene	1.0	U	U
10061-02-6	trans-1,3-Dichloropropene	1.0	U	
79-00-5	1,1,2-Trichloroethane	1.0	U	
127-18-4	Tetrachloroethene	1.0	U	
591-78-6	2-Hexanone	5.0	U	R (SA, SB)
124-48-1	Dibromochloromethane	1.0	U	U
108-90-7	Chlorobenzene	1.0	U	
7816-60-0	m,p-Xylene	1.0	U	
95-47-6	o-Xylene	1.0	U	
100-42-5	Styrene	1.0	U	
75-25-2	Bromoform	1.0	U	
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	
75-71-8	Dichlorodifluoromethane	1.0	U	U (SB)
75-69-4	Trichlorofluoromethane	1.0	U	U
100-41-4	Ethylbenzene	1.0	U	
541-73-1	1,3-Dichlorobenzene	1.0	U	

17899

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

1710148

Lab Name: Laucks Testing Labs Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: EL010

Matrix: (soil/water) WATER Lab Sample ID: 9905019-01

Sample wt/vol: 25.0 (g/ml) ML Lab File ID: U0504017.D

Level: (low/med) LOW Date Received: 05/01/99

% Moisture: not dec. _____ Date Analyzed: 05/04/99

GC Column: DB624 ID: 0.45 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

379

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

1710149

Lab Name: Laucks Testing Labs

SDG No.: EL010

Matrix: (soil/water) WATER

Lab Sample ID: 9905019-02

Sample wt/vol: 25.0 (g/ml) ML

Lab File ID: U0504018.D

Level: (low/med) LOW

Date Received: 05/01/99

% Moisture: not dec.

Date Analyzed: 05/04/99

GC Column: DB624 ID: 0.45 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND (ug/L or ug/Kg)	UG/L	Q	
74-87-3	Chloromethane	1.0	U	U
75-01-4	Vinyl chloride	1.0	U	
74-83-9	Bromomethane	1.0	U	
75-00-3	Chloroethane	1.0	U	
75-35-4	1,1-Dichloroethene	1.0	U	
67-64-1	Acetone	5.0	U	R (5A, 5B)
75-15-0	Carbon disulfide	1.0	U	U
75-09-2	Methylene chloride	1.0	U	
156-60-5	trans-1,2-Dichloroethene	1.0	U	
75-34-3	1,1-Dichloroethane	1.0	U	
156-59-2	cis-1,2-Dichloroethene	1.0	U	
78-93-3	2-Butanone	5.0	U	R (5A, 5B)
67-66-3	Chloroform	1.0	U	U
71-55-6	1,1,1-Trichloroethane	1.0	U	
56-23-5	Carbon tetrachloride	1.0	U	
71-43-2	Benzene	1.0	U	
107-06-2	1,2-Dichloroethane	1.0	U	
79-01-6	Trichloroethene	1.0	U	
78-87-5	1,2-Dichloropropane	1.0	U	
75-27-4	Bromodichloromethane	1.0	U	
10061-01-5	cis-1,3-Dichloropropene	1.0	U	
108-10-1	4-Methyl-2-pentanone	5.0	U	R (5B)
108-88-3	Toluene	1.0	U	U
10061-02-6	trans-1,3-Dichloropropene	1.0	U	
79-00-5	1,1,2-Trichloroethane	1.0	U	
127-18-4	Tetrachloroethene	1.0	U	
591-78-6	2-Hexanone	5.0	U	R (5A, 5B)
124-48-1	Dibromochloromethane	1.0	U	U
108-90-7	Chlorobenzene	1.0	U	
7816-60-0	m,p-Xylene	1.0	U	
95-47-6	o-Xylene	1.0	U	
100-42-5	Styrene	1.0	U	
75-25-2	Bromoform	1.0	U	
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	
75-71-8	Dichlorodifluoromethane	1.0	U	U (5B)
75-69-4	Trichlorofluoromethane	1.0	U	U
100-41-4	Ethylbenzene	1.0	U	
541-73-1	1,3-Dichlorobenzene	1.0	U	

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

1710149

Lab Name: Laucks Testing Labs Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: EL010

Matrix: (soil/water) WATER Lab Sample ID: 9905019-02

Sample wt/vol: 25.0 (g/ml) ML Lab File ID: U0504018.D

Level: (low/med) LOW Date Received: 05/01/99

% Moisture: not dec. _____ Date Analyzed: 05/04/99

GC Column: DB624 ID: 0.45 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

386

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

1710150

Lab Name: Laucks Testing Labs

SDG No.: EL010

Matrix: (soil/water) WATER

Lab Sample ID: 9905019-03

Sample wt/vol: 25.0 (g/ml) ML

Lab File ID: U0504019.D

Level: (low/med) LOW

Date Received: 05/01/99

% Moisture: not dec.

Date Analyzed: 05/04/99

GC Column: DB624 ID: 0.45 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q	
74-87-3	Chloromethane	1.0	U	U
75-01-4	Vinyl chloride	1.0	U	
74-83-9	Bromomethane	1.0	U	
75-00-3	Chloroethane	1.0	U	
75-35-4	1,1-Dichloroethene	1.0	U	
67-64-1	Acetone	5.0	U	R (SA, SB)
75-15-0	Carbon disulfide	1.0	U	U
75-09-2	Methylene chloride	1.0	U	
156-60-5	trans-1,2-Dichloroethene	1.0	U	
75-34-3	1,1-Dichloroethane	1.0	U	
156-59-2	cis-1,2-Dichloroethene	1.0	U	
78-93-3	2-Butanone	5.0	U	R (SA, SB)
67-66-3	Chloroform	1.0	U	U
71-55-6	1,1,1-Trichloroethane	1.0	U	
56-23-5	Carbon tetrachloride	1.0	U	
71-43-2	Benzene	1.0	U	
107-06-2	1,2-Dichloroethane	1.0	U	
79-01-6	Trichloroethene	1.0	U	
78-87-5	1,2-Dichloropropane	1.0	U	
75-27-4	Bromodichloromethane	1.0	U	
10061-01-5	cis-1,3-Dichloropropene	1.0	U	
108-10-1	4-Methyl-2-pentanone	5.0	U	R (SB)
108-88-3	Toluene	1.0	U	U
10061-02-6	trans-1,3-Dichloropropene	1.0	U	
79-00-5	1,1,2-Trichloroethane	1.0	U	
127-18-4	Tetrachloroethene	1.0	U	
591-78-6	2-Hexanone	5.0	U	R (SA, SB)
124-48-1	Dibromochloromethane	1.0	U	U
108-90-7	Chlorobenzene	1.0	U	
7816-60-0	m,p-Xylene	1.0	U	
95-47-6	o-Xylene	1.0	U	
100-42-5	Styrene	1.0	U	
75-25-2	Bromoform	1.0	U	
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	
75-71-8	Dichlorodifluoromethane	1.0	U	U (SB)
75-69-4	Trichlorofluoromethane	1.0	U	U
100-41-4	Ethylbenzene	1.0	U	
541-73-1	1,3-Dichlorobenzene	1.0	U	

W7899

FORM I VOA

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

1710150

Lab Name: Laucks Testing Labs Contract:

Lab Code: Case No.: SAS No.: SDG No.: EL010

Matrix: (soil/water) WATER Lab Sample ID: 9905019-03

Sample wt/vol: 25.0 (g/ml) ML Lab File ID: U0504019.D

Level: (low/med) LOW Date Received: 05/01/99

% Moisture: not dec. Date Analyzed: 05/04/99

GC Column: DB624 ID: 0.45 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

u 7897

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

1710151

Lab Name: Laucks Testing Labs

SDG No.: EL010

Matrix: (soil/water) WATER

Lab Sample ID: 9905019-04

Sample wt/vol: 25.0 (g/ml) ML

Lab File ID: U0504011.D

Level: (low/med) LOW

Date Received: 05/01/99

% Moisture: not dec.

Date Analyzed: 05/04/99

GC Column: DB624 ID: 0.45 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NO.	COMPOUND		Q	
74-87-3	Chloromethane	1.0	U	U
75-01-4	Vinyl chloride	1.0	U	
74-83-9	Bromomethane	1.0	U	
75-00-3	Chloroethane	1.0	U	
75-35-4	1,1-Dichloroethene	1.0	U	
67-64-1	Acetone	6.1		J (SA,SB)
75-15-0	Carbon disulfide	1.0	U	U
75-09-2	Methylene chloride	0.5	JB	U (7)
156-60-5	trans-1,2-Dichloroethene	1.0	U	U
75-34-3	1,1-Dichloroethane	1.0	U	
156-59-2	cis-1,2-Dichloroethene	1.0	U	
78-93-3	2-Butanone	5.0	U	R (SA,SB)
67-66-3	Chloroform	1.0	U	U
71-55-6	1,1,1-Trichloroethane	1.0	U	
56-23-5	Carbon tetrachloride	1.0	U	
71-43-2	Benzene	1.0	U	
107-06-2	1,2-Dichloroethane	1.0	U	
79-01-6	Trichloroethene	1.0	U	
78-87-5	1,2-Dichloropropane	1.0	U	
75-27-4	Bromodichloromethane	1.0	U	
10061-01-5	cis-1,3-Dichloropropene	1.0	U	
108-10-1	4-Methyl-2-pentanone	5.0	U	R (SB)
108-88-3	Toluene	1.0	U	U
10061-02-6	trans-1,3-Dichloropropene	1.0	U	
79-00-5	1,1,2-Trichloroethane	1.0	U	
127-18-4	Tetrachloroethene	1.0	U	
591-78-6	2-Hexanone	5.0	U	R (SA,SB)
124-48-1	Dibromochloromethane	1.0	U	U
108-90-7	Chlorobenzene	1.0	U	
7816-60-0	m,p-Xylene	1.0	U	
95-47-6	o-Xylene	1.0	U	
100-42-5	Styrene	1.0	U	
75-25-2	Bromoform	1.0	U	
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	
75-71-8	Dichlorodifluoromethane	1.0	U	U (SB)
75-69-4	Trichlorofluoromethane	1.0	U	U
100-41-4	Ethylbenzene	1.0	U	
541-73-1	1,3-Dichlorobenzene	1.0	U	

FORM I VOA

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

1710151

Lab Name: Laucks Testing Labs Contract:

Lab Code: Case No.: SAS No.: SDG No.: EL010

Matrix: (soil/water) WATER Lab Sample ID: 9905019-04

Sample wt/vol: 25.0 (g/ml) ML Lab File ID: U0504011.D

Level: (low/med) LOW Date Received: 05/01/99

% Moisture: not dec. Date Analyzed: 05/04/99

GC Column: DB624 ID: 0.45 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/L

Number TICs found: 1

CAS NO.	COMPOUND	RT	EST. CONC.	Q
1. 001066-40-6	Silanol, trimethyl-	9.14	1.4	JN

NJ

a7289

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

1710152

Lab Name: Laucks Testing Labs

SDG No.: EL010

Matrix: (soil/water) WATER

Lab Sample ID: 9905058-01

Sample wt/vol: 25.0 (g/ml) ML

Lab File ID: U0504020.D

Level: (low/med) LOW

Date Received: 05/04/99

% Moisture: not dec.

Date Analyzed: 05/04/99

GC Column: DB624 ID: 0.45 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NO.	COMPOUND		Q	
74-87-3	Chloromethane	1.0	U	U
75-01-4	Vinyl chloride	1.0	U	
74-83-9	Bromomethane	1.0	U	
75-00-3	Chloroethane	1.0	U	
75-35-4	1,1-Dichloroethene	1.0	U	
67-64-1	Acetone	5.0	U	R (SA,SB)
75-15-0	Carbon disulfide	1.0	U	U
75-09-2	Methylene chloride	1.0	U	U
156-60-5	trans-1,2-Dichloroethene	2.0		
75-34-3	1,1-Dichloroethane	1.0	U	U
156-59-2	cis-1,2-Dichloroethene	13		
78-93-3	2-Butanone	5.0	U	R (SA,SB)
67-66-3	Chloroform	16		
71-55-6	1,1,1-Trichloroethane	1.0	U	U
56-23-5	Carbon tetrachloride	1.0	U	
71-43-2	Benzene	1.0	U	
107-06-2	1,2-Dichloroethane	1.5		
79-01-6	Trichloroethene	130	E	R (14)
78-87-5	1,2-Dichloropropane	0.2	J	J
75-27-4	Bromodichloromethane	1.0	U	U
10061-01-5	cis-1,3-Dichloropropene	1.0	U	U
108-10-1	4-Methyl-2-pentanone	5.0	U	R (SB)
108-88-3	Toluene	1.0	U	U
10061-02-6	trans-1,3-Dichloropropene	1.0	U	U
79-00-5	1,1,2-Trichloroethane	5.0		
127-18-4	Tetrachloroethene	4.4		
591-78-6	2-Hexanone	5.0	U	R (SA,SB)
124-48-1	Dibromochloromethane	1.0	U	U
108-90-7	Chlorobenzene	1.0	U	
7816-60-0	m,p-Xylene	1.0	U	
95-47-6	o-Xylene	1.0	U	
100-42-5	Styrene	1.0	U	
75-25-2	Bromoform	1.0	U	
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	
75-71-8	Dichlorodifluoromethane	1.0	U	UJ (SB)
75-69-4	Trichlorofluoromethane	1.0	U	U
100-41-4	Ethylbenzene	1.0	U	
541-73-1	1,3-Dichlorobenzene	1.0	U	

FORM I VOA

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

1710152

Lab Name: Laucks Testing Labs Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: EL010

Matrix: (soil/water) WATER Lab.Sample ID: 9905058-01

Sample wt/vol: 25.0 (g/ml) ML Lab File ID: U0504020.D

Level: (low/med) LOW Date Received: 05/04/99

% Moisture: not dec. _____ Date Analyzed: 05/04/99

GC Column: DB624 ID: 0.45 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

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SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

1710152DL

Lab Name: Laucks Testing Labs

SDG No.: EL010

Matrix: (soil/water) WATER

Lab Sample ID: 9905058-01DL

Sample wt/vol: 25.0 (g/ml) ML

Lab File ID: U0505011.D

Level: (low/med) LOW

Date Received: 05/04/99

% Moisture: not dec.

Date Analyzed: 05/05/99

GC Column: DB624 ID: 0.45 (mm)

Dilution Factor: 5.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NO.	COMPOUND		Q
74-87-3	Chloromethane	5.0	U
75-01-4	Vinyl chloride	5.0	U
74-83-9	Bromomethane	5.0	U
75-00-3	Chloroethane	5.0	U
75-35-4	1,1-Dichloroethene	5.0	U
67-64-1	Acetone	25	U
75-15-0	Carbon disulfide	5.0	U
75-09-2	Methylene chloride	1.9	JBD
156-60-5	trans-1,2-Dichloroethene	1.9	JD
75-34-3	1,1-Dichloroethane	5.0	U
156-59-2	cis-1,2-Dichloroethene	12	D
78-93-3	2-Butanone	25	U
67-66-3	Chloroform	15	D
71-55-6	1,1,1-Trichloroethane	5.0	U
56-23-5	Carbon tetrachloride	5.0	U
71-43-2	Benzene	5.0	U
107-06-2	1,2-Dichloroethane	1.3	JD
79-01-6	Trichloroethene	130	D
78-87-5	1,2-Dichloropropane	5.0	U
75-27-4	Bromodichloromethane	5.0	U
10061-01-5	cis-1,3-Dichloropropene	5.0	U
108-10-1	4-Methyl-2-pentanone	25	U
108-88-3	Toluene	5.0	U
10061-02-6	trans-1,3-Dichloropropene	5.0	U
79-00-5	1,1,2-Trichloroethane	4.5	JD
127-18-4	Tetrachloroethene	4.1	JD
591-78-6	2-Hexanone	25	U
124-48-1	Dibromochloromethane	5.0	U
108-90-7	Chlorobenzene	5.0	U
7816-60-0	m,p-Xylene	5.0	U
95-47-6	o-Xylene	5.0	U
100-42-5	Styrene	5.0	U
75-25-2	Bromoform	5.0	U
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U
75-71-8	Dichlorodifluoromethane	5.0	U
75-69-4	Trichlorofluoromethane	5.0	U
100-41-4	Ethylbenzene	5.0	U
541-73-1	1,3-Dichlorobenzene	5.0	U

R(14)

R(14)

FORM I VOA

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

1710154

Lab Name: Laucks Testing Labs

SDG No.: EL010

Matrix: (soil/water) WATER

Lab Sample ID: 9905058-02

Sample wt/vol: 25.0 (g/ml) ML

Lab File ID: U0504021.D

Level: (low/med) LOW

Date Received: 05/04/99

% Moisture: not dec.

Date Analyzed: 05/04/99

GC Column: DB624 ID: 0.45 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NO.	COMPOUND		Q	
74-87-3	Chloromethane	1.0	U	U
75-01-4	Vinyl chloride	1.0	U	
74-83-9	Bromomethane	1.0	U	
75-00-3	Chloroethane	1.0	U	
75-35-4	1,1-Dichloroethene	1.0	U	
67-64-1	Acetone	5.0	U	R (5A, 5B)
75-15-0	Carbon disulfide	1.0	U	U
75-09-2	Methylene chloride	1.0	U	
156-60-5	trans-1,2-Dichloroethene	1.0	U	
75-34-3	1,1-Dichloroethane	1.0	U	
156-59-2	cis-1,2-Dichloroethene	1.0	U	
78-93-3	2-Butanone	5.0	U	R (5A, 5B)
67-66-3	Chloroform	1.0	U	U
71-55-6	1,1,1-Trichloroethane	1.0	U	
56-23-5	Carbon tetrachloride	1.0	U	
71-43-2	Benzene	1.0	U	
107-06-2	1,2-Dichloroethane	1.0	U	
79-01-6	Trichloroethene	1.0	U	
78-87-5	1,2-Dichloropropane	1.0	U	
75-27-4	Bromodichloromethane	1.0	U	
10061-01-5	cis-1,3-Dichloropropene	1.0	U	
108-10-1	4-Methyl-2-pentanone	5.0	U	R (5B)
108-88-3	Toluene	1.0	U	U
10061-02-6	trans-1,3-Dichloropropene	1.0	U	
79-00-5	1,1,2-Trichloroethane	1.0	U	
127-18-4	Tetrachloroethene	1.0	U	
591-78-6	2-Hexanone	5.0	U	R (5A, 5B)
124-48-1	Dibromochloromethane	1.0	U	U
108-90-7	Chlorobenzene	1.0	U	
7816-60-0	m,p-Xylene	1.0	U	
95-47-6	o-Xylene	1.0	U	
100-42-5	Styrene	1.0	U	
75-25-2	Bromoform	1.0	U	
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	
75-71-8	Dichlorodifluoromethane	1.0	U	UJ (5B)
75-69-4	Trichlorofluoromethane	1.0	U	U
100-41-4	Ethylbenzene	1.0	U	
541-73-1	1,3-Dichlorobenzene	1.0	U	

U 429

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

1710154

Lab Name: Laucks Testing Labs Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: EL010

Matrix: (soil/water) WATER Lab Sample ID: 9905058-02

Sample wt/vol: 25.0 (g/ml) ML Lab File ID: U0504021.D

Level: (low/med) LOW Date Received: 05/04/99

% Moisture: not dec. _____ Date Analyzed: 05/04/99

GC Column: DB624 ID: 0.45 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

4799

430

FORM I VOA-TIC

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

1710155

Lab Name: Laucks Testing Labs

SDG No.: EL010

Matrix: (soil/water) WATER

Lab Sample ID: 9905058-03

Sample wt/vol: 25.0 (g/ml) ML

Lab File ID: U0504012.D

Level: (low/med) LOW

Date Received: 05/04/99

% Moisture: not dec. _____

Date Analyzed: 05/04/99

GC Column: DB624 ID: 0.45 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q	
74-87-3	Chloromethane	1.0	U	
75-01-4	Vinyl chloride	1.0	U	
74-83-9	Bromomethane	1.0	U	
75-00-3	Chloroethane	1.0	U	
75-35-4	1,1-Dichloroethene	1.0	U	R (SA, SB)
67-64-1	Acetone	5.0	U	
75-15-0	Carbon disulfide	1.0	U	
75-09-2	Methylene chloride	1.0	U	
156-60-5	trans-1,2-Dichloroethene	1.0	U	
75-34-3	1,1-Dichloroethane	1.0	U	
156-59-2	cis-1,2-Dichloroethene	1.0	U	R (SA, SB)
78-93-3	2-Butanone	5.0	U	
67-66-3	Chloroform	1.0	U	
71-55-6	1,1,1-Trichloroethane	1.0	U	
56-23-5	Carbon tetrachloride	1.0	U	
71-43-2	Benzene	1.0	U	
107-06-2	1,2-Dichloroethane	1.0	U	
79-01-6	Trichloroethene	1.0	U	
78-87-5	1,2-Dichloropropane	1.0	U	
75-27-4	Bromodichloromethane	1.0	U	
10061-01-5	cis-1,3-Dichloropropene	1.0	U	
108-10-1	4-Methyl-2-pentanone	5.0	U	R (SB)
108-88-3	Toluene	1.0	U	
10061-02-6	trans-1,3-Dichloropropene	1.0	U	
79-00-5	1,1,2-Trichloroethane	1.0	U	
127-18-4	Tetrachloroethene	1.0	U	
591-78-6	2-Hexanone	5.0	U	R (SA, SB)
124-48-1	Dibromochloromethane	1.0	U	
108-90-7	Chlorobenzene	1.0	U	
7816-60-0	m,p-Xylene	1.0	U	
95-47-6	o-Xylene	1.0	U	
100-42-5	Styrene	1.0	U	
75-25-2	Bromoform	1.0	U	
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	W (SB)
75-71-8	Dichlorodifluoromethane	1.0	U	
75-69-4	Trichlorofluoromethane	1.0	U	
100-41-4	Ethylbenzene	1.0	U	
541-73-1	1,3-Dichlorobenzene	1.0	U	

4/7/99

FORM I VOA

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

1710155

Lab Name: Laucks Testing Labs Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: EL010

Matrix: (soil/water) WATER Lab Sample ID: 9905058-03

Sample wt/vol: 25.0 (g/ml) ML Lab File ID: U0504012.D

Level: (low/med) LOW Date Received: 05/04/99

% Moisture: not dec. _____ Date Analyzed: 05/04/99

GC Column: DB624 ID: 0.45 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

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SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

1710156

Lab Name: Laucks Testing Labs

SDG No.: EL010

Matrix: (soil/water) WATER

Lab Sample ID: 9905097-01

Sample wt/vol: 25.0 (g/ml) ML

Lab File ID: U0505023.D

Level: (low/med) LOW

Date Received: 05/05/99

% Moisture: not dec.

Date Analyzed: 05/05/99

GC Column: DB624 ID: 0.45 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NO.	COMPOUND		Q	
74-87-3	Chloromethane	1.0	U	U
75-01-4	Vinyl chloride	1.0	U	
74-83-9	Bromomethane	1.0	U	
75-00-3	Chloroethane	1.0	U	
75-35-4	1,1-Dichloroethene	1.0	U	
67-64-1	Acetone	5.0	U	R(SA,SB)
75-15-0	Carbon disulfide	1.0	U	U
75-09-2	Methylene chloride	1.0	U	
156-60-5	trans-1,2-Dichloroethene	1.0	U	
75-34-3	1,1-Dichloroethane	1.0	U	
156-59-2	cis-1,2-Dichloroethene	1.0	U	
78-93-3	2-Butanone	5.0	U	R(SA,SB)
67-66-3	Chloroform	1.0	U	U
71-55-6	1,1,1-Trichloroethane	1.0	U	
56-23-5	Carbon tetrachloride	1.0	U	
71-43-2	Benzene	1.0	U	
107-06-2	1,2-Dichloroethane	1.0	U	
79-01-6	Trichloroethene	1.0	U	
78-87-5	1,2-Dichloropropane	1.0	U	
75-27-4	Bromodichloromethane	1.0	U	
10061-01-5	cis-1,3-Dichloropropene	1.0	U	
108-10-1	4-Methyl-2-pentanone	5.0	U	R(SB)
108-88-3	Toluene	1.0	U	U
10061-02-6	trans-1,3-Dichloropropene	1.0	U	
79-00-5	1,1,2-Trichloroethane	1.0	U	
127-18-4	Tetrachloroethene	1.0	U	
591-78-6	2-Hexanone	5.0	U	R(SA,SB)
124-48-1	Dibromochloromethane	1.0	U	U
108-90-7	Chlorobenzene	1.0	U	
7816-60-0	m,p-Xylene	1.0	U	
95-47-6	o-Xylene	1.0	U	
100-42-5	Styrene	1.0	U	
75-25-2	Bromoform	1.0	U	
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	
75-71-8	Dichlorodifluoromethane	1.0	U	
75-69-4	Trichlorofluoromethane	1.0	U	
100-41-4	Ethylbenzene	1.0	U	
541-73-1	1,3-Dichlorobenzene	1.0	U	

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

1710156

Lab Name: Laucks Testing Labs Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: EL010

Matrix: (soil/water) WATER Lab Sample ID: 9905097-01

Sample wt/vol: 25.0 (g/ml) ML Lab File ID: U0505023.D

Level: (low/med) LOW Date Received: 05/05/99

% Moisture: not dec. _____ Date Analyzed: 05/05/99

GC Column: DB624 ID: 0.45 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

FORM I VOA-TIC

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

1710158

Lab Name: Laucks Testing Labs

SDG No.: EL010

Matrix: (soil/water) WATER

Lab Sample ID: 9905097-03

Sample wt/vol: 25.0 (g/ml) ML

Lab File ID: U0505024.D

Level: (low/med) LOW

Date Received: 05/05/99

% Moisture: not dec. _____

Date Analyzed: 05/05/99

GC Column: DB624 ID: 0.45 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NO.	COMPOUND		Q	
74-87-3	Chloromethane	1.0	U	U
75-01-4	Vinyl chloride	1.0	U	
74-83-9	Bromomethane	1.0	U	
75-00-3	Chloroethane	1.0	U	
75-35-4	1,1-Dichloroethene	1.0	U	
67-64-1	Acetone	5.0	U	R (5A, 5B)
75-15-0	Carbon disulfide	1.0	U	U
75-09-2	Methylene chloride	1.0	U	
156-60-5	trans-1,2-Dichloroethene	1.0	U	
75-34-3	1,1-Dichloroethane	1.0	U	
156-59-2	cis-1,2-Dichloroethene	1.0	U	
78-93-3	2-Butanone	5.0	U	R (5A, 5B)
67-66-3	Chloroform	1.0	U	U
71-55-6	1,1,1-Trichloroethane	1.0	U	
56-23-5	Carbon tetrachloride	1.0	U	
71-43-2	Benzene	1.0	U	
107-06-2	1,2-Dichloroethane	1.0	U	
79-01-6	Trichloroethene	1.0	U	
78-87-5	1,2-Dichloropropane	1.0	U	
75-27-4	Bromodichloromethane	1.0	U	
10061-01-5	cis-1,3-Dichloropropene	1.0	U	
108-10-1	4-Methyl-2-pentanone	5.0	U	R (5B)
108-88-3	Toluene	1.0	U	U
10061-02-6	trans-1,3-Dichloropropene	1.0	U	
79-00-5	1,1,2-Trichloroethane	1.0	U	
127-18-4	Tetrachloroethene	0.3	J	
591-78-6	2-Hexanone	5.0	U	R (5A, 5B)
124-48-1	Dibromochloromethane	1.0	U	U
108-90-7	Chlorobenzene	1.0	U	
7816-60-0	m,p-Xylene	1.0	U	
95-47-6	o-Xylene	1.0	U	
100-42-5	Styrene	1.0	U	
75-25-2	Bromoform	1.0	U	
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	
75-71-8	Dichlorodifluoromethane	1.0	U	
75-69-4	Trichlorofluoromethane	1.0	U	
100-41-4	Ethylbenzene	1.0	U	
541-73-1	1,3-Dichlorobenzene	1.0	U	

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

1710158

Lab Name: Laucks Testing Labs Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: EL010

Matrix: (soil/water) WATER Lab Sample ID: 9905097-03

Sample wt/vol: 25.0 (g/ml) ML Lab File ID: U0505024.D

Level: (low/med) LOW Date Received: 05/05/99

% Moisture: not dec. _____ Date Analyzed: 05/05/99

GC Column: DB624 ID: 0.45 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

FORM I VOA-TIC

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

1710159

Lab Name: Laucks Testing Labs

SDG No.: EL010

Matrix: (soil/water) WATER

Lab Sample ID: 9905097-04

Sample wt/vol: 25.0 (g/ml) ML

Lab File ID: U0505013.D

Level: (low/med) LOW

Date Received: 05/05/99

% Moisture: not dec.

Date Analyzed: 05/05/99

GC Column: DB624 ID: 0.45 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NO.	COMPOUND		Q	
74-87-3	Chloromethane	1.0	U	U
75-01-4	Vinyl chloride	1.0	U	
74-83-9	Bromomethane	1.0	U	
75-00-3	Chloroethane	1.0	U	
75-35-4	1,1-Dichloroethene	1.0	U	
67-64-1	Acetone	5.0	U	R (SA, SB)
75-15-0	Carbon disulfide	1.0	U	U
75-09-2	Methylene chloride	1.0	U	
156-60-5	trans-1,2-Dichloroethene	1.0	U	
75-34-3	1,1-Dichloroethane	1.0	U	
156-59-2	cis-1,2-Dichloroethene	1.0	U	
78-93-3	2-Butanone	5.0	U	R (SA, SB)
67-66-3	Chloroform	1.0	U	U
71-55-6	1,1,1-Trichloroethane	1.0	U	
56-23-5	Carbon tetrachloride	1.0	U	
71-43-2	Benzene	1.0	U	
107-06-2	1,2-Dichloroethane	1.0	U	
79-01-6	Trichloroethene	1.0	U	
78-87-5	1,2-Dichloropropane	1.0	U	
75-27-4	Bromodichloromethane	1.0	U	
10061-01-5	cis-1,3-Dichloropropene	1.0	U	
108-10-1	4-Methyl-2-pentanone	5.0	U	R (SB)
108-88-3	Toluene	1.0	U	U
10061-02-6	trans-1,3-Dichloropropene	1.0	U	
79-00-5	1,1,2-Trichloroethane	1.0	U	
127-18-4	Tetrachloroethene	1.0	U	
591-78-6	2-Hexanone	5.0	U	R (SA, SB)
124-48-1	Dibromochloromethane	1.0	U	U
108-90-7	Chlorobenzene	1.0	U	
7816-60-0	m,p-Xylene	1.0	U	
95-47-6	o-Xylene	1.0	U	
100-42-5	Styrene	1.0	U	
75-25-2	Bromoform	1.0	U	
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	
75-71-8	Dichlorodifluoromethane	1.0	U	
75-69-4	Trichlorofluoromethane	1.0	U	
100-41-4	Ethylbenzene	1.0	U	
541-73-1	1,3-Dichlorobenzene	1.0	U	

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

1710159

Lab Name: Laucks Testing Labs Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: EL010

Matrix: (soil/water) WATER Lab Sample ID: 9905097-04

Sample wt/vol: 25.0 (g/ml) ML Lab.File ID: U0505013.D

Level: (low/med) LOW Date Received: 05/05/99

% Moisture: not dec. _____ Date Analyzed: 05/05/99

GC Column: DB624 ID: 0.45 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

1710160

Lab Name: Laucks Testing Labs

SDG No.: EL010

Matrix: (soil/water) WATER

Lab Sample ID: 9905157-01

Sample wt/vol: 25.0 (g/ml) ML

Lab File ID: U0507015.D

Level: (low/med) LOW

Date Received: 05/06/99

% Moisture: not dec.

Date Analyzed: 05/07/99

GC Column: DB624 ID: 0.45 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	1.0	U
75-01-4	Vinyl chloride	1.0	U
74-83-9	Bromomethane	1.0	U
75-00-3	Chloroethane	1.0	U
75-35-4	1,1-Dichloroethene	1.0	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	1.0	U
75-09-2	Methylene chloride	1.0	U
156-60-5	trans-1,2-Dichloroethene	1.0	U
75-34-3	1,1-Dichloroethane	1.0	U
156-59-2	cis-1,2-Dichloroethene	1.0	U
78-93-3	2-Butanone	5.0	U
67-66-3	Chloroform	1.0	U
71-55-6	1,1,1-Trichloroethane	1.0	U
56-23-5	Carbon tetrachloride	1.0	U
71-43-2	Benzene	1.0	U
107-06-2	1,2-Dichloroethane	1.0	U
79-01-6	Trichloroethene	1.0	U
78-87-5	1,2-Dichloropropane	1.0	U
75-27-4	Bromodichloromethane	1.0	U
10061-01-5	cis-1,3-Dichloropropene	1.0	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	1.0	U
10061-02-6	trans-1,3-Dichloropropene	1.0	U
79-00-5	1,1,2-Trichloroethane	1.0	U
127-18-4	Tetrachloroethene	1.0	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	1.0	U
108-90-7	Chlorobenzene	1.0	U
7816-60-0	m,p-Xylene	1.0	U
95-47-6	o-Xylene	1.0	U
100-42-5	Styrene	1.0	U
75-25-2	Bromoform	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U
75-71-8	Dichlorodifluoromethane	1.0	U
75-69-4	Trichlorofluoromethane	1.0	U
100-41-4	Ethylbenzene	1.0	U
541-73-1	1,3-Dichlorobenzene	1.0	U

R (SA, SB)

R (SA, SB)

R (SB)

R (SA, SB)

FORM I VOA

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

1710160

Lab Name: Laucks Testing Labs Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: EL010

Matrix: (soil/water) WATER Lab Sample ID: 9905157-01

Sample wt/vol: 25.0 (g/ml) ML Lab File ID: U0507015.D

Level: (low/med) LOW Date Received: 05/06/99

% Moisture: not dec. _____ Date Analyzed: 05/07/99

GC Column: DB624 ID: 0.45 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

Number TICs found: 1

CAS NO.	COMPOUND	RT	EST. CONC.	Q.
1. 000464-06-2	Butane, 2,2,3-trimethyl-	9.06	1.5	JN

NJ

SAMPLE NO.

1710161

VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: Laucks Testing Labs

SDG No.: EL010

Matrix: (soil/water) WATER

Lab Sample ID: 9905157-02

Sample wt/vol: 25.0 (g/ml) ML

Lab File ID: U0507016.D

Level: (low/med) LOW

Date Received: 05/06/99

% Moisture: not dec.

Date Analyzed: 05/07/99

GC Column: DB624 ID: 0.45 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NO.	COMPOUND		Q	
74-87-3	Chloromethane	1.0	U	U
75-01-4	Vinyl chloride	1.0	U	
74-83-9	Bromomethane	1.0	U	
75-00-3	Chloroethane	1.0	U	
75-35-4	1,1-Dichloroethene	1.0	U	
67-64-1	Acetone	5.0	U	R (SA, SB)
75-15-0	Carbon disulfide	1.0	U	U
75-09-2	Methylene chloride	1.0	U	
156-60-5	trans-1,2-Dichloroethene	1.0	U	
75-34-3	1,1-Dichloroethane	1.0	U	
156-59-2	cis-1,2-Dichloroethene	1.0	U	
78-93-3	2-Butanone	5.0	U	R (SA, SB)
67-66-3	Chloroform	1.0	U	U
71-55-6	1,1,1-Trichloroethane	1.0	U	
56-23-5	Carbon tetrachloride	1.0	U	
71-43-2	Benzene	1.0	U	
107-06-2	1,2-Dichloroethane	1.0	U	
79-01-6	Trichloroethene	1.1		
78-87-5	1,2-Dichloropropane	1.0	U	U
75-27-4	Bromodichloromethane	1.0	U	U
10061-01-5	cis-1,3-Dichloropropene	1.0	U	U
108-10-1	4-Methyl-2-pentanone	5.0	U	R (SB)
108-88-3	Toluene	1.0	U	U
10061-02-6	trans-1,3-Dichloropropene	1.0	U	
79-00-5	1,1,2-Trichloroethane	1.0	U	
127-18-4	Tetrachloroethene	1.4		
591-78-6	2-Hexanone	5.0	U	R (SA, SB)
124-48-1	Dibromochloromethane	1.0	U	U
108-90-7	Chlorobenzene	1.0	U	
7816-60-0	m,p-Xylene	1.0	U	
95-47-6	o-Xylene	1.0	U	
100-42-5	Styrene	1.0	U	
75-25-2	Bromoform	1.0	U	
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	
75-71-8	Dichlorodifluoromethane	1.0	U	
75-69-4	Trichlorofluoromethane	1.0	U	
100-41-4	Ethylbenzene	1.0	U	
541-73-1	1,3-Dichlorobenzene	1.0	U	

FORM I VOA

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

1710161

Lab Name: Laucks Testing Labs Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: EL010

Matrix: (soil/water) WATER Lab Sample ID: 9905157-02

Sample wt/vol: 25.0 (g/ml) ML Lab-File ID: U0507016.D

Level: (low/med) LOW Date Received: 05/06/99

% Moisture: not dec. _____ Date Analyzed: 05/07/99

GC Column: DB624 ID: 0.45 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

1710163

Lab Name: Laucks Testing Labs

SDG No.: EL010

Matrix: (soil/water) WATER

Lab Sample ID: 9905157-03

Sample wt/vol: 25.0 (g/ml) ML

Lab File ID: U0507013.D

Level: (low/med) LOW

Date Received: 05/06/99

% Moisture: not dec. _____

Date Analyzed: 05/07/99

GC Column: DB624 ID: 0.45 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q	
74-87-3	Chloromethane	1.0	U	U
75-01-4	Vinyl chloride	1.0	U	
74-83-9	Bromomethane	1.0	U	
75-00-3	Chloroethane	1.0	U	
75-35-4	1,1-Dichloroethene	1.0	U	
67-64-1	Acetone	5.0	U	R (SA, SB)
75-15-0	Carbon disulfide	1.0	U	U
75-09-2	Methylene chloride	0.7	JB	U (7)
156-60-5	trans-1,2-Dichloroethene	1.0	U	U
75-34-3	1,1-Dichloroethane	1.0	U	
156-59-2	cis-1,2-Dichloroethene	1.0	U	
78-93-3	2-Butanone	5.0	U	R (SA, SB)
67-66-3	Chloroform	1.0	U	U
71-55-6	1,1,1-Trichloroethane	1.0	U	
56-23-5	Carbon tetrachloride	1.0	U	
71-43-2	Benzene	1.0	U	
107-06-2	1,2-Dichloroethane	1.0	U	
79-01-6	Trichloroethene	1.0	U	
78-87-5	1,2-Dichloropropane	1.0	U	
75-27-4	Bromodichloromethane	1.0	U	
10061-01-5	cis-1,3-Dichloropropene	1.0	U	
108-10-1	4-Methyl-2-pentanone	5.0	U	R (SA, SB)
108-88-3	Toluene	1.0	U	U
10061-02-6	trans-1,3-Dichloropropene	1.0	U	
79-00-5	1,1,2-Trichloroethane	1.0	U	
127-18-4	Tetrachloroethene	1.0	U	
591-78-6	2-Hexanone	5.0	U	R (SA, SB)
124-48-1	Dibromochloromethane	1.0	U	U
108-90-7	Chlorobenzene	1.0	U	
7816-60-0	m,p-Xylene	1.0	U	
95-47-6	o-Xylene	1.0	U	
100-42-5	Styrene	1.0	U	
75-25-2	Bromoform	1.0	U	
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	
75-71-8	Dichlorodifluoromethane	1.0	U	
75-69-4	Trichlorofluoromethane	1.0	U	
100-41-4	Ethylbenzene	1.0	U	
541-73-1	1,3-Dichlorobenzene	1.0	U	

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FORM I VOA

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

1710163

Lab Name: Laucks Testing Labs Contract:

Lab Code: Case No.: SAS No.: SDG No.: EL010

Matrix: (soil/water) WATER Lab Sample ID: 9905157-03

Sample wt/vol: 25.0 (g/ml) ML Lab File ID: U0507013.D

Level: (low/med) LOW Date Received: 05/06/99

% Moisture: not dec. Date Analyzed: 05/07/99

GC Column: DB624 ID: 0.45 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

#799

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

1710164

Lab Name: Laucks Testing Labs

SDG No.: EL010

Matrix: (soil/water) WATER

Lab Sample ID: 9905185-01

Sample wt/vol: 25.0 (g/ml) ML

Lab File ID: U0513011.D

Level: (low/med) LOW

Date Received: 05/07/99

% Moisture: not dec.

Date Analyzed: 05/13/99

GC Column: DB624 ID: 0.45 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND (ug/L or ug/Kg)	UG/L	Q	
74-87-3	Chloromethane	1.0	U	U
75-01-4	Vinyl chloride	1.0	U	
74-83-9	Bromomethane	1.0	U	
75-00-3	Chloroethane	1.0	U	
75-35-4	1,1-Dichloroethene	1.0	U	
67-64-1	Acetone	5.0	U	R (5A,5B)
75-15-0	Carbon disulfide	1.0	U	U
75-09-2	Methylene chloride	1.0	U	
156-60-5	trans-1,2-Dichloroethene	1.0	U	
75-34-3	1,1-Dichloroethane	1.0	U	
156-59-2	cis-1,2-Dichloroethene	1.0	U	
78-93-3	2-Butanone	5.0	U	R (5A,5B)
67-66-3	Chloroform	0.9	J	
71-55-6	1,1,1-Trichloroethane	1.0	U	U
56-23-5	Carbon tetrachloride	1.0	U	
71-43-2	Benzene	1.0	U	
107-06-2	1,2-Dichloroethane	1.0	U	
79-01-6	Trichloroethene	1.0	U	
78-87-5	1,2-Dichloropropane	1.0	U	
75-27-4	Bromodichloromethane	1.0	U	
10061-01-5	cis-1,3-Dichloropropene	1.0	U	
108-10-1	4-Methyl-2-pentanone	5.0	U	
108-88-3	Toluene	1.0	U	R (5B)
10061-02-6	trans-1,3-Dichloropropene	1.0	U	U
79-00-5	1,1,2-Trichloroethane	1.0	U	
127-18-4	Tetrachloroethene	1.0	U	
591-78-6	2-Hexanone	5.0	U	R (5A,5B)
124-48-1	Dibromochloromethane	1.0	U	U
108-90-7	Chlorobenzene	1.0	U	
7816-60-0	m,p-Xylene	1.0	U	
95-47-6	o-Xylene	1.0	U	
100-42-5	Styrene	1.0	U	
75-25-2	Bromoform	1.0	U	
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	
75-71-8	Dichlorodifluoromethane	1.0	U	
75-69-4	Trichlorofluoromethane	1.0	U	
100-41-4	Ethylbenzene	1.0	U	
541-73-1	1,3-Dichlorobenzene	1.0	U	

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

1710164

Lab Name: Laucks Testing Labs Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: EL010

Matrix: (soil/water) WATER Lab Sample ID: 9905185-01

Sample wt/vol: 25.0 (g/ml) ML Lab File ID: U0513011.D

Level: (low/med) LOW Date Received: 05/07/99

% Moisture: not dec. _____ Date Analyzed: 05/13/99

GC Column: DB624 ID: 0.45 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

1710165

Lab Name: Laucks Testing Labs

SDG No.: EL010

Matrix: (soil/water) WATER

Lab Sample ID: 9905185-02

Sample wt/vol: 25.0 (g/ml) ML

Lab File ID: U0513012.D

Level: (low/med) LOW

Date Received: 05/07/99

% Moisture: not dec.

Date Analyzed: 05/13/99

GC Column: DB624 ID: 0.45 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NO.	COMPOUND		Q	
74-87-3	Chloromethane	1.0	U	U
75-01-4	Vinyl chloride	1.0	U	
74-83-9	Bromomethane	1.0	U	
75-00-3	Chloroethane	1.0	U	
75-35-4	1,1-Dichloroethene	1.0	U	R (5A,5B)
67-64-1	Acetone	5.0	U	
75-15-0	Carbon disulfide	1.0	U	U
75-09-2	Methylene chloride	1.0	U	
156-60-5	trans-1,2-Dichloroethene	1.0	U	
75-34-3	1,1-Dichloroethane	1.0	U	
156-59-2	cis-1,2-Dichloroethene	1.0	U	R (5A,5B)
78-93-3	2-Butanone	5.0	U	
67-66-3	Chloroform	0.7	J	J
71-55-6	1,1,1-Trichloroethane	1.0	U	U
56-23-5	Carbon tetrachloride	1.0	U	
71-43-2	Benzene	1.0	U	
107-06-2	1,2-Dichloroethane	1.0	U	
79-01-6	Trichloroethene	1.0	U	
78-87-5	1,2-Dichloropropane	1.0	U	
75-27-4	Bromodichloromethane	1.0	U	
10061-01-5	cis-1,3-Dichloropropene	1.0	U	
108-10-1	4-Methyl-2-pentanone	5.0	U	R (5B)
108-88-3	Toluene	1.0	U	U
10061-02-6	trans-1,3-Dichloropropene	1.0	U	
79-00-5	1,1,2-Trichloroethane	1.0	U	
127-18-4	Tetrachloroethene	1.0	U	
591-78-6	2-Hexanone	5.0	U	R (5A,5B)
124-48-1	Dibromochloromethane	1.0	U	U
108-90-7	Chlorobenzene	1.0	U	
7816-60-0	m,p-Xylene	1.0	U	
95-47-6	o-Xylene	1.0	U	
100-42-5	Styrene	1.0	U	
75-25-2	Bromoform	1.0	U	
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	
75-71-8	Dichlorodifluoromethane	1.0	U	
75-69-4	Trichlorofluoromethane	1.0	U	
100-41-4	Ethylbenzene	1.0	U	
541-73-1	1,3-Dichlorobenzene	1.0	U	

FORM I VOA

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

1710165

Lab Name: Laucks Testing Labs Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: EL010

Matrix: (soil/water) WATER Lab Sample ID: 9905185-02

Sample wt/vol: 25.0 (g/ml) ML Lab File ID: U0513012.D

Level: (low/med) LOW Date Received: 05/07/99

% Moisture: not dec. _____ Date Analyzed: 05/13/99

GC Column: DB624 ID: 0.45 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

FORM I VOA-TIC

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

1710166

Lab Name: Laucks Testing Labs

SDG No.: EL010

Matrix: (soil/water) WATER

Lab Sample ID: 9905185-03

Sample wt/vol: 25.0 (g/ml) ML

Lab File ID: U0513008.D

Level: (low/med) LOW

Date Received: 05/07/99

% Moisture: not dec. _____

Date Analyzed: 05/13/99

GC Column: DB624 ID: 0.45 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	1.0	U
75-01-4	Vinyl chloride	1.0	U
74-83-9	Bromomethane	1.0	U
75-00-3	Chloroethane	1.0	U
75-35-4	1,1-Dichloroethene	1.0	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	1.0	U
75-09-2	Methylene chloride	0.7	JB
156-60-5	trans-1,2-Dichloroethene	1.0	U
75-34-3	1,1-Dichloroethane	1.0	U
156-59-2	cis-1,2-Dichloroethene	1.0	U
78-93-3	2-Butanone	5.0	U
67-66-3	Chloroform	1.0	U
71-55-6	1,1,1-Trichloroethane	1.0	U
56-23-5	Carbon tetrachloride	1.0	U
71-43-2	Benzene	1.0	U
107-06-2	1,2-Dichloroethane	1.0	U
79-01-6	Trichloroethene	1.0	U
78-87-5	1,2-Dichloropropane	1.0	U
75-27-4	Bromodichloromethane	1.0	U
10061-01-5	cis-1,3-Dichloropropene	1.0	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	1.0	U
10061-02-6	trans-1,3-Dichloropropene	1.0	U
79-00-5	1,1,2-Trichloroethane	1.0	U
127-18-4	Tetrachloroethene	1.0	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	1.0	U
108-90-7	Chlorobenzene	1.0	U
7816-60-0	m,p-Xylene	1.0	U
95-47-6	o-Xylene	1.0	U
100-42-5	Styrene	1.0	U
75-25-2	Bromoform	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U
75-71-8	Dichlorodifluoromethane	1.0	U
75-69-4	Trichlorofluoromethane	1.0	U
100-41-4	Ethylbenzene	1.0	U
541-73-1	1,3-Dichlorobenzene	1.0	U

U

R (5A 5B)

U (7)

R (5A, 5B)

R (5B)

R (5A, 5B)

7/99

FORM I VOA

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

1710166

Lab Name: Laucks Testing Labs Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: EL010

Matrix: (soil/water) WATER Lab Sample ID: 9905185-03

Sample wt/vol: 25.0 (g/ml) ML Lab File ID: U0513008.D

Level: (low/med) LOW Date Received: 05/07/99

% Moisture: not dec. _____ Date Analyzed: 05/13/99

GC Column: DB624 ID: 0.45 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

FORM I VOA-TIC

7799

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

1710168

Lab Name: Laucks Testing Labs

SDG No.: EL010

Matrix: (soil/water) WATER

Lab Sample ID: 9905203-01

Sample wt/vol: 25.0 (g/ml) ML

Lab File ID: U0513013.D

Level: (low/med) LOW

Date Received: 05/08/99

% Moisture: not dec. _____

Date Analyzed: 05/13/99

GC Column: DB624 ID: 0.45 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q	
74-87-3	Chloromethane	1.0	U	U
75-01-4	Vinyl chloride	1.0	U	
74-83-9	Bromomethane	1.0	U	
75-00-3	Chloroethane	1.0	U	
75-35-4	1,1-Dichloroethene	1.0	U	
67-64-1	Acetone	5.0	U	R (SA,SB)
75-15-0	Carbon disulfide	1.0	U	U
75-09-2	Methylene chloride	1.0	U	
156-60-5	trans-1,2-Dichloroethene	1.0	U	
75-34-3	1,1-Dichloroethane	1.0	U	
156-59-2	cis-1,2-Dichloroethene	1.0	U	
78-93-3	2-Butanone	5.0	U	R (SA,SB)
67-66-3	Chloroform	1.0	U	U
71-55-6	1,1,1-Trichloroethane	1.0	U	
56-23-5	Carbon tetrachloride	1.0	U	
71-43-2	Benzene	1.0	U	
107-06-2	1,2-Dichloroethane	1.0	U	
79-01-6	Trichloroethene	1.0	U	
78-87-5	1,2-Dichloropropane	1.0	U	
75-27-4	Bromodichloromethane	1.0	U	
10061-01-5	cis-1,3-Dichloropropene	1.0	U	
108-10-1	4-Methyl-2-pentanone	5.0	U	R (SB)
108-88-3	Toluene	1.0	U	U
10061-02-6	trans-1,3-Dichloropropene	1.0	U	
79-00-5	1,1,2-Trichloroethane	1.0	U	
127-18-4	Tetrachloroethene	1.0	U	
591-78-6	2-Hexanone	5.0	U	R (SA,SB)
124-48-1	Dibromochloromethane	1.0	U	U
108-90-7	Chlorobenzene	1.0	U	
7816-60-0	m,p-Xylene	1.0	U	
95-47-6	o-Xylene	1.0	U	
100-42-5	Styrene	1.0	U	
75-25-2	Bromoform	1.0	U	
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	
75-71-8	Dichlorodifluoromethane	1.0	U	
75-69-4	Trichlorofluoromethane	1.0	U	
100-41-4	Ethylbenzene	1.0	U	
541-73-1	1,3-Dichlorobenzene	1.0	U	

FORM I VOA

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

1710168

Lab Name: Laucks Testing Labs Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: EL010

Matrix: (soil/water) WATER Lab Sample ID: 9905203-01

Sample wt/vol: 25.0 (g/ml) ML Lab File ID: U0513013.D

Level: (low/med) LOW Date Received: 05/08/99

% Moisture: not dec. _____ Date Analyzed: 05/13/99

GC Column: DB624 ID: 0.45 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

FORM I VOA-TIC

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

1710169

Lab Name: Laucks Testing Labs

SDG No.: EL010

Matrix: (soil/water) WATER

Lab Sample ID: 9905203-02

Sample wt/vol: 25.0 (g/ml) ML

Lab File ID: U0513014.D

Level: (low/med) LOW

Date Received: 05/08/99

% Moisture: not dec.

Date Analyzed: 05/13/99

GC Column: DB624 ID: 0.45 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NO.	COMPOUND		Q	
74-87-3	Chloromethane	1.0	U	U
75-01-4	Vinyl chloride	1.0	U	
74-83-9	Bromomethane	1.0	U	
75-00-3	Chloroethane	1.0	U	
75-35-4	1,1-Dichloroethene	1.0	U	
67-64-1	Acetone	5.0	U	R (SA, SB)
75-15-0	Carbon disulfide	1.0	U	U
75-09-2	Methylene chloride	1.0	U	
156-60-5	trans-1,2-Dichloroethene	1.0	U	
75-34-3	1,1-Dichloroethane	1.0	U	
156-59-2	cis-1,2-Dichloroethene	1.0	U	
78-93-3	2-Butanone	5.0	U	R (SA, SB)
67-66-3	Chloroform	1.0	U	U
71-55-6	1,1,1-Trichloroethane	1.0	U	
56-23-5	Carbon tetrachloride	1.0	U	
71-43-2	Benzene	1.0	U	
107-06-2	1,2-Dichloroethane	1.0	U	
79-01-6	Trichloroethene	1.0	U	
78-87-5	1,2-Dichloropropane	1.0	U	
75-27-4	Bromodichloromethane	1.0	U	
10061-01-5	cis-1,3-Dichloropropene	1.0	U	
108-10-1	4-Methyl-2-pentanone	5.0	U	R (SB)
108-88-3	Toluene	1.0	U	U
10061-02-6	trans-1,3-Dichloropropene	1.0	U	
79-00-5	1,1,2-Trichloroethane	1.0	U	
127-18-4	Tetrachloroethene	1.0	U	
591-78-6	2-Hexanone	5.0	U	R (SA, SB)
124-48-1	Dibromochloromethane	1.0	U	U
108-90-7	Chlorobenzene	1.0	U	
7816-60-0	m,p-Xylene	1.0	U	
95-47-6	o-Xylene	1.0	U	
100-42-5	Styrene	1.0	U	
75-25-2	Bromoform	1.0	U	
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	
75-71-8	Dichlorodifluoromethane	1.0	U	
75-69-4	Trichlorofluoromethane	1.0	U	
100-41-4	Ethylbenzene	1.0	U	
541-73-1	1,3-Dichlorobenzene	1.0	U	

17299

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

1710169

Lab Name: Laucks Testing Labs Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: EL010

Matrix: (soil/water) WATER Lab Sample ID: 9905203-02

Sample wt/vol: 25.0 (g/ml) ML Lab File ID: U0513014.D

Level: (low/med) LOW Date Received: 05/08/99

% Moisture: not dec. _____ Date Analyzed: 05/13/99

GC Column: DB624 ID: 0.45 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

U7299

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

1710170

Lab Name: Laucks Testing Labs

SDG No.: EL010

Matrix: (soil/water) WATER

Lab Sample ID: 9905203-03

Sample wt/vol: 25.0 (g/ml) ML

Lab File ID: U0513009.D

Level: (low/med) LOW

Date Received: 05/08/99

% Moisture: not dec.

Date Analyzed: 05/13/99

GC Column: DB624 ID: 0.45 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q	
74-87-3	Chloromethane	1.0	U	U
75-01-4	Vinyl chloride	1.0	U	
74-83-9	Bromomethane	1.0	U	
75-00-3	Chloroethane	1.0	U	
75-35-4	1,1-Dichloroethene	1.0	U	J (SA,SB)
67-64-1	Acetone	6.0		
75-15-0	Carbon disulfide	1.0	U	U
75-09-2	Methylene chloride	0.5	JB	U (7)
156-60-5	trans-1,2-Dichloroethene	1.0	U	U
75-34-3	1,1-Dichloroethane	1.0	U	
156-59-2	cis-1,2-Dichloroethene	1.0	U	
78-93-3	2-Butanone	5.0	U	R (SA,SB)
67-66-3	Chloroform	1.0	U	U
71-55-6	1,1,1-Trichloroethane	1.0	U	
56-23-5	Carbon tetrachloride	1.0	U	
71-43-2	Benzene	1.0	U	
107-06-2	1,2-Dichloroethane	1.0	U	
79-01-6	Trichloroethene	1.0	U	
78-87-5	1,2-Dichloropropane	1.0	U	
75-27-4	Bromodichloromethane	1.0	U	
10061-01-5	cis-1,3-Dichloropropene	1.0	U	
108-10-1	4-Methyl-2-pentanone	5.0	U	R (SB)
108-88-3	Toluene	1.0	U	U
10061-02-6	trans-1,3-Dichloropropene	1.0	U	
79-00-5	1,1,2-Trichloroethane	1.0	U	
127-18-4	Tetrachloroethene	1.0	U	
591-78-6	2-Hexanone	5.0	U	R (SA,SB)
124-48-1	Dibromochloromethane	1.0	U	U
108-90-7	Chlorobenzene	1.0	U	
7816-60-0	m,p-Xylene	1.0	U	
95-47-6	o-Xylene	1.0	U	
100-42-5	Styrene	1.0	U	
75-25-2	Bromoform	1.0	U	
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	
75-71-8	Dichlorodifluoromethane	1.0	U	
75-69-4	Trichlorofluoromethane	1.0	U	
100-41-4	Ethylbenzene	1.0	U	
541-73-1	1,3-Dichlorobenzene	1.0	U	

FORM I VOA

A7299

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

1710170

Lab Name: Laucks Testing Labs Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: EL010

Matrix: (soil/water) WATER Lab Sample ID: 9905203-03

Sample wt/vol: 25.0 (g/ml) ML Lab File ID: U0513009.D

Level: (low/med) LOW Date Received: 05/08/99

% Moisture: not dec. _____ Date Analyzed: 05/13/99

GC Column: DB624 ID: 0.45 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

FORM I VOA-TIC

A7299

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: MCAS El Toro

Collection Date: May 10 through May 14, 1999

LDC Report Date: July 1, 1999

Matrix: Water

Parameters: Volatiles

Validation Level: Level III

Laboratory: Laucks Testing Laboratories

Sample Delivery Group (SDG): EL011

Sample Identification

1710171
1710172
1710173
1710174
1710175
1710176
1710177
1710178
1710179
1710181
1710173MS
1710173MSD

Introduction

This data review covers 12 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8260B 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

Instrument performance was checked at 12 hour intervals.

All ion abundance requirements were met.

III. Initial Calibration

Initial calibration was performed using required standard concentrations.

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

Average relative response factors (RRF) for all 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
3/3/99	Acetone 2-Butanone 2-Hexanone	0.012 (≥0.05) 0.019 (≥0.05) 0.039 (≥0.05)	All samples in SDG EL011	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% with the following exceptions:

Date	Compound	%D	Associated Samples	Flag	A or P
5/13/99	2-Butanone	31.4	1710171 1710172 1710173 1710174 1710173MS 1710173MSD VBLKU1	J	A

Date	Compound	%D	Associated Samples	Flag	A or P
5/24/99	Dichlorodifluoromethane Chloromethane Carbon disulfide	67.3 30.3 59.2	1710179 1710181 VBLKU3	J J J	A

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

Date	Compound	RRF (Limits)	Associated Samples	Flag	A or P
5/13/99	Acetone 2-Butanone 4-Methyl-2-pentanone 2-Hexanone	0.009 (≥0.05) 0.013 (≥0.05) 0.040 (≥0.05) 0.035 (≥0.05)	1710171 1710172 1710173 1710174 1710173MS 1710173MSD VBLKU1	J (all detects) R (all non-detects)	A
5/17/99	Acetone 2-Butanone 4-Methyl-2-pentanone 2-Hexanone	0.009 (≥0.05) 0.016 (≥0.05) 0.040 (≥0.05) 0.034 (≥0.05)	1710175 1710176 1710177 1710178 VBLKU2	J (all detects) R (all non-detects)	A
5/24/99	Acetone 2-Butanone 4-Methyl-2-pentanone 2-Hexanone	0.009 (≥0.05) 0.016 (≥0.05) 0.038 (≥0.05) 0.033 (≥0.05)	1710179 1710181 VBLKU3	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
VBLKU1	5/13/99	Methylene chloride	0.2 ug/L	1710171 1710172 1710173 1710174
VBLKU2	5/17/99	Methylene chloride	0.3 ug/L	1710175 1710176 1710177 1710178

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
1710178	Methylene chloride	0.5 ug/L	1.0U 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 with the following exceptions:

Sample	Compound	Finding	Criteria	Flag	A or P
1710175 1710176 1710177 1710178 1710179 1710181	All TCL compounds	No MS/MSD associated with these samples.	MS/MSD required.	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. 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 of Data

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

XVI. Field Duplicates

Samples 1710176 and 1710177 were identified as field duplicates. No volatiles were detected in any of the samples.

XVII. Field Blanks

Samples 1710174, 1710178 and 1710181 were identified as trip blanks. No volatile contaminants were found in these blanks with the following exceptions:

Trip Blank ID	Compound	Concentration (ug/L)
1710174	Methylene chloride	2.4
1710178	Methylene chloride Acetone	0.5 3.7
1710181	Acetone Methylene chloride	3.2 0.6

MCAS El Toro
Volatiles - Data Qualification Summary - SDG EL011

SDG	Sample	Compound	Flag	A or P	Reason
EL011	1710171 1710172 1710173 1710174 1710175 1710176 1710177 1710178 1710179 1710181	Acetone 2-Butanone 2-Hexanone	J (all detects) R (all non-detects)	A	Initial calibration (RRF)
EL011	1710171 1710172 1710173 1710174	2-Butanone	J	A	Continuing calibration (%D)
EL011	1710179 1710181	Dichlorodifluoromethane Chloromethane Carbon disulfide	J J J	A	Continuing calibration (%D)
EL011	1710171 1710172 1710173 1710174 1710175 1710176 1710177 1710178 1710179 1710181	Acetone 2-Butanone 4-Methyl-2-pentanone 2-Hexanone	J (all detects) R (all non-detects)	A	Continuing calibration (RRF)
EL011	1710175 1710176 1710177 1710178 1710179 1710181	All TCL compounds	None	P	Matrix spike/Matrix spike duplicates

MCAS El Toro
Volatiles - Laboratory Blank Data Qualification Summary - SDG EL011

SDG	Sample	Compound TIC (RT in minutes)	Modified Final Concentration	A or P
EL011	1710178	Methylene chloride	1.0U ug/L	A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

1710171

Lab Name: Laucks Testing Labs

SDG No.: EL011

Matrix: (soil/water) WATER

Lab Sample ID: 9905306-01

Sample wt/vol: 25.0 (g/ml) ML

Lab File ID: U0513015.D

Level: (low/med) LOW

Date Received: 05/11/99

% Moisture: not dec.

Date Analyzed: 05/13/99

GC Column: DB-624 ID: 0.45 (mm)

Dilution Factor: 1.0

Soil Extract Volume (uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NO.	COMPOUND		Q	
74-87-3	Chloromethane	1.0	U	U
75-01-4	Vinyl chloride	1.0	U	
74-83-9	Bromomethane	1.0	U	
75-00-3	Chloroethane	1.0	U	
75-35-4	1,1-Dichloroethene	1.0	U	
67-64-1	Acetone	5.0	U	R (SA,SB)
75-15-0	Carbon disulfide	1.0	U	U
75-09-2	Methylene chloride	1.0	U	
156-60-5	trans-1,2-Dichloroethene	1.0	U	
75-34-3	1,1-Dichloroethane	1.0	U	
156-59-2	cis-1,2-Dichloroethene	1.0	U	
78-93-3	2-Butanone	5.0	U	R (SA,SB)
67-66-3	Chloroform	1.0	U	U
71-55-6	1,1,1-Trichloroethane	1.0	U	
56-23-5	Carbon tetrachloride	1.0	U	
71-43-2	Benzene	1.0	U	
107-06-2	1,2-Dichloroethane	1.0	U	
79-01-6	Trichloroethene	1.0	U	
78-87-5	1,2-Dichloropropane	1.0	U	
75-27-4	Bromodichloromethane	1.0	U	
10061-01-5	cis-1,3-Dichloropropene	1.0	U	
108-10-1	4-Methyl-2-pentanone	5.0	U	R (SB)
108-88-3	Toluene	1.0	U	U
10061-02-6	trans-1,3-Dichloropropene	1.0	U	
79-00-5	1,1,2-Trichloroethane	1.0	U	
127-18-4	Tetrachloroethene	0.3	J	J
591-78-6	2-Hexanone	5.0	U	R (SA,SB)
124-48-1	Dibromochloromethane	1.0	U	
108-90-7	Chlorobenzene	1.0	U	
7816-60-0	m,p-Xylene	1.0	U	
95-47-6	o-Xylene	1.0	U	
100-42-5	Styrene	1.0	U	
75-25-2	Bromoform	1.0	U	
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	
75-71-8	Dichlorodifluoromethane	0.8	J	J
75-69-4	Trichlorofluoromethane	1.0	U	U
100-41-4	Ethylbenzene	1.0	U	
541-73-1	1,3-Dichlorobenzene	1.0	U	

17299

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

1710171

Lab Name: Laucks Testing Labs Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: EL011

Matrix: (soil/water) WATER Lab Sample ID: 9905306-01

Sample wt/vol: 25.0 (g/ml) ML Lab File ID: U0513015.D

Level: (low/med) LOW Date Received: 05/11/99

% Moisture: not dec. _____ Date Analyzed: 05/13/99

GC Column: DB-624 ID: 0.45 (mm) Dilution Factor: 1.0

Soil Extract Volume _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

1710172

Lab Name: Laucks Testing Labs SDG No.: EL011

Matrix: (soil/water) WATER Lab Sample ID: 9905306-02

Sample wt/vol: 25.0 (g/ml) ML Lab File ID: U0513016.D

Level: (low/med) LOW Date Received: 05/11/99

% Moisture: not dec. Date Analyzed: 05/13/99

GC Column: DB-624 ID: 0.45 (mm) Dilution Factor: 1.0

Soil Extract Volume (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NO.	COMPOUND	UG/L	Q	
74-87-3	Chloromethane	1.0	U	U
75-01-4	Vinyl chloride	1.0	U	
74-83-9	Bromomethane	1.0	U	
75-00-3	Chloroethane	1.0	U	
75-35-4	1,1-Dichloroethene	1.0	U	
67-64-1	Acetone	5.0	U	R (5A, 5B)
75-15-0	Carbon disulfide	1.0	U	U
75-09-2	Methylene chloride	1.0	U	
156-60-5	trans-1,2-Dichloroethene	1.0	U	
75-34-3	1,1-Dichloroethane	1.0	U	
156-59-2	cis-1,2-Dichloroethene	1.0	U	
78-93-3	2-Butanone	5.0	U	R (5A, 5B)
67-66-3	Chloroform	1.0	U	U
71-55-6	1,1,1-Trichloroethane	1.0	U	
56-23-5	Carbon tetrachloride	1.0	U	
71-43-2	Benzene	1.0	U	
107-06-2	1,2-Dichloroethane	1.0	U	
79-01-6	Trichloroethene	1.0	U	
78-87-5	1,2-Dichloropropane	1.0	U	
75-27-4	Bromodichloromethane	1.0	U	
10061-01-5	cis-1,3-Dichloropropene	1.0	U	
108-10-1	4-Methyl-2-pentanone	5.0	U	R (5B)
108-88-3	Toluene	1.0	U	U
10061-02-6	trans-1,3-Dichloropropene	1.0	U	
79-00-5	1,1,2-Trichloroethane	1.0	U	
127-18-4	Tetrachloroethene	0.2	J	J
591-78-6	2-Hexanone	5.0	U	R (5A, 5B)
124-48-1	Dibromochloromethane	1.0	U	U
108-90-7	Chlorobenzene	1.0	U	
7816-60-0	m,p-Xylene	1.0	U	
95-47-6	o-Xylene	1.0	U	
100-42-5	Styrene	1.0	U	
75-25-2	Bromoform	1.0	U	
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	
75-71-8	Dichlorodifluoromethane	0.3	J	J
75-69-4	Trichlorofluoromethane	1.0	U	U
100-41-4	Ethylbenzene	1.0	U	
541-73-1	1,3-Dichlorobenzene	1.0	U	

FORM I VOA

6/7/99

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

1710172

Lab Name: Laucks Testing Labs Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: EL011

Matrix: (soil/water) WATER Lab Sample ID: 9905306-02

Sample wt/vol: 25.0 (g/ml) ML Lab File ID: U0513016.D

Level: (low/med) LOW Date Received: 05/11/99

% Moisture: not dec. _____ Date Analyzed: 05/13/99

GC Column: DB-624 ID: 0.45 (mm) Dilution Factor: 1.0

Soil Extract Volume _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

1710173

Lab Name: Laucks Testing Labs

SDG No.: EL011

Matrix: (soil/water) WATER

Lab Sample ID: 9905306-03

Sample wt/vol: 25.0 (g/ml) ML

Lab File ID: U0513017.D

Level: (low/med) LOW

Date Received: 05/11/99

% Moisture: not dec.

Date Analyzed: 05/13/99

GC Column: DB-624 ID: 0.45 (mm)

Dilution Factor: 1.0

Soil Extract Volume (uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NO.	COMPOUND		Q	
74-87-3	Chloromethane	1.0	U	U
75-01-4	Vinyl chloride	1.0	U	
74-83-9	Bromomethane	1.0	U	
75-00-3	Chloroethane	1.0	U	
75-35-4	1,1-Dichloroethene	1.0	U	
67-64-1	Acetone	5.0	U	R (SA,5B)
75-15-0	Carbon disulfide	1.0	U	U
75-09-2	Methylene chloride	1.0	U	
156-60-5	trans-1,2-Dichloroethene	1.0	U	
75-34-3	1,1-Dichloroethane	1.0	U	
156-59-2	cis-1,2-Dichloroethene	1.0	U	
78-93-3	2-Butanone	5.0	U	R (SA,5B)
67-66-3	Chloroform	1.0	U	U
71-55-6	1,1,1-Trichloroethane	1.0	U	
56-23-5	Carbon tetrachloride	1.0	U	
71-43-2	Benzene	1.0	U	
107-06-2	1,2-Dichloroethane	1.0	U	
79-01-6	Trichloroethene	1.0	U	
78-87-5	1,2-Dichloropropane	1.0	U	
75-27-4	Bromodichloromethane	1.0	U	
10061-01-5	cis-1,3-Dichloropropene	1.0	U	
108-10-1	4-Methyl-2-pentanone	5.0	U	R (5B)
108-88-3	Toluene	1.0	U	U
10061-02-6	trans-1,3-Dichloropropene	1.0	U	
79-00-5	1,1,2-Trichloroethane	1.0	U	
127-18-4	Tetrachloroethene	0.4	J	J
591-78-6	2-Hexanone	5.0	U	R (SA,5B)
124-48-1	Dibromochloromethane	1.0	U	U
108-90-7	Chlorobenzene	1.0	U	
7816-60-0	m,p-Xylene	1.0	U	
95-47-6	o-Xylene	1.0	U	
100-42-5	Styrene	1.0	U	
75-25-2	Bromoform	1.0	U	
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	
75-71-8	Dichlorodifluoromethane	0.3	J	J
75-69-4	Trichlorofluoromethane	1.0	U	U
100-41-4	Ethylbenzene	1.0	U	
541-73-1	1,3-Dichlorobenzene	1.0	U	

#799

FORM I VOA

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

1710173

Lab Name: Laucks Testing Labs Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: EL011

Matrix: (soil/water) WATER Lab Sample ID: 9905306-03

Sample wt/vol: 25.0 (g/ml) ML Lab File ID: U0513017.D

Level: (low/med) LOW Date Received: 05/11/99

% Moisture: not dec. _____ Date Analyzed: 05/13/99

GC Column: DB-624 ID: 0.45 (mm) Dilution Factor: 1.0

Soil Extract Volume _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

U7299

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

1710174

Lab Name: Laucks Testing Labs

SDG No.: EL011

Matrix: (soil/water) WATER

Lab Sample ID: 9905306-04

Sample wt/vol: 25.0 (g/ml) ML

Lab File ID: U0513010.D

Level: (low/med) LOW

Date Received: 05/11/99

% Moisture: not dec. _____

Date Analyzed: 05/13/99

GC Column: DB-624 ID: 0.45 (mm)

Dilution Factor: 1.0

Soil Extract Volume _____ (uL)

Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	1.0	U
75-01-4	Vinyl chloride	1.0	U
74-83-9	Bromomethane	1.0	U
75-00-3	Chloroethane	1.0	U
75-35-4	1,1-Dichloroethene	1.0	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	1.0	U
75-09-2	Methylene chloride	2.4	B
156-60-5	trans-1,2-Dichloroethene	1.0	U
75-34-3	1,1-Dichloroethane	1.0	U
156-59-2	cis-1,2-Dichloroethene	1.0	U
78-93-3	2-Butanone	5.0	U
67-66-3	Chloroform	1.0	U
71-55-6	1,1,1-Trichloroethane	1.0	U
56-23-5	Carbon tetrachloride	1.0	U
71-43-2	Benzene	1.0	U
107-06-2	1,2-Dichloroethane	1.0	U
79-01-6	Trichloroethene	1.0	U
78-87-5	1,2-Dichloropropane	1.0	U
75-27-4	Bromodichloromethane	1.0	U
10061-01-5	cis-1,3-Dichloropropene	1.0	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	1.0	U
10061-02-6	trans-1,3-Dichloropropene	1.0	U
79-00-5	1,1,2-Trichloroethane	1.0	U
127-18-4	Tetrachloroethene	1.0	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	1.0	U
108-90-7	Chlorobenzene	1.0	U
7816-60-0	m,p-Xylene	1.0	U
95-47-6	o-Xylene	1.0	U
100-42-5	Styrene	1.0	U
75-25-2	Bromoform	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U
75-71-8	Dichlorodifluoromethane	1.0	U
75-69-4	Trichlorofluoromethane	1.0	U
100-41-4	Ethylbenzene	1.0	U
541-73-1	1,3-Dichlorobenzene	1.0	U

U
R (SA, SB)
U
U
R (SA, SB)
U
R (SB)
U
R (SA, SB)
U

FORM I VOA

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

1710174

Lab Name: Laucks Testing Labs Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: EL011

Matrix: (soil/water) WATER Lab Sample ID: 9905306-04

Sample wt/vol: 25.0 (g/ml) ML Lab File ID: U0513010.D

Level: (low/med) LOW Date Received: 05/11/99

% Moisture: not dec. _____ Date Analyzed: 05/13/99

GC Column: DB-624 ID: 0.45 (mm) Dilution Factor: 1.0

Soil Extract Volume _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

FORM I VOA-TIC

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

1710175

Lab Name: Laucks Testing Labs

SDG No.: EL011

Matrix: (soil/water) WATER

Lab Sample ID: 9905399-01

Sample wt/vol: 25.0 (g/ml) ML

Lab File ID: U0517019.D

Level: (low/med) LOW

Date Received: 05/14/99

% Moisture: not dec.

Date Analyzed: 05/17/99

GC Column: DB-624 ID: 0.45 (mm)

Dilution Factor: 1.0

Soil Extract Volume (uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	1.0	U
75-01-4	Vinyl chloride	1.0	U
74-83-9	Bromomethane	1.0	U
75-00-3	Chloroethane	1.0	U
75-35-4	1,1-Dichloroethene	1.0	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	1.0	U
75-09-2	Methylene chloride	1.0	U
156-60-5	trans-1,2-Dichloroethene	1.0	U
75-34-3	1,1-Dichloroethane	1.0	U
156-59-2	cis-1,2-Dichloroethene	1.0	U
78-93-3	2-Butanone	5.0	U
67-66-3	Chloroform	0.4	J
71-55-6	1,1,1-Trichloroethane	1.0	U
56-23-5	Carbon tetrachloride	1.0	U
71-43-2	Benzene	1.0	U
107-06-2	1,2-Dichloroethane	1.0	U
79-01-6	Trichloroethene	1.0	U
78-87-5	1,2-Dichloropropane	1.0	U
75-27-4	Bromodichloromethane	1.0	U
10061-01-5	cis-1,3-Dichloropropene	1.0	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	1.0	U
10061-02-6	trans-1,3-Dichloropropene	1.0	U
79-00-5	1,1,2-Trichloroethane	1.0	U
127-18-4	Tetrachloroethene	1.0	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	1.0	U
108-90-7	Chlorobenzene	1.0	U
7816-60-0	m,p-Xylene	1.0	U
95-47-6	o-Xylene	1.0	U
100-42-5	Styrene	1.0	U
75-25-2	Bromoform	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U
75-71-8	Dichlorodifluoromethane	1.0	U
75-69-4	Trichlorofluoromethane	1.0	U
100-41-4	Ethylbenzene	1.0	U
541-73-1	1,3-Dichlorobenzene	1.0	U

R (SA, SB)

R (SA, SB)

R (SB)

R (SA, SB)

FORM I VOA

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

1710175

Lab Name: Laucks Testing Labs Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: EL011

Matrix: (soil/water) WATER Lab Sample ID: 9905399-01

Sample wt/vol: 25.0 (g/ml) ML Lab File ID: U0517019.D

Level: (low/med) LOW Date Received: 05/14/99

% Moisture: not dec. _____ Date Analyzed: 05/17/99

GC Column: DB-624 ID: 0.45 (mm) Dilution Factor: 1.0

Soil Extract Volume _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/L

Number TICs found: 1

CAS NO.	COMPOUND	RT	EST. CONC.	Q
1. 000420-56-4	Silane, fluorotrimethyl-	3.58	1.1	JN

NJ

FORM I VOA-TIC

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

1710176

Lab Name: Laucks Testing Labs

SDG No.: EL011

Matrix: (soil/water) WATER

Lab Sample ID: 9905399-02

Sample wt/vol: 25.0 (g/ml) ML

Lab File ID: U0517020.D

Level: (low/med) LOW

Date Received: 05/14/99

% Moisture: not dec.

Date Analyzed: 05/17/99

GC Column: DB-624 ID: 0.45 (mm)

Dilution Factor: 1.0

Soil Extract Volume (uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q	
74-87-3	Chloromethane	1.0	U	U
75-01-4	Vinyl chloride	1.0	U	
74-83-9	Bromomethane	1.0	U	
75-00-3	Chloroethane	1.0	U	
75-35-4	1,1-Dichloroethene	1.0	U	
67-64-1	Acetone	5.0	U	R (SA, SB)
75-15-0	Carbon disulfide	1.0	U	U
75-09-2	Methylene chloride	1.0	U	
156-60-5	trans-1,2-Dichloroethene	1.0	U	
75-34-3	1,1-Dichloroethane	1.0	U	
156-59-2	cis-1,2-Dichloroethene	1.0	U	
78-93-3	2-Butanone	5.0	U	R (SA, SB)
67-66-3	Chloroform	1.0	U	U
71-55-6	1,1,1-Trichloroethane	1.0	U	
56-23-5	Carbon tetrachloride	1.0	U	
71-43-2	Benzene	1.0	U	
107-06-2	1,2-Dichloroethane	1.0	U	
79-01-6	Trichloroethene	1.0	U	
78-87-5	1,2-Dichloropropane	1.0	U	
75-27-4	Bromodichloromethane	1.0	U	
10061-01-5	cis-1,3-Dichloropropene	1.0	U	
108-10-1	4-Methyl-2-pentanone	5.0	U	R (SB)
108-88-3	Toluene	1.0	U	U
10061-02-6	trans-1,3-Dichloropropene	1.0	U	
79-00-5	1,1,2-Trichloroethane	1.0	U	
127-18-4	Tetrachloroethene	1.0	U	
591-78-6	2-Hexanone	5.0	U	R (SA, SB)
124-48-1	Dibromochloromethane	1.0	U	U
108-90-7	Chlorobenzene	1.0	U	
7816-60-0	m,p-Xylene	1.0	U	
95-47-6	o-Xylene	1.0	U	
100-42-5	Styrene	1.0	U	
75-25-2	Bromoform	1.0	U	
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	
75-71-8	Dichlorodifluoromethane	1.0	U	
75-69-4	Trichlorofluoromethane	1.0	U	
100-41-4	Ethylbenzene	1.0	U	
541-73-1	1,3-Dichlorobenzene	1.0	U	

FORM I VOA

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

1710176

Lab Name: Laucks Testing Labs Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: EL011

Matrix: (soil/water) WATER Lab Sample ID: 9905399-02

Sample wt/vol: 25.0 (g/ml) ML Lab File ID: U0517020.D

Level: (low/med) LOW Date Received: 05/14/99

% Moisture: not dec. _____ Date Analyzed: 05/17/99

GC Column: DB-624 ID: 0.45 (mm) Dilution Factor: 1.0

Soil Extract Volume _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

FORM I VOA-TIC

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

1710177

Lab Name: Laucks Testing Labs

SDG No.: EL011

Matrix: (soil/water) WATER

Lab Sample ID: 9905399-03

Sample wt/vol: 25.0 (g/ml) ML

Lab File ID: U0517021.D

Level: (low/med) LOW

Date Received: 05/14/99

% Moisture: not dec.

Date Analyzed: 05/17/99

GC Column: DB-624 ID: 0.45 (mm)

Dilution Factor: 1.0

Soil Extract Volume (uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	1.0	U
75-01-4	Vinyl chloride	1.0	U
74-83-9	Bromomethane	1.0	U
75-00-3	Chloroethane	1.0	U
75-35-4	1,1-Dichloroethene	1.0	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	1.0	U
75-09-2	Methylene chloride	1.0	U
156-60-5	trans-1,2-Dichloroethene	1.0	U
75-34-3	1,1-Dichloroethane	1.0	U
156-59-2	cis-1,2-Dichloroethene	1.0	U
78-93-3	2-Butanone	5.0	U
67-66-3	Chloroform	1.0	U
71-55-6	1,1,1-Trichloroethane	1.0	U
56-23-5	Carbon tetrachloride	1.0	U
71-43-2	Benzene	1.0	U
107-06-2	1,2-Dichloroethane	1.0	U
79-01-6	Trichloroethene	1.0	U
78-87-5	1,2-Dichloropropane	1.0	U
75-27-4	Bromodichloromethane	1.0	U
10061-01-5	cis-1,3-Dichloropropene	1.0	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	1.0	U
10061-02-6	trans-1,3-Dichloropropene	1.0	U
79-00-5	1,1,2-Trichloroethane	1.0	U
127-18-4	Tetrachloroethene	1.0	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	1.0	U
108-90-7	Chlorobenzene	1.0	U
7816-60-0	m,p-Xylene	1.0	U
95-47-6	o-Xylene	1.0	U
100-42-5	Styrene	1.0	U
75-25-2	Bromoform	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U
75-71-8	Dichlorodifluoromethane	1.0	U
75-69-4	Trichlorofluoromethane	1.0	U
100-41-4	Ethylbenzene	1.0	U
541-73-1	1,3-Dichlorobenzene	1.0	U

R (5A, 5B)

R (5A, 5B)

R (5B)

R (5A, 5B)

0 7299

FORM I VOA

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

1710177

Lab Name: Laucks Testing Labs Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: EL011

Matrix: (soil/water) WATER Lab Sample ID: 9905399-03

Sample wt/vol: 25.0 (g/ml) ML Lab File ID: U0517021.D

Level: (low/med) LOW Date Received: 05/14/99

% Moisture: not dec. _____ Date Analyzed: 05/17/99

GC Column: DB-624 ID: 0.45 (mm) Dilution Factor: 1.0

Soil Extract Volume _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/L

Number TICs found: 1

CAS NO.	COMPOUND	RT	EST. CONC.	Q
1. 000420-56-4	Silane, fluorotrimethyl-	3.58	1.5	JN

NJ

7799

FORM I VOA-TIC

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

1710178

Lab Name: Laucks Testing Labs

SDG No.: EL011

Matrix: (soil/water) WATER

Lab Sample ID: 9905399-04

Sample wt/vol: 25.0 (g/ml) ML

Lab File ID: U0517015.D

Level: (low/med) LOW

Date Received: 05/14/99

% Moisture: not dec.

Date Analyzed: 05/17/99

GC Column: DB-624 ID: 0.45 (mm)

Dilution Factor: 1.0

Soil Extract Volume (uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q	
74-87-3	Chloromethane	1.0	U	
75-01-4	Vinyl chloride	1.0	U	
74-83-9	Bromomethane	1.0	U	
75-00-3	Chloroethane	1.0	U	
75-35-4	1,1-Dichloroethene	1.0	U	
67-64-1	Acetone	3.7	J	J (SA,5B)
75-15-0	Carbon disulfide	1.0	U	
75-09-2	Methylene chloride	0.5	JB	U (7)
156-60-5	trans-1,2-Dichloroethene	1.0	U	
75-34-3	1,1-Dichloroethane	1.0	U	
156-59-2	cis-1,2-Dichloroethene	1.0	U	
78-93-3	2-Butanone	5.0	U	R (SA,5B)
67-66-3	Chloroform	1.0	U	
71-55-6	1,1,1-Trichloroethane	1.0	U	
56-23-5	Carbon tetrachloride	1.0	U	
71-43-2	Benzene	1.0	U	
107-06-2	1,2-Dichloroethane	1.0	U	
79-01-6	Trichloroethene	1.0	U	
78-87-5	1,2-Dichloropropane	1.0	U	
75-27-4	Bromodichloromethane	1.0	U	
10061-01-5	cis-1,3-Dichloropropene	1.0	U	
108-10-1	4-Methyl-2-pentanone	5.0	U	R (5B)
108-88-3	Toluene	1.0	U	
10061-02-6	trans-1,3-Dichloropropene	1.0	U	
79-00-5	1,1,2-Trichloroethane	1.0	U	
127-18-4	Tetrachloroethene	1.0	U	
591-78-6	2-Hexanone	5.0	U	R (SA,5B)
124-48-1	Dibromochloromethane	1.0	U	
108-90-7	Chlorobenzene	1.0	U	
7816-60-0	m,p-Xylene	1.0	U	
95-47-6	o-Xylene	1.0	U	
100-42-5	Styrene	1.0	U	
75-25-2	Bromoform	1.0	U	
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	
75-71-8	Dichlorodifluoromethane	1.0	U	
75-69-4	Trichlorofluoromethane	1.0	U	
100-41-4	Ethylbenzene	1.0	U	
541-73-1	1,3-Dichlorobenzene	1.0	U	

U 7/99

FORM I VOA

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

1710178

Lab Name: Laucks Testing Labs Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: EL011

Matrix: (soil/water) WATER Lab Sample ID: 9905399-04

Sample wt/vol: 25.0 (g/ml) ML Lab File ID: U0517015.D

Level: (low/med) LOW Date Received: 05/14/99

% Moisture: not dec. _____ Date Analyzed: 05/17/99

GC Column: DB-624 ID: 0.45 (mm) Dilution Factor: 1.0

Soil Extract Volume _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

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SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

1710179

Lab Name: Laucks Testing Labs

SDG No.: EL011

Matrix: (soil/water) WATER

Lab Sample ID: 9905436-01

Sample wt/vol: 25.0 (g/ml) ML

Lab File ID: U0524011.D

Level: (low/med) LOW

Date Received: 05/15/99

% Moisture: not dec.

Date Analyzed: 05/24/99

GC Column: DB-624 ID: 0.45 (mm)

Dilution Factor: 1.0

Soil Extract Volume (uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q	
74-87-3	Chloromethane	1.0	U	W (SB)
75-01-4	Vinyl chloride	1.0	U	
74-83-9	Bromomethane	1.0	U	
75-00-3	Chloroethane	1.0	U	
75-35-4	1,1-Dichloroethene	1.0	U	
67-64-1	Acetone	5.0	U	R (SA, SB)
75-15-0	Carbon disulfide	1.0	U	W (SB)
75-09-2	Methylene chloride	1.0	U	
156-60-5	trans-1,2-Dichloroethene	1.0	U	
75-34-3	1,1-Dichloroethane	1.0	U	
156-59-2	cis-1,2-Dichloroethene	1.0	U	
78-93-3	2-Butanone	5.0	U	R (SA, SB)
67-66-3	Chloroform	1.0	U	
71-55-6	1,1,1-Trichloroethane	1.0	U	
56-23-5	Carbon tetrachloride	1.0	U	
71-43-2	Benzene	1.0	U	
107-06-2	1,2-Dichloroethane	1.0	U	
79-01-6	Trichloroethene	1.0	U	
78-87-5	1,2-Dichloropropane	1.0	U	
75-27-4	Bromodichloromethane	1.0	U	
10061-01-5	cis-1,3-Dichloropropene	1.0	U	
108-10-1	4-Methyl-2-pentanone	5.0	U	R (SB)
108-88-3	Toluene	1.0	U	
10061-02-6	trans-1,3-Dichloropropene	1.0	U	
79-00-5	1,1,2-Trichloroethane	1.0	U	
127-18-4	Tetrachloroethene	1.0	U	
591-78-6	2-Hexanone	5.0	U	R (SA, SB)
124-48-1	Dibromochloromethane	1.0	U	
108-90-7	Chlorobenzene	1.0	U	
7816-60-0	m,p-Xylene	1.0	U	
95-47-6	o-Xylene	1.0	U	
100-42-5	Styrene	1.0	U	
75-25-2	Bromoform	1.0	U	
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	
75-71-8	Dichlorodifluoromethane	1.0	U	W (SB)
75-69-4	Trichlorofluoromethane	1.0	U	
100-41-4	Ethylbenzene	1.0	U	
541-73-1	1,3-Dichlorobenzene	1.0	U	

U 7/29

FORM I VOA

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

1710179

Lab Name: Laucks Testing Labs Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: EL011

Matrix: (soil/water) WATER Lab Sample ID: 9905436-01

Sample wt/vol: 25.0 (g/ml) ML Lab File ID: U0524011.D

Level: (low/med) LOW Date Received: 05/15/99

% Moisture: not dec. _____ Date Analyzed: 05/24/99

GC Column: DB-624 ID: 0.45 (mm) Dilution Factor: 1.0

Soil Extract Volume _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

7299

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

1710181

Lab Name: Laucks Testing Labs

SDG No.: EL011

Matrix: (soil/water) WATER

Lab Sample ID: 9905436-02

Sample wt/vol: 25.0 (g/ml) ML

Lab File ID: U0524009.D

Level: (low/med) LOW

Date Received: 05/15/99

% Moisture: not dec.

Date Analyzed: 05/24/99

GC Column: DB-624 ID: 0.45 (mm)

Dilution Factor: 1.0

Soil Extract Volume (uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q	
74-87-3	Chloromethane	1.0	U	UJ (SB)
75-01-4	Vinyl chloride	1.0	U	UJ
74-83-9	Bromomethane	1.0	U	
75-00-3	Chloroethane	1.0	U	
75-35-4	1,1-Dichloroethene	1.0	U	J (SA+SB)
67-64-1	Acetone	3.2	J	
75-15-0	Carbon disulfide	1.0	U	UJ (SB)
75-09-2	Methylene chloride	0.6	J	J
156-60-5	trans-1,2-Dichloroethene	1.0	U	UJ
75-34-3	1,1-Dichloroethane	1.0	U	
156-59-2	cis-1,2-Dichloroethene	1.0	U	
78-93-3	2-Butanone	5.0	U	R (SA, SB)
67-66-3	Chloroform	1.0	U	UJ
71-55-6	1,1,1-Trichloroethane	1.0	U	
56-23-5	Carbon tetrachloride	1.0	U	
71-43-2	Benzene	1.0	U	
107-06-2	1,2-Dichloroethane	1.0	U	
79-01-6	Trichloroethene	1.0	U	
78-87-5	1,2-Dichloropropane	1.0	U	
75-27-4	Bromodichloromethane	1.0	U	
10061-01-5	cis-1,3-Dichloropropene	1.0	U	
108-10-1	4-Methyl-2-pentanone	5.0	U	R (SB)
108-88-3	Toluene	1.0	U	UJ
10061-02-6	trans-1,3-Dichloropropene	1.0	U	
79-00-5	1,1,2-Trichloroethane	1.0	U	
127-18-4	Tetrachloroethene	1.0	U	
591-78-6	2-Hexanone	5.0	U	R (SA, SB)
124-48-1	Dibromochloromethane	1.0	U	UJ
108-90-7	Chlorobenzene	1.0	U	
7816-60-0	m,p-Xylene	1.0	U	
95-47-6	o-Xylene	1.0	U	
100-42-5	Styrene	1.0	U	
75-25-2	Bromoform	1.0	U	
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	
75-71-8	Dichlorodifluoromethane	1.0	U	UJ (SB)
75-69-4	Trichlorofluoromethane	1.0	U	UJ
100-41-4	Ethylbenzene	1.0	U	
541-73-1	1,3-Dichlorobenzene	1.0	U	

W 7/24

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

1710181

Lab Name: Laucks Testing Labs Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: EL011

Matrix: (soil/water) WATER Lab Sample ID: 9905436-02

Sample wt/vol: 25.0 (g/ml) ML Lab File ID: U0524009.D

Level: (low/med) LOW Date Received: 05/15/99

% Moisture: not dec. _____ Date Analyzed: 05/24/99

GC Column: DB-624 ID: 0.45 (mm) Dilution Factor: 1.0

Soil Extract Volume _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

#7269

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: MCAS El Toro

Collection Date: May 20, 1999

LDC Report Date: July 1, 1999

Matrix: Water

Parameters: Volatiles

Validation Level: Level III

Laboratory: Laucks Testing Laboratories

Sample Delivery Group (SDG): EL012

Sample Identification

1710200
1710201
1710202
1710203
1710203DL
1710204
1710203MS
1710203MSD

Introduction

This data review covers 8 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA Contract Laboratory Program Statement of Work (SOW) OLC02.1 for Volatiles.

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

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

Blank results are summarized in Section V.

Field duplicates are summarized in Section XVI.

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

The following are definitions of the data qualifiers:

U Indicates the compound or 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

Instrument performance was checked at 12 hour intervals.

All ion abundance requirements were met.

III. Initial Calibration

Initial calibration was performed using required standard concentrations.

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

Average relative response factors (RRF) for all 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
1/29/99	Acetone 2-Butanone 2-Hexanone	0.008 (≥0.05) 0.015 (≥0.05) 0.049 (≥0.05)	All samples in SDG EL012	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 30.0% with the following exceptions:

Date	Compound	%D	Associated Samples	Flag	A or P
5/28/99	2-Butanone	35.4	1710200 1710201 1710202 VBLKF1	J	A

Date	Compound	%D	Associated Samples	Flag	A or P
6/1/99	Carbon tetrachloride	31.3	1710203 1710203DL 1710204 1710203MS 1710203MSD VBLKF2	J	A

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

Date	Compound	RRF (Limits)	Associated Samples	Flag	A or P
5/28/99	Acetone 2-Butanone	0.009 (≥0.05) 0.020 (≥0.05)	1710200 1710201 1710202 VBLKF1	J (all detects) R (all non-detects) J (all detects) R (all non-detects)	A
6/1/99	Acetone 2-Butanone	0.009 (≥0.05) 0.017 (≥0.05)	1710203 1710203DL 1710204 1710203MS 1710203MSD VBLKF2	J (all detects) R (all non-detects) 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
VBLKF2	6/1/99	Methylene chloride	0.78 ug/L	1710203 1710203DL 1710204

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
1710203DL	Methylene chloride	66 ug/L	100U ug/L

VI. Surrogate Spikes

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

VII. Matrix Spike/Matrix Spike Duplicates

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)

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

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Internal Standards

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

XI. Target Compound Identifications

Raw data were not reviewed for this SDG.

XII. Compound Quantitation and CRQLs

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

Sample	Compound	Finding	Criteria	Flag	A or P
1710203	Trichloroethene	Sample result exceeded calibration range.	Reported result should be within calibration range.	J (all detects)	A

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

The overall assessment of data was acceptable with the following exceptions:

Sample	Compound	Finding	Flag	A or P
1710203	Trichloroethene	For database purposes this compound was rejected.	R	A
1710203DL	All TCL compounds except Trichloroethene	For database purposes these compounds were rejected.	R	A

XVI. Field Duplicates

No field duplicates were identified in this SDG.

XVII. Field Blanks

Sample 1710202 was identified as an equipment rinsate. No volatile contaminants were found in this blank with the following exceptions:

Equipment Rinsate ID	Compound	Concentration (ug/L)
1710202	Acetone	7.2

Sample 1710204 was identified as a trip blank. No volatile contaminants were found in this blank.

MCAS El Toro
Volatiles - Data Qualification Summary - SDG EL012

SDG	Sample	Compound	Flag	A or P	Reason
EL012	1710200 1710201 1710202 1710203 1710203DL 1710204	Acetone 2-Butanone 2-Hexanone	J (all detects) R (all non-detects)	A	Initial calibration (RRF)
EL012	1710200 1710201 1710202	2-Butanone	J	A	Continuing calibration (%D)
EL012	1710203 1710203DL 1710204	Carbon tetrachloride	J	A	Continuing calibration (%D)
EL012	1710200 1710201 1710202 1710203 1710203DL 1710204	Acetone 2-Butanone	J (all detects) R (all non-detects) J (all detects) R (all non-detects)	A	Continuing calibration (RRF)
EL012	1710203	Trichloroethene	J (all detects)	A	Compound quantitation and CRQLs
EL012	1710203	Trichloroethene	R	A	Overall assessment of data
EL012	1710203DL	All TCL compounds except Trichloroethene	R	A	Overall assessment of data

MCAS El Toro
Volatiles - Laboratory Blank Data Qualification Summary - SDG EL012

SDG	Sample	Compound TIC (RT in minutes)	Modified Final Concentration	A or P
EL012	1710203DL	Methylene chloride	100U ug/L	A

1LCA

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

1710200

Lab Name: Laucks Testing Labs

SDG No.: EL012

Lab Sample ID: 9905530-01

Date Received: 05/21/99

Lab File ID: F0528015.D

Date Analyzed: 05/28/99

Purge Vol: 25.0 ML

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION (ug/L)	Q	
74-87-3	Chloromethane	1.0	U	U
75-01-4	Vinyl chloride	1.0	U	
74-83-9	Bromomethane	1.0	U	
75-00-3	Chloroethane	1.0	U	
75-35-4	1,1-Dichloroethene	1.0	U	
67-64-1	Acetone	5.0	U	R (SA, SB)
75-15-0	Carbon disulfide	1.0	U	U
75-09-2	Methylene chloride	2.0	U	
156-60-5	trans-1,2-Dichloroethene	1.0	U	
75-34-3	1,1-Dichloroethane	1.0	U	
156-59-2	cis-1,2-Dichloroethene	1.0	U	
78-93-3	2-Butanone	5.0	U	R (SA, SB)
74-97-5	Bromochloromethane	1.0	U	U
67-66-3	Chloroform	1.0	U	
107-06-2	1,2-Dichloroethane	1.0	U	
71-55-6	1,1,1-Trichloroethane	1.0	U	
56-23-5	Carbon tetrachloride	1.0	U	
71-43-2	Benzene	1.0	U	
79-01-6	Trichloroethene	11		
78-87-5	1,2-Dichloropropane	1.0	U	U
75-27-4	Bromodichloromethane	1.0	U	
10061-01-5	cis-1,3-Dichloropropene	1.0	U	
108-10-1	4-Methyl-2-pentanone	5.0	U	
108-88-3	Toluene	1.0	U	
10061-02-6	trans-1,3-Dichloropropene	1.0	U	
79-00-5	1,1,2-Trichloroethane	1.0	U	
127-18-4	Tetrachloroethene	1.0	U	
591-78-6	2-Hexanone	5.0	U	R (SA)
124-48-1	Dibromochloromethane	1.0	U	U
106-93-4	1,2-Dibromoethane	1.0	U	
108-90-7	Chlorobenzene	1.0	U	
100-41-4	Ethylbenzene	1.0	U	
100-42-5	Styrene	1.0	U	
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	
75-25-2	Bromoform	1.0	U	
541-73-1	1,3-Dichlorobenzene	1.0	U	
106-46-7	1,4-Dichlorobenzene	1.0	U	
95-50-1	1,2-Dichlorobenzene	1.0	U	
96-12-8	1,2-Dibromo-3-chloropropane	1.0	U	
120-82-1	1,2,4-Trichlorobenzene	1.0	U	

FORM I VOA

Form Ver. 1.0 4-22-96

1LCA

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

1710200

Lab Name: Laucks Testing Labs

SDG No.: EL012

Lab Sample ID: 9905530-01

Date Received: 05/21/99

Lab File ID: F0528015.D

Date Analyzed: 05/28/99

Purge Vol: 25.0 ML

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION (ug/L)	Q
1330-20-7	Xylene (total)	1.0	U

M

FORM I VOA

Form Ver. 1.0 4-22-96

7299

1E

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

1710200

Lab Name: Laucks Testing Labs

SDG No.: EL012

Matrix: (soil/water) WATER

Date Received: 05/21/99

Lab Sample ID: 9905530-01

Date Analyzed: 05/28/99

Lab File ID: F0528015.D

Dilution Factor: 1.0

Purge Vol: 25.0 (g/ml) ML

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

17299

FORM I VOA-TIC

1LCA

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

1710201

Lab Name: Laucks Testing Labs

SDG No.: EL012

Lab Sample ID: 9905530-02

Date Received: 05/21/99

Lab File ID: F0528016.D

Date Analyzed: 05/28/99

Purge Vol: 25.0 ML

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION (ug/L)	Q
74-87-3	Chloromethane	1.0	U
75-01-4	Vinyl chloride	1.0	U
74-83-9	Bromomethane	1.0	U
75-00-3	Chloroethane	1.0	U
75-35-4	1,1-Dichloroethene	1.0	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	1.0	U
75-09-2	Methylene chloride	2.0	U
156-60-5	trans-1,2-Dichloroethene	1.0	U
75-34-3	1,1-Dichloroethane	1.0	U
156-59-2	cis-1,2-Dichloroethene	1.0	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	1.0	U
67-66-3	Chloroform	1.0	U
107-06-2	1,2-Dichloroethane	1.0	U
71-55-6	1,1,1-Trichloroethane	1.0	U
56-23-5	Carbon tetrachloride	1.0	U
71-43-2	Benzene	1.0	U
79-01-6	Trichloroethene	11	
78-87-5	1,2-Dichloropropane	1.0	U
75-27-4	Bromodichloromethane	1.0	U
10061-01-5	cis-1,3-Dichloropropene	1.0	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	1.0	U
10061-02-6	trans-1,3-Dichloropropene	1.0	U
79-00-5	1,1,2-Trichloroethane	1.0	U
127-18-4	Tetrachloroethene	1.0	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	1.0	U
106-93-4	1,2-Dibromoethane	1.0	U
108-90-7	Chlorobenzene	1.0	U
100-41-4	Ethylbenzene	1.0	U
100-42-5	Styrene	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U
75-25-2	Bromoform	1.0	U
541-73-1	1,3-Dichlorobenzene	1.0	U
106-46-7	1,4-Dichlorobenzene	1.0	U
95-50-1	1,2-Dichlorobenzene	1.0	U
96-12-8	1,2-Dibromo-3-chloropropane	1.0	U
120-82-1	1,2,4-Trichlorobenzene	1.0	U

U

R(5A,5B)

U

R(5A,5B)

U

R(5A)

U

17299

1LCA

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

1710201

Lab Name: Laucks Testing Labs

SDG No.: EL012

Lab Sample ID: 9905530-02

Date Received: 05/21/99

Lab File ID: F0528016.D

Date Analyzed: 05/28/99

Purge Vol: 25.0 ML

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION (ug/L)	Q
1330-20-7	Xylene (total)	1.0	U

U

FORM I VOA

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17299

1E

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

1710201

Lab Name: Laucks Testing Labs

SDG No.: EL012

Matrix: (soil/water) WATER

Date Received: 05/21/99

Lab Sample ID: 9905530-02

Date Analyzed: 05/28/99

Lab File ID: F0528016.D

Dilution Factor: 1.0

Purge Vol: 25.0 (g/ml) ML

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

17299

1LCA

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

1710202

Lab Name: Laucks Testing Labs

SDG No.: EL012

Lab Sample ID: 9905530-03

Date Received: 05/21/99

Lab File ID: F0528017.D

Date Analyzed: 05/28/99

Purge Vol: 25.0 ML

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION (ug/L)	Q	
74-87-3	Chloromethane	1.0	U	U
75-01-4	Vinyl chloride	1.0	U	
74-83-9	Bromomethane	1.0	U	
75-00-3	Chloroethane	1.0	U	
75-35-4	1,1-Dichloroethene	1.0	U	J (SA,SB)
67-64-1	Acetone	7.2		
75-15-0	Carbon disulfide	1.0	U	U
75-09-2	Methylene chloride	2.0	U	
156-60-5	trans-1,2-Dichloroethene	1.0	U	
75-34-3	1,1-Dichloroethane	1.0	U	
156-59-2	cis-1,2-Dichloroethene	1.0	U	R (SA,SB)
78-93-3	2-Butanone	5.0	U	
74-97-5	Bromochloromethane	1.0	U	U
67-66-3	Chloroform	1.0	U	
107-06-2	1,2-Dichloroethane	1.0	U	
71-55-6	1,1,1-Trichloroethane	1.0	U	
56-23-5	Carbon tetrachloride	1.0	U	
71-43-2	Benzene	1.0	U	
79-01-6	Trichloroethene	1.0	U	
78-87-5	1,2-Dichloropropane	1.0	U	
75-27-4	Bromodichloromethane	1.0	U	
10061-01-5	cis-1,3-Dichloropropene	1.0	U	
108-10-1	4-Methyl-2-pentanone	5.0	U	
108-88-3	Toluene	1.0	U	
10061-02-6	trans-1,3-Dichloropropene	1.0	U	
79-00-5	1,1,2-Trichloroethane	1.0	U	
127-18-4	Tetrachloroethene	1.0	U	
591-78-6	2-Hexanone	5.0	U	R (SA)
124-48-1	Dibromochloromethane	1.0	U	U
106-93-4	1,2-Dibromoethane	1.0	U	
108-90-7	Chlorobenzene	1.0	U	
100-41-4	Ethylbenzene	1.0	U	
100-42-5	Styrene	1.0	U	
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	
75-25-2	Bromoform	1.0	U	
541-73-1	1,3-Dichlorobenzene	1.0	U	
106-46-7	1,4-Dichlorobenzene	1.0	U	
95-50-1	1,2-Dichlorobenzene	1.0	U	
96-12-8	1,2-Dibromo-3-chloropropane	1.0	U	
120-82-1	1,2,4-Trichlorobenzene	1.0	U	

7299

1LCA

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

1710202

Lab Name: Laucks Testing Labs

SDG No.: EL012

Lab Sample ID: 9905530-03

Date Received: 05/21/99

Lab File ID: F0528017.D

Date Analyzed: 05/28/99

Purge Vol: 25.0 ML

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION (ug/L)	Q
1330-20-7	Xylene (total)	1.0	U

U

1799

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1E

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

1710202

Lab Name: Laucks Testing Labs

SDG No.: EL012

Matrix: (soil/water) WATER

Date Received: 05/21/99

Lab Sample ID: 9905530-03

Date Analyzed: 05/28/99

Lab File ID: F0528017.D

Dilution Factor: 1.0

Purge Vol: 25.0 (g/ml) ML

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

07799

1LCA
LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

1710203

Lab Name: Laucks Testing Labs

SDG No.: EL012

Lab Sample ID: 9905530-04

Date Received: 05/21/99

Lab File ID: F0601010.D

Date Analyzed: 06/01/99

Purge Vol: 25.0 ML

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION (ug/L)	Q	
74-87-3	Chloromethane	1.0	U	U
75-01-4	Vinyl chloride	1.0	U	
74-83-9	Bromomethane	1.0	U	
75-00-3	Chloroethane	1.0	U	
75-35-4	1,1-Dichloroethene	1.0	U	
67-64-1	Acetone	5.0	U	R (SA, SB)
75-15-0	Carbon disulfide	1.0	U	U
75-09-2	Methylene chloride	2.0	U	
156-60-5	trans-1,2-Dichloroethene	1.0	U	
75-34-3	1,1-Dichloroethane	1.0	U	
156-59-2	cis-1,2-Dichloroethene	1.0	U	
78-93-3	2-Butanone	5.0	U	R (SA, SB)
74-97-5	Bromochloromethane	1.0	U	U
67-66-3	Chloroform	1.2		
107-06-2	1,2-Dichloroethane	1.0	U	U
71-55-6	1,1,1-Trichloroethane	1.0	U	U
56-23-5	Carbon tetrachloride	2.6		U (SB)
71-43-2	Benzene	1.0	U	U
79-01-6	Trichloroethene	310	E	R (14)
78-87-5	1,2-Dichloropropane	1.0	U	U
75-27-4	Bromodichloromethane	1.0	U	
10061-01-5	cis-1,3-Dichloropropene	1.0	U	
108-10-1	4-Methyl-2-pentanone	5.0	U	
108-88-3	Toluene	1.0	U	
10061-02-6	trans-1,3-Dichloropropene	1.0	U	
79-00-5	1,1,2-Trichloroethane	1.0	U	
127-18-4	Tetrachloroethene	5.9		
591-78-6	2-Hexanone	5.0	U	R (SA)
124-48-1	Dibromochloromethane	1.0	U	U
106-93-4	1,2-Dibromoethane	1.0	U	
108-90-7	Chlorobenzene	1.0	U	
100-41-4	Ethylbenzene	1.0	U	
100-42-5	Styrene	1.0	U	
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	
75-25-2	Bromoform	1.0	U	
541-73-1	1,3-Dichlorobenzene	1.0	U	
106-46-7	1,4-Dichlorobenzene	1.0	U	
95-50-1	1,2-Dichlorobenzene	1.0	U	
96-12-8	1,2-Dibromo-3-chloropropane	1.0	U	
120-82-1	1,2,4-Trichlorobenzene	1.0	U	

11799

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1LCA

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

1710203

Lab Name: Laucks Testing Labs

SDG No.: EL012

Lab Sample ID: 9905530-04

Date Received: 05/21/99

Lab File ID: F0601010.D

Date Analyzed: 06/01/99

Purge Vol: 25.0 ML

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION (ug/L)	Q
1330-20-7	Xylene (total)	1.0	U

U

U 7299

FORM I VOA

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1E

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

1710203

Lab Name: Laucks Testing Labs

SDG No.: EL012

Matrix: (soil/water) WATER

Date Received: 05/21/99

Lab Sample ID: 9905530-04

Date Analyzed: 06/01/99

Lab File ID: F0601010.D

Dilution Factor: 1.0

Purge Vol: 25.0 (g/ml) ML

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

1799

1LCA

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

1710203DL

Lab Name: Laucks Testing Labs

SDG No.: EL012

Lab Sample ID: 9905530-04DL

Date Received: 05/21/99

Lab File ID: F0601013.D

Date Analyzed: 06/01/99

Purge Vol: 25.0 ML

Dilution Factor: 50.0

CAS NO.	COMPOUND	CONCENTRATION (ug/L)	Q
74-87-3	Chloromethane	50	U
75-01-4	Vinyl chloride	50	U
74-83-9	Bromomethane	50	U
75-00-3	Chloroethane	50	U
75-35-4	1,1-Dichloroethene	50	U
67-64-1	Acetone	250	U
75-15-0	Carbon disulfide	50	U
75-09-2	Methylene chloride	66	JBD
156-60-5	trans-1,2-Dichloroethene	50	U
75-34-3	1,1-Dichloroethane	50	U
156-59-2	cis-1,2-Dichloroethene	50	U
78-93-3	2-Butanone	250	U
74-97-5	Bromochloromethane	50	U
67-66-3	Chloroform	50	U
107-06-2	1,2-Dichloroethane	50	U
71-55-6	1,1,1-Trichloroethane	50	U
56-23-5	Carbon tetrachloride	50	U
71-43-2	Benzene	50	U
79-01-6	Trichloroethene	1000	D
78-87-5	1,2-Dichloropropane	50	U
75-27-4	Bromodichloromethane	50	U
10061-01-5	cis-1,3-Dichloropropene	50	U
108-10-1	4-Methyl-2-pentanone	250	U
108-88-3	Toluene	50	U
10061-02-6	trans-1,3-Dichloropropene	50	U
79-00-5	1,1,2-Trichloroethane	50	U
127-18-4	Tetrachloroethene	50	U
591-78-6	2-Hexanone	250	U
124-48-1	Dibromochloromethane	50	U
106-93-4	1,2-Dibromoethane	50	U
108-90-7	Chlorobenzene	50	U
100-41-4	Ethylbenzene	50	U
100-42-5	Styrene	50	U
79-34-5	1,1,2,2-Tetrachloroethane	50	U
75-25-2	Bromoform	50	U
541-73-1	1,3-Dichlorobenzene	50	U
106-46-7	1,4-Dichlorobenzene	50	U
95-50-1	1,2-Dichlorobenzene	50	U
96-12-8	1,2-Dibromo-3-chloropropane	50	U
120-82-1	1,2,4-Trichlorobenzene	50	U

R(14)

R(14)

6/29/99

1LCA

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

1710203DL

Lab Name: Laucks Testing Labs

SDG No.: EL012

Lab Sample ID: 9905530-04DL

Date Received: 05/21/99

Lab File ID: F0601013.D

Date Analyzed: 06/01/99

Purge Vol: 25.0 ML

Dilution Factor: 50.0

CAS NO.	COMPOUND	CONCENTRATION (ug/L)	Q
1330-20-7	Xylene (total)	50	U

R(14)

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1E

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

1710203DL

Lab Name: Laucks Testing Labs

SDG No.: EL012

Matrix: (soil/water) WATER

Date Received: 05/21/99

Lab Sample ID: 9905530-04DL

Date Analyzed: 06/01/99

Lab File ID: F0601013.D

Dilution Factor: 50.0

Purge Vol: 25.0 (g/ml) ML

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

1LCA

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

1710204

Lab Name: Laucks Testing Labs

SDG No.: EL012

Lab Sample ID: 9905530-05

Date Received: 05/21/99

Lab File ID: F0601014.D

Date Analyzed: 06/01/99

Purge Vol: 25.0 ML

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION (ug/L)	Q
74-87-3	Chloromethane	1.0	U
75-01-4	Vinyl chloride	1.0	U
74-83-9	Bromomethane	1.0	U
75-00-3	Chloroethane	1.0	U
75-35-4	1,1-Dichloroethene	1.0	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	1.0	U
75-09-2	Methylene chloride	2.0	U
156-60-5	trans-1,2-Dichloroethene	1.0	U
75-34-3	1,1-Dichloroethane	1.0	U
156-59-2	cis-1,2-Dichloroethene	1.0	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	1.0	U
67-66-3	Chloroform	1.0	U
107-06-2	1,2-Dichloroethane	1.0	U
71-55-6	1,1,1-Trichloroethane	1.0	U
56-23-5	Carbon tetrachloride	1.0	U
71-43-2	Benzene	1.0	U
79-01-6	Trichloroethene	1.0	U
78-87-5	1,2-Dichloropropane	1.0	U
75-27-4	Bromodichloromethane	1.0	U
10061-01-5	cis-1,3-Dichloropropene	1.0	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	1.0	U
10061-02-6	trans-1,3-Dichloropropene	1.0	U
79-00-5	1,1,2-Trichloroethane	1.0	U
127-18-4	Tetrachloroethene	1.0	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	1.0	U
106-93-4	1,2-Dibromoethane	1.0	U
108-90-7	Chlorobenzene	1.0	U
100-41-4	Ethylbenzene	1.0	U
100-42-5	Styrene	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U
75-25-2	Bromoform	1.0	U
541-73-1	1,3-Dichlorobenzene	1.0	U
106-46-7	1,4-Dichlorobenzene	1.0	U
95-50-1	1,2-Dichlorobenzene	1.0	U
96-12-8	1,2-Dibromo-3-chloropropane	1.0	U
120-82-1	1,2,4-Trichlorobenzene	1.0	U

R (5A, 5B)

R (5A, 5B)

U, 5B

R (5A)

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1LCA

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

1710204

Lab Name: Laucks Testing Labs

SDG No.: EL012

Lab Sample ID: 9905530-05

Date Received: 05/21/99

Lab File ID: F0601014.D

Date Analyzed: 06/01/99

Purge Vol: 25.0 ML

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION (ug/L)	Q
1330-20-7	Xylene (total)	1.0	U

FORM I VOA

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1E

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

1710204

Lab Name: Laucks Testing Labs

SDG No.: EL012

Matrix: (soil/water) WATER

Date Received: 05/21/99

Lab Sample ID: 9905530-05

Date Analyzed: 06/01/99

Lab File ID: F0601014.D

Dilution Factor: 1.0

Purge Vol: 25.0 (g/ml) ML

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

FORM I VOA-TIC

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: MCAS El Toro, CTO 171

Collection Date: April 26 through May 14, 1999

LDC Report Date: July 12, 1999

Matrix: Water

Parameters: Gross Alpha and Beta

Validation Level: Level III

Laboratory: Paragon Analytics, Inc.

Sample Delivery Group (SDG): 9905031

Sample Identification

1710138	1710171
1710139	1710172
1710145	1710142DUP
1710142	1710160DUP
1710143	1710167MS
1710152	1710167MSD
1710153	1710179MS
1710160	
1710161	
1710154	
1710156	
1710158	
1710173	
1710176	
1710164	
1710165	
1710167	
1710179	
1710180	
1710168	

Introduction

This data review covers 27 water samples listed on the cover sheet. The analyses were per Method PAI SOP 724R5 for Gross Alpha and Beta Radioactivity.

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 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 VIII.

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

All criteria for the initial calibration were met.

Detector efficiency was determined and a self-absorption curve was generated for each radionuclide of interest.

b. Continuing Calibration

Calibration verification and background determination were performed at the required frequencies. Results were within laboratory control limits.

III. Blanks

Method blanks were reviewed for each matrix as applicable. Blank results contained less than the minimum detectable activity (MDA) .

IV. Accuracy and Precision Data

a. Matrix Spike/(Matrix Spike) Duplicates

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

Spike ID (Associated Samples)	Analyte	MS (%R) (Limits)	MSD (%R) (Limits)	RPD (Limits)	Flag	A or P
1710167MS/MSD (All samples in SDG 9905031)	Gross alpha	139.3 (70-130)	-	-	J (all detects)	A

Duplicate (DUP) sample analyses were reviewed for each matrix as applicable. Relative percent differences (RPD) were within QC limits with the following exceptions:

DUP ID (Associated Samples)	Analyte	RPD (Limits)	Flag	A or P
1710142DUP (All samples in SDG 9905031)	Gross beta	26 (≤20)	J	A

b. Laboratory Control Samples

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

V. Minimum Detectable Activity

All minimum detectable activities met required detection limits.

VI. Sample Result Verification

Raw data were not reviewed for this SDG

VII. Overall Assessment of Data

Data flags are summarized at the end of this report.

VIII. Field Duplicates

Samples 1710153 and 1710153 and samples 1710179 and 1710180 were identified as field duplicates. No gross alpha or beta was detected in any of the samples with the following exceptions:

Analyte	Concentration (pCi/L)		RPD
	1710152	1710153	
Gross alpha	60.5	56.1	8
Gross beta	30.5	28.9	5

Analyte	Concentration (pCi/L)		RPD
	1710179	1710180	
Gross alpha	14.7	11.4	25
Gross beta	9.5	8.8	8

IX. Field Blanks

No field blanks were identified in this SDG.

MCAS El Toro, CTO 171
Gross Alpha and Beta - Data Qualification Summary - SDG 9905031

SDG	Sample	Analyte	Flag	A or P	Reason
9905031	1710138	Gross alpha	J (all detects)	A	Matrix spike/Matrix spike duplicates (%R)(RPD)
	1710139	Gross beta	J		
	1710145				
	1710142				
	1710143				
	1710152				
	1710153				
	1710160				
	1710161				
	1710154				
	1710156				
	1710158				
	1710173				
	1710176				
	1710164				
	1710165				
	1710167				
	1710179				
	1710180				
	1710168				
	1710171				
	1710172				

MCAS El Toro, CTO 171
Gross Alpha and Beta - Laboratory Blank Data Qualification Summary - SDG 9905031

No Sample Data Qualified in this SDG

A77

ALPHA/BETA ANALYSIS RESULTS SUMMARY

Method 900.0/9310 (Modified)

Lab Name: Paragon Analytics, Inc.

Date Collected: 04/26/99

Client Name: Laucks Testing Lab

Date Analyzed : 06/27/99

Client Project ID: Bechtel/NAVY CLEAN

Sample Matrix : Water

Lab Sample ID Series: 99-05-031

Count Duration: 1000 Min.

Analyzed By : CJM

Client Sample ID	Lab Sample ID	Gross Alpha (pCi/liter)	Gross Beta (pCi/liter)
1710138	05-031-01	6.9 ± 1.9 J(8,9)	5.6 ± 1.4 J (8,9)
1710139	05-031-02	14.1 ± 3.1	7.6 ± 2.1
1710145	05-031-03	17.1 ± 4.1	4.4 ± 2.6
1710142	05-031-04	26.1 ± 3.5	17.5 ± 2.2
1710143	05-031-05	32.1 ± 4.0	15.2 ± 2.0
1710152	05-031-06	60.5 ± 7.2	30.5 ± 3.6
1710153	05-031-07	56.1 ± 6.8	28.9 ± 3.5
1710160	05-031-08	18.2 ± 2.8	12.8 ± 1.9
1710161	05-031-09	13.1 ± 2.2	9.6 ± 1.5
1710154	05-031-10	21.1 ± 3.8	6.9 ± 2.2
1710156	05-031-11	20.1 ± 3.1	8.3 ± 1.7
1710158	05-031-12	17.8 ± 2.7	8.7 ± 1.4
1710173	05-031-13	16.6 ± 2.8	7.2 ± 1.7
1710176	05-031-14	6.9 ± 1.9	5.1 ± 1.5
1710164	05-031-15	29.2 ± 4.4	12.4 ± 2.4
1710142	05-031-D1	21.4 ± 3.0	13.5 ± 1.8
1710160	05-031-D2	19.9 ± 3.2	11.2 ± 1.8

Reported Uncertainties are the Estimated Total Propagated Uncertainties (2σ)
See PAI SOP 743R1 for TPU determinations.

Reported Activities are the calculated net activities, not truncated or censored by an *a priori* detection limit estimate. Sample results should be compared to the decision level calculated from the appropriate blank.

These samples were prepared using PAI SOP 702R12 and analyzed using PAI SOP 724R5.

Remarks:

7/13/99

Sample 99-05-031-D1 is a duplicate of sample 99-05-031-04.
Sample 99-05-031-D2 is a duplicate of sample 99-05-031-08.

ALPHA/BETA ANALYSIS RESULTS SUMMARY

Method 900.0/9310 (Modified)

Lab Name: Paragon Analytics, Inc.

Date Collected: 05/06/99

Client Name: Laucks Testing Lab

Date Analyzed : 06/28/99

Client Project ID: Bechtel/NAVY CLEAN

Sample Matrix : Water

Lab Sample ID Series: 99-05-031

Count Duration: 1000 Min.

Analyzed By : CJM

Client Sample ID	Lab Sample ID	Gross Alpha (pCi/liter)	Gross Beta (pCi/liter)
1710165	05-031-16	20.5 ± 3.4 J(8,9)	10.9 ± 2.0 J (8,9)
1710167	05-031-17	7.8 ± 2.2	4.6 ± 1.6
1710179	05-031-18	14.7 ± 2.6	9.5 ± 1.8
1710180	05-031-19	11.4 ± 2.4	8.8 ± 1.8
1710168	05-031-20	17.8 ± 3.2	10.0 ± 2.0
1710171	05-031-21	20.4 ± 3.3	9.6 ± 2.1
1710172	05-031-22	23.2 ± 3.4	10.4 ± 1.8

Reported Uncertainties are the Estimated Total Propagated Uncertainties (2σ) See PAI SOP 743R1 for TPU determinations.

Reported Activities are the calculated net activities, not truncated or censored by an *a priori* detection limit estimate. Sample results should be compared to the decision level calculated from the appropriate blank.

These samples were prepared using PAI SOP 702R12 and analyzed using PAI SOP 724R5.

7/13/99

ALPHA/BETA ANALYSIS MDA SUMMARY

Method 900.0/9310 (Modified)

Lab Name: Paragon Analytics, Inc.

Date Collected: 04/26/99

Client Name: Laucks Testing Lab

Date Analyzed : 06/27/99

Client Project ID: Bechtel/NAVY CLEAN

Sample Matrix : Water

Lab Sample ID Series: 99-05-031

Count Duration: 1000 Min.

Analyzed By : CJM

Client Sample ID	Lab Sample ID	Gross Alpha MDA (pCi/liter)	Gross Beta MDA (pCi/liter)
1710138	05-031-01	2.4	2.0
1710139	05-031-02	3.7	3.2
1710145	05-031-03	5.0	4.2
1710142	05-031-04	2.3	1.8
1710143	05-031-05	1.8	1.9
1710152	05-031-06	2.6	2.6
1710153	05-031-07	2.9	2.6
1710160	05-031-08	1.9	2.2
1710161	05-031-09	1.9	1.7
1710154	05-031-10	3.8	3.5
1710156	05-031-11	2.4	2.3
1710158	05-031-12	2.0	1.7
1710173	05-031-13	2.5	2.4
1710176	05-031-14	2.4	2.3
1710164	05-031-15	3.7	3.2
1710142	05-031-D1	1.9	1.8
1710160	05-031-D2	2.7	2.1

Reported Uncertainties are the Estimated Total Propagated Uncertainties (2σ)
See PAI SOP 743FC for TPU determinations.

These samples were prepared using PAI SOP702FC and analyzed using PAI SOP705FC.

Remarks:

Sample 99-05-031-D1 is a duplicate of sample 99-05-031-04.
Sample 99-05-031-D2 is a duplicate of sample 99-05-031-08.

7/13/99

ALPHA/BETA ANALYSIS MDA SUMMARY

Method 900.0/9310 (Modified)

Lab Name: Paragon Analytics, Inc.

Date Collected: 05/06/99

Client Name: Laucks Testing Lab

Date Analyzed : 06/28/99

Client Project ID: Bechtel/NAVY CLEAN

Sample Matrix : Water

Lab Sample ID Series: 99-05-031

Count Duration: 1000 Min.

Analyzed By : CJM

Client Sample ID	Lab Sample ID	Gross Alpha MDA (pCi/liter)	Gross Beta MDA (pCi/liter)
1710165	05-031-16	3.1	2.6
1710167	05-031-17	2.9	2.5
1710179	05-031-18	2.3	2.4
1710180	05-031-19	2.5	2.4
1710168	05-031-20	3.0	2.8
1710171	05-031-21	2.5	2.9
1710172	05-031-22	2.3	2.3

Reported Uncertainties are the Estimated Total Propagated Uncertainties (2σ)
See PAI SOP 743FC for TPU determinations.

These samples were prepared using PAI SOP702FC and analyzed using PAI SOP705FC.

7/13/99

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: MCAS El Toro, CTO 171

Collection Date: April 26 through May 14, 1999

LDC Report Date: July 12, 1999

Matrix: Water

Parameters: Total Alpha Emitting Radium Isotopes

Validation Level: Level III

Laboratory: Paragon Analytics, Inc.

Sample Delivery Group (SDG): 9905031

Sample Identification

1710138	1710171
1710139	1710172
1710145	1710142DUP
1710142	1710160DUP
1710143	1710142MS
1710152	1710160MS
1710153	
1710160	
1710161	
1710154	
1710156	
1710158	
1710173	
1710176	
1710164	
1710165	
1710167	
1710179	
1710180	
1710168	

Introduction

This data review covers 26 water samples listed on the cover sheet. The analyses were per Method PAI SOP 724R5 for Total Alpha Emitting Radium Isotopes.

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 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 VIII.

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

All criteria for the initial calibration were met.

Detector efficiency was determined and a self-absorption curve was generated for each radionuclide of interest.

b. Continuing Calibration

Calibration verification and background determination were performed at the required frequencies. Results were within laboratory control limits.

III. Blanks

Method blanks were reviewed for each matrix as applicable. Blank results contained less than the minimum detectable activity (MDA).

IV. Accuracy and Precision Data

a. Matrix Spike/(Matrix Spike) Duplicate

Matrix spike (MS) analyses were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

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

b. Laboratory Control Samples

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

V. Sample Carrier Recovery

All sample carrier recoveries were within validation criteria.

VI. Minimum Detectable Activity

All minimum detectable activities met required detection limits.

VII. Sample Result Verification

Raw data were not reviewed for this SDG.

IX. Overall Assessment of Data

Data flags are summarized at the end of this report.

X. Field Duplicates

Samples 1710152 and 1710153 and samples 1710179 and 1710180 were identified as field duplicates. No total alpha emitting radium isotopes were detected in any of the samples with the following exceptions:

Analyte	Concentration (pCi/L)		RPD
	1710179	1710180	
Total radium	0.59	0.53	11

XI. Field Blanks

No field blanks were identified in this SDG.

MCAS El Toro, CTO 171
Total Alpha Emitting Radium Isotopes - Data Qualification Summary - SDG 9905031

No Sample Data Qualified in this SDG

MCAS El Toro, CTO 171
Total Alpha Emitting Radium Isotopes - Laboratory Blank Data Qualification Summary - SDG 9905031

No Sample Data Qualified in this SDG

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TOTAL ALPHA-EMITTING RADIUM ANALYSIS RESULTS SUMMARY

Method 903.0 (Modified)

Lab Name: Paragon Analytics, Inc.

Date Collected: 04/26/99

Client Name: Laucks Testing Lab

Date Analyzed : 06/23/99

Client Project ID: Bechtel/NAVY CLEAN

Sample Matrix : Water

Lab Sample ID Series: 99-05-031

Count Duration: 60 Min.

Client Sample ID	Lab Sample ID	Total Radium (pCi/l)
1710138	05-031-01	0.05 ± 0.29 u
1710139	05-031-02	0.36 ± 0.30
1710145	05-031-03	0.38 ± 0.31
1710142	05-031-04	0.43 ± 0.33
1710143	05-031-05	0.66 ± 0.37
1710152	05-031-06	0.24 ± 0.25 u
1710153	05-031-07	0.28 ± 0.31 u
1710160	05-031-08	0.04 ± 0.23
1710161	05-031-09	0.26 ± 0.28
1710154	05-031-10	0.61 ± 0.38
1710156	05-031-11	0.20 ± 0.25 u
1710158	05-031-12	0.10 ± 0.26
1710173	05-031-13	0.07 ± 0.22
1710176	05-031-14	0.09 ± 0.22
1710164	05-031-15	0.09 ± 0.27
1710165	05-031-16	0.18 ± 0.29
1710167	05-031-17	0.30 ± 0.29
1710179	05-031-18	0.59 ± 0.36
1710180	05-031-19	0.53 ± 0.37
1710168	05-031-20	0.32 ± 0.35 u
1710171	05-031-21	0.45 ± 0.38
1710172	05-031-22	0.32 ± 0.39 u
Blank	05-031-B1	0.08 ± 0.11
Blank	05-031-B2	0.01 ± 0.27
1710142	05-031-D1	0.08 ± 0.31
1710160	05-031-D2	0.42 ± 0.38

Reported Uncertainties are the Estimated Total Propagated Uncertainties
See PAI SOP 743R1 for details of the TPU determination.

7/13/99

TOTAL ALPHA-EMITTING RADIUM MDA RESULTS SUMMARY

Method 903.0 (Modified)

Lab Name: Paragon Analytics, Inc.

Date Collected: 04/26/99

Client Name: Laucks Testing Lab

Date Analyzed : 06/23/99

Client Project ID: Bechtel/NAVY CLEAN

Sample Matrix : Water

Lab Sample ID Series: 99-05-031

Count Duration: 60 Min.

Client Sample ID	Lab Sample ID	Total Radium MDA (pCi/l)
1710138	05-031-01	0.47
1710139	05-031-02	0.35
1710145	05-031-03	0.34
1710142	05-031-04	0.38
1710143	05-031-05	0.33
1710152	05-031-06	0.31
1710153	05-031-07	0.40
1710160	05-031-08	0.36
1710161	05-031-09	0.35
1710154	05-031-10	0.39
1710156	05-031-11	0.33
1710158	05-031-12	0.39
1710173	05-031-13	0.34
1710176	05-031-14	0.32
1710164	05-031-15	0.41
1710165	05-031-16	0.40
1710167	05-031-17	0.34
1710179	05-031-18	0.34
1710180	05-031-19	0.41
1710168	05-031-20	0.39
1710171	05-031-21	0.37
1710172	05-031-22	0.46
Blank	05-031-B1	0.17
Blank	05-031-B2	0.45
1710142	05-031-D1	0.50
1710160	05-031-D2	0.48

See PAI SOP 708FC for details of the MDA determination.
Mass-Corrected Efficiency Determination was used in calculations.

pr 7/13/99

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: MCAS El Toro, CTO 171

Collection Date: April 26 through May 14, 1999

LDC Report Date: July 12, 1999

Matrix: Water

Parameters: Radium 228

Validation Level: Level III

Laboratory: Paragon Analytics, Inc.

Sample Delivery Group (SDG): 9905031

Sample Identification

1710138	1710171
1710139	1710172
1710145	1710142DUP
1710142	1710160DUP
1710143	1710171DUP
1710152	1710167MS
1710153	1710167MSD
1710160	
1710161	
1710154	
1710156	
1710158	
1710173	
1710176	
1710164	
1710165	
1710167	
1710179	
1710180	
1710168	

Introduction

This data review covers 27 water samples listed on the cover sheet. The analyses were per Method SOP 724R5 for Radium 228.

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 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 VIII.

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

All criteria for the initial calibration were met.

Detector efficiency was determined and a self-absorption curve was generated for each radionuclide of interest.

b. Continuing Calibration

Calibration verification and background determination were performed at the required frequencies. Results were within laboratory control limits.

III. Blanks

Method blanks were reviewed for each matrix as applicable. Blank results contained less than the minimum detectable activity (MDA).

IV. Accuracy and Precision Data

a. Matrix Spike/(Matrix Spike) Duplicate

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.

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

b. Laboratory Control Samples

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

V. Sample Carrier Recovery

All sample carrier recoveries were within validation criteria.

VI. Minimum Detectable Activity

All minimum detectable activities met required detection limits.

VII. Sample Result Verification

Raw data were not reviewed for this SDG.

IX. Overall Assessment of Data

Data flags are summarized at the end of this report.

X. Field Duplicates

Samples 1710152 and 1710153 and samples 1710179 and 1710180 were identified as field duplicates. No radium 228 was detected in any of the samples with the following exceptions:

Analyte	Concentration (pCi/L)		RPD
	1710179	1710180	
Radium 228	0.95U	1.08	200

XI. Field Blanks

No field blanks were identified in this SDG.

MCAS El Toro, CTO 171
Radium 228 - Data Qualification Summary - SDG 9905031

No Sample Data Qualified in this SDG

MCAS El Toro, CTO 171
Radium 228 - Laboratory Blank Data Qualification Summary - SDG 9905031

No Sample Data Qualified in this SDG

Ra-228 ANALYSIS RESULTS SUMMARY

Lab Name: Paragon Analytics, Inc.

Date Collected: 04/26/99

Client Name: Laucks Testing Laboratori

Date Analyzed : 06/22/99

Client Project ID: Bechtel/NAVY CLEAN

Sample Matrix : Water

Lab Sample ID Series: 99-05-031

Count Duration: 250 Min.

Analyzed by: CJM

Client Sample ID	Lab Sample ID	(pCi/l)	MDA
1710138	05-031-01	0.60 ± 0.43 u	0.68
1710139	05-031-02	0.81 ± 0.46	0.71
1710145	05-031-03	0.78 ± 0.44	0.69
1710142	05-031-04	0.93 ± 0.46	0.70
1710143	05-031-05	0.64 ± 0.41	0.64
1710152	05-031-06	0.42 ± 0.48 u	0.79
1710153	05-031-07	0.12 ± 0.45	0.75
1710160	05-031-08	0.37 ± 0.46	0.75
1710161	05-031-09	-0.19 ± 0.46	0.78
1710154	05-031-10	-0.04 ± 0.41	0.70
1710156	05-031-11	0.35 ± 0.40	0.66
1710158	05-031-12	0.56 ± 0.43	0.69
1710173	05-031-13	0.21 ± 0.43	0.71
1710176	05-031-14	0.62 ± 0.52	0.83
1710164	05-031-15	0.83 ± 0.59	0.94
1710165	05-031-16	0.73 ± 0.55	0.87
1710167	05-031-17	0.67 ± 0.72	1.18
1710179	05-031-18	0.71 ± 0.59	0.95
1710180	05-031-19	1.08 ± 0.50	0.76
1710168	05-031-20	0.84 ± 0.59 u	0.93
1710171	05-031-21	0.83 ± 0.55 u	0.87
1710172	05-031-22	1.07 ± 0.54	0.83
1710142	05-031-D1	0.84 ± 0.46	0.73
1710160	05-031-D2	0.43 ± 0.44 u	0.71
1710171	05-031-D3	0.98 ± 0.61	0.97

Reported Uncertainties are the Estimated Total Propagated Uncertainties (2σ)
See PAI SOP743R1 for details of TPU determinations.

These samples were prepared using PAI SOP746R1 and analyzed using PAI SOP724R5.

7/13/99

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: MCAS El Toro, CTO 171

Collection Date: April 26 through May 14, 1999

LDC Report Date: July 12, 1999

Matrix: Water

Parameters: Total Uranium

Validation Level: Level III

Laboratory: Paragon Analytics, Inc.

Sample Delivery Group (SDG): 9905031

Sample Identification

1710138	1710171
1710139	1710172
1710145	1710160DUP
1710142	1710142DUP
1710143	1710167MS
1710152	1710167MSD
1710153	
1710160	
1710161	
1710154	
1710156	
1710158	
1710173	
1710176	
1710164	
1710165	
1710167	
1710179	
1710180	
1710168	

Introduction

This data review covers 26 water samples listed on the cover sheet. The analyses were per ASTM Method D3972-90M for Total Uranium.

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 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

All criteria for the initial calibration were met.

Detector efficiency was determined and a self-absorption curve was generated for each radionuclide of interest.

b. Continuing Calibration

Calibration verification and background determination were performed at the required frequencies. Results were within laboratory control limits.

III. Blanks

Method blanks were reviewed for each matrix as applicable. Blank results contained less than the minimum detectable activity (MDA) with the following exceptions:

Method Blank ID	Analyte	Activity (pCi/L)	Associated Samples
AS02436BLK	Total uranium	0.090	1710138 1710139 1710145 1710142 1710143 1710152 1710153 1710160 1710161 1710154 1710156 1710158 1710173

No sample data were qualified based on the contaminants found in the method blanks.

IV. Accuracy and Precision Data

a. Matrix Spike/(Matrix Spike) Duplicate

Matrix spike (MS) analyses were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

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

b. Laboratory Control Samples

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

V. Sample Specific Chemical Recovery

All sample specific chemical recoveries were within validation criteria.

VI. Minimum Detectable Activity

All minimum detectable activities met required detection limits.

VII. Sample Result Verification

Raw data were not reviewed for this SDG.

VIII. Overall Assessment of Data

Data flags are summarized at the end of this report.

IX. Field Duplicates

Samples 1710152 and 1710153 and 1710179 and 1710180 were identified as field duplicates. No total uranium was detected in any of the samples with the following exceptions:

Analyte	Activity (pCi/L)		RPD
	1710152	1710153	
Total uranium	46.8	46.5	0.6

Analyte	Activity (pCi/L)		RPD
	1710179	1710180	
Total uranium	10.8	9.81	10

X. Field Blanks

No field blanks were identified in this SDG.

MCAS El Toro, CTO 171
Total Uranium - Data Qualification Summary - SDG 9905031

No Sample Data Qualified in this SDG

MCAS El Toro, CTO 171
Total Uranium - Laboratory Blank Data Qualification Summary - SDG 9905031

No Sample Data Qualified in this SDG

Sample Results Summary

Client Name: Laucks Testing Laboratories, Inc.
Client Project Name: Bechtel/NAVY CLEAN
Client Project Number:

Laboratory Name: Paragon Analytics, Inc.
PAI Work Order: 9905031

Reported on: Tuesday, June 29, 1999 10:39:34

Lab Sample ID	Client Sample ID	Test	Nuclide	Result +/- 2 s TPU	MDC	Units	Matrix	Prep Batch	Date Analyzed	Flags
9905031-1	1710138	TOTALU	TOTALU	7.30 +/- 0.73	0.066	pCi/l	Water	AS02436	6/14/99	
9905031-2	1710139	TOTALU	TOTALU	13.5 +/- 1.2	0.049	pCi/l	Water	AS02436	6/14/99	
9905031-3	1710145	TOTALU	TOTALU	11.9 +/- 1.1	0.057	pCi/l	Water	AS02436	6/14/99	
9905031-4	1710142	TOTALU	TOTALU	27.1 +/- 2.3	0.041	pCi/l	Water	AS02436	6/14/99	
9905031-5	1710143	TOTALU	TOTALU	25.8 +/- 2.3	0.052	pCi/l	Water	AS02436	6/14/99	
9905031-6	1710152	TOTALU	TOTALU	46.8 +/- 3.9	0.080	pCi/l	Water	AS02436	6/26/99	
9905031-7	1710153	TOTALU	TOTALU	46.5 +/- 4.0	0.046	pCi/l	Water	AS02436	6/14/99	
9905031-8	1710160	TOTALU	TOTALU	19.7 +/- 1.7	0.044	pCi/l	Water	AS02436	6/26/99	
9905031-9	1710161	TOTALU	TOTALU	13.4 +/- 1.2	0.018	pCi/l	Water	AS02436	6/14/99	
9905031-10	1710154	TOTALU	TOTALU	15.7 +/- 1.5	0.063	pCi/l	Water	AS02436	6/17/99	
9905031-11	1710156	TOTALU	TOTALU	17.0 +/- 1.5	0.024	pCi/l	Water	AS02436	6/17/99	
9905031-12	1710158	TOTALU	TOTALU	16.4 +/- 1.5	0.023	pCi/l	Water	AS02436	6/17/99	
9905031-13	1710173	TOTALU	TOTALU	14.7 +/- 1.3	0.053	pCi/l	Water	AS02436	6/17/99	
9905031-14	1710176	TOTALU	TOTALU	6.60 +/- 0.69	0.060	pCi/l	Water	AS02437	6/18/99	
9905031-15	1710164	TOTALU	TOTALU	20.8 +/- 1.8	0.061	pCi/l	Water	AS02437	6/18/99	

Comments:

7/13/99

Abbreviations:
TPU - Total Propagated Uncertainty (see PAI SOP 743)
MDC - Minimum Detectable Concentration (see PAI SOP 709)

Qualifiers/Flags:
U - Result is less than the sample specific minimum detectable activity.
LT - Result is less than Requested MDC, greater than sample specific MDC.
Y2 - Chemical Yield outside default limits.

Sample Results Summary

Client Name: Laucks Testing Laboratories, Inc.
Client Project Name: Bechtel/NAVY CLEAN
Client Project Number:

Laboratory Name: Paragon Analytics, Inc.
PAI Work Order: 9905031

Reported on: Tuesday, June 29, 1999 10:39:35

Lab Sample ID	Client Sample ID	Test	Nuclide	Result +/- 2 s TPU	MDC	Units	Matrix	Prep Batch	Date Analyzed	Flags
9905031-16	1710165	TOTALU	TOTALU	16.3 +/- 1.5	0.051	pCi/l	Water	AS02437	6/18/99	
9905031-17	1710167	TOTALU	TOTALU	6.80 +/- 0.69	0.074	pCi/l	Water	AS02437	6/18/99	
9905031-18	1710179	TOTALU	TOTALU	10.8 +/- 1.0	0.075	pCi/l	Water	AS02437	6/18/99	
9905031-19	1710180	TOTALU	TOTALU	9.81 +/- 0.94	0.041	pCi/l	Water	AS02437	6/18/99	
9905031-20	1710168	TOTALU	TOTALU	17.9 +/- 1.6	0.023	pCi/l	Water	AS02437	6/18/99	
9905031-21	1710171	TOTALU	TOTALU	16.0 +/- 1.5	0.044	pCi/l	Water	AS02437	6/21/99	
9905031-22	1710172	TOTALU	TOTALU	21.1 +/- 1.9	0.059	pCi/l	Water	AS02437	6/18/99	

7/13/99

Comments:

Abbreviations:
TPU - Total Propagated Uncertainty (see PAI SOP 743)
MDC - Minimum Detectable Concentration (see PAI SOP 709)

Qualifiers/Flags:
U - Result is less than the sample specific minimum detectable activity.
LT - Result is less than Requested MDC, greater than sample specific MDC.
Y2 - Chemical Yield outside default limits.

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: MCAS El Toro

Collection Date: April 26 through May 7, 1999

LDC Report Date: July 1, 1999

Matrix: Water

Parameters: Wet Chemistry

Validation Level: Level III & IV

Laboratory: Laucks Testing Laboratories

Sample Delivery Group (SDG): EL010

Sample Identification

1710138**	1710142MS
1710139**	1710142DUP
1710140	1710152MS
1710142	1710152DUP
1710143	1710157MS
1710145	1710157DUP
1710148	1710145MS
1710149	1710145DUP
1710150	1710139DUP
1710152	1710156DUP
1710154	
1710156	
1710157	
1710158	
1710160	
1710161	
1710164	
1710165	
1710168	
1710169	

**Indicates sample underwent Level IV review

Introduction

This data review covers 30 water samples listed on the cover sheet. The analyses were per EPA Method 300.0 for Chloride, Fluoride, Nitrate as Nitrogen and Sulfate, EPA Method 310.1 for Alkalinity, EPA Method 376.1 for Total Sulfide, EPA Method 415.1 for Total Organic Carbon and SM Method 3500 FE D for Ferrous and Ferric Iron.

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

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

Blank results are summarized in Section III.

Field duplicates are summarized in Section VII.

Samples indicated by a double asterisk on the front cover underwent a Level IV review. A Level III review was performed on all of the other samples. Raw data were not evaluated for the samples reviewed by Level III criteria since this review is 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 with the following exceptions:

Sample	Analyte	Total Hours From Sample Collection Until Analysis	Required Holding Time (in Days) From Sample Collection Until Analysis	Flag	A or P
1710138**	Nitrate as nitrogen	55.5	48	J	P
1710139**	Nitrate as nitrogen	53.5	48	J	P
1710140	Nitrate as nitrogen	52.5	48	J	P
1710156 1710157 1710158	Ferrous iron	48	24	J	P
1710156 1710157 1710158	Ferric iron	48	24	J	P

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

II. Calibration

a. Initial Calibration

All criteria for the initial calibration of each method were met with the following exceptions:

Sample	Analyte	Finding	Criteria	Flag	A or P
1710138** 1710139** 1710140 1710142 1710143 1710145 1710152 1710154 1710156 1710157 1710158	Chloride Fluoride Nitrate as N	A blank was not used to establish the calibration curve.	A blank must be used to establish the calibration curve.	None None None	P

Sample	Analyte	Finding	Criteria	Flag	A or P
1710138** 1710139** 1710140 1710142 1710143 1710145 1710148 1710149 1710150 1710152 1710154 1710156 1710157 1710158 1710160 1710161 1710164 1710165 1710168 1710169	Sulfate	A blank was not used to establish the calibration curve.	A blank must be used to establish the calibration curve.	None	P

Sample	Analyte	Finding	Criteria	Flag	A or P
1710138** 1710139** 1710140 1710142 1710143 1710145 1710152 1710154 1710156 1710158	Alkalinity	Titrant not standardized prior to analytical run.	Titrant should be standardized prior to each analytical run.	J	P

b. Calibration Verification

Calibration verification frequency and analysis criteria were met for each method when applicable with the following exceptions:

Date	Lab. Reference/ID	Analyte	%R (Limits)	Associated Samples	Flag	A or P
4/28/99	ICV	Ferrous iron	112 (90-110)	1710142 1710143	J (all detects)	P
4/28/99	CCV1	Ferrous iron	113 (90-110)	1710142 1710143	J (all detects)	P

III. Blanks

Method blanks were reviewed for each matrix as applicable. No contaminant

concentrations were found in the method blanks with the following exceptions:

Method Blank ID	Analyte	Concentration	Associated Samples
MB	Alkalinity	2 mg/L	1710138** 1710139** 1710140 1710142 1710143 1710145 1710152 1710154 1710156 1710158

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.

IV. Accuracy and Precision Data

a. Matrix Spike/(Matrix Spike) Duplicates

Matrix spike (MS) analyses were reviewed for each matrix as applicable with the following exceptions:

Sample	Analyte	Finding	Criteria	Flag	A or P
1710138** 1710139** 1710140 1710142 1710143 1710152 1710154 1710156 1710157 1710158	Ferrous iron	No MS associated with these samples.	MS required.	None	P

Percent recoveries (%R) were within QC limits.

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

b. Laboratory Control Samples

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

Sample	Analyte	Finding	Criteria	Flag	A or P
1710138** 1710139** 1710140 1710142 1710143 1710145 1710148 1710149 1710150 1710152 1710154 1710156 1710158 1710160 1710161 1710164 1710165 1710168 1710169	Total Sulfide	No LCS analysis associated with these samples.	LCS analysis required.	J	P

Percent recoveries (%R) were within QC limits.

V. Sample Result Verification

All sample result verifications were within validation criteria for samples on which a Level IV review was performed. Raw data were not evaluated for the samples reviewed by Level III criteria.

VI. Overall Assessment of Data

Data flags are summarized at the end of this report.

VII. Field Duplicates

Samples 1710139** and 1710140 and samples 1710168 and 1710169 were identified as field duplicates. No contaminant concentrations were detected in any of the samples with the following exceptions:

Analyte	Concentration (mg/L)		RPD
	1710139**	1710140	
Alkalinity	250	250	0
Chloride	100	110	10
Ferric iron	1.4	0.94	39
Fluoride	1.7	1.7	0

Analyte	Concentration (mg/L)		RPD
	1710139**	1710140	
Nitrate as nitrogen	4.5	4.6	2
Sulfate	340	350	3
Total organic carbon	2.7	2.6	4

Analyte	Concentration (mg/L)		RPD
	1710168	1710169	
Sulfate	150	150	0

VIII. Field Blanks

No field blanks were identified in this SDG.

MCAS El Toro
Wet Chemistry - Data Qualification Summary - SDG EL010

SDG	Sample	Analyte	Flag	A or P	Reason
EL010	1710138** 1710139** 1710140	Nitrate as nitrogen	J	P	Technical holding times
EL010	1710156 1710157 1710158	Ferrous iron Ferric iron	J J	P	Technical holding times
EL010	1710138** 1710139** 1710140 1710142 1710143 1710145 1710152 1710154 1710156 1710157 1710158	Chloride Fluoride Nitrate as N	None None None	P	Initial calibration
EL010	1710138** 1710139** 1710140 1710142 1710143 1710145 1710148 1710149 1710150 1710152 1710154 1710156 1710157 1710158 1710160 1710161 1710164 1710165 1710168 1710169	Sulfate	None	P	Initial calibration
EL010	1710138** 1710139** 1710140 1710142 1710143 1710145 1710152 1710154 1710156 1710158	Alkalinity	J	P	Continuing calibration

SDG	Sample	Analyte	Flag	A or P	Reason
EL010	1710142 1710143	Ferrous iron	J (all detects)	P	Continuing calibration (%R)
EL010	1710138** 1710139** 1710140 1710142 1710143 1710152 1710154 1710156 1710157 1710158	Ferrous iron	None	P	Matrix spike
EL010	1710138** 1710139** 1710140 1710142 1710143 1710145 1710148 1710149 1710150 1710152 1710154 1710156 1710158 1710160 1710161 1710164 1710165 1710168 1710169	Total Sulfide	J	P	Laboratory control samples

MCAS El Toro
Wet Chemistry - Laboratory Blank Data Qualification Summary - SDG EL010

No Sample Data Qualified in this SDG

INORGANICS ANALYSIS DATA SHEET

Lab Name: Laucks Testing Labs
SDG No. : EL010
Matrix : WATER

Sample ID : 1710138
Lab Sample ID: 9904632-01
Date Received: 04/27/99

Analyte	Result		Units	Prepped	Analyzed	Limit	Method
Bicarb. Alkalinity, HCO3	240.		mg/L J (58)	05/07/99	05/07/99	2.	EPA 310 1mod
Carb. Alkalinity, CO3	2.	U	mg/L UJ	05/07/99	05/07/99	2.	EPA 310 1mod
Alkalinity, Total as CaCO3	240.		mg/L J	05/07/99	05/07/99	2.	EPA 310.1mod
Chloride	75.		mg/L		04/28/99	50.	EPA 300.0
Iron, Ferrous, as Fe	0.04	U	mg/L U		04/27/99	0.04	SM 3500 FE D
Iron, Ferric, as Fe	0.46		mg/L			0.10	SM 3500 FE D
Fluoride (Method 300.0)	1.0		mg/L		05/04/99	0.2	EPA 300.0
Nitrate as N (EPA 300.0)	2.4		mg/L J (1)		04/28/99	1.	EPA 300.0
Sulfide, total	1.	U	mg/L UJ (10)	05/03/99	05/03/99	1.	EPA 376 1
Sulfate (SO4)	180.		mg/L		04/28/99	50.	EPA 300.0
Total Organic Carbon	2.4		mg/L	05/18/99	05/18/99	1.0	EPA 415.1

W7299

INORGANICS ANALYSIS DATA SHEET

Lab Name: Laucks Testing Labs Sample ID : 1710139
SDG No. : EL010 Lab Sample ID: 9904632-02
Matrix : WATER Date Received: 04/27/99

Analyte	Result		Units	Prepped	Analyzed	Limit	Method
Bicarb. Alkalinity, HCO3	250.		mg/L J (SB)	05/07/99	05/07/99	2.	EPA 310 1mod
Carb. Alkalinity, CO3	2.	U	mg/L UJ	05/07/99	05/07/99	2.	EPA 310 1mod
Alkalinity, Total as CaCO3	250.		mg/L J	05/07/99	05/07/99	2.	EPA 310.1mod
Chloride	100.		mg/L		04/28/99	50.	EPA 300.0
Iron, Ferrous, as Fe	0.04	U	mg/L U		04/27/99	0.04	SM 3500 FE D
Iron, Ferric, as Fe	1.4		mg/L			0.10	SM 3500 FE D
Fluoride (Method 300.0)	1.7		mg/L		05/04/99	0.2	EPA 300.0
Nitrate as N (EPA 300.0)	4.5		mg/L J (1)		04/28/99	1.	EPA 300.0
Sulfide, total	1.	U	mg/L UJ (10)	05/03/99	05/03/99	1.	EPA 376 1
Sulfate (SO4)	340.		mg/L		04/28/99	50.	EPA 300.0
Total Organic Carbon	2.7		mg/L	05/18/99	05/18/99	1.0	EPA 415.1

#7299

INORGANICS ANALYSIS DATA SHEET

Lab Name: Laucks Testing Labs Sample ID : 1710140
SDG No. : EL010 Lab Sample ID: 9904632-03
Matrix : WATER Date Received: 04/27/99

Analyte	Result		Units	Prepped	Analyzed	Limit	Method
Bicarb. Alkalinity, HCO3	250.		mg/L J (B)	05/07/99	05/07/99	2.	EPA 310 1mod
Carb. Alkalinity, CO3	2.	U	mg/L U	05/07/99	05/07/99	2.	EPA 310 1mod
Alkalinity, Total as CaCO3	250.		mg/L J	05/07/99	05/07/99	2.	EPA 310.1mod
Chloride	110.		mg/L		04/28/99	50.	EPA 300.0
Iron, Ferrous, as Fe	0.04	U	mg/L U		04/27/99	0.04	SM 3500 FE D
Iron, Ferric, as Fe	0.94		mg/L			0.10	SM 3500 FE D
Fluoride (Method 300.0)	1.7		mg/L		05/04/99	0.2	EPA 300.0
Nitrate as N (EPA 300.0)	4.6		mg/L		04/28/99	1.	EPA 300.0
Sulfide, total	1.	U	mg/L U (U)	05/03/99	05/03/99	1.	EPA 376 1
Sulfate (SO4)	350.		mg/L		04/28/99	50.	EPA 300.0
Total Organic Carbon	2.6		mg/L	05/18/99	05/18/99	1.0	EPA 415.1

N 7299

INORGANICS ANALYSIS DATA SHEET

Lab Name: Laucks Testing Labs Sample ID : 1710142
SDG No. : EL010 Lab Sample ID: 9904648-01
Matrix : WATER Date Received: 04/28/99

Analyte	Result		Units	Prepped	Analyzed	Limit	Method
Bicarb. Alkalinity, HCO3	300.		mg/L J (SB)	05/07/99	05/07/99	2.	EPA 310 1mod
Carb. Alkalinity, CO3	2.	U	mg/L UJ	05/07/99	05/07/99	2.	EPA 310 1mod
Alkalinity, Total as CaCO3	300.		mg/L J	05/07/99	05/07/99	2.	EPA 310.1mod
Chloride	40.		mg/L		04/28/99	5.	EPA 300.0
Iron, Ferrous, as Fe	0.04	U	mg/L ~~UJ~~ U		04/28/99	0.04	SM 3500 FE D
Iron, Ferric, as Fe	0.10	U	mg/L U			0.10	SM 3500 FE D
Fluoride (Method 300.0)	1.2		mg/L		05/04/99	0.2	EPA 300.0
Nitrate as N (EPA 300.0)	10.		mg/L		04/28/99	1.	EPA 300.0
Sulfide, total	1.	U	mg/L UJ (LO)	05/03/99	05/03/99	1.	EPA 376 1
Sulfate (SO4)	160.		mg/L		04/28/99	50.	EPA 300.0
Total Organic Carbon	1.3		mg/L	05/18/99	05/18/99	1.0	EPA 415.1

u 7299

INORGANICS ANALYSIS DATA SHEET

Lab Name: Laucks Testing Labs Sample ID : 1710143
SDG No. : EL010 Lab Sample ID: 9904648-02
Matrix : WATER Date Received: 04/28/99

Analyte	Result		Units	Prepped	Analyzed	Limit	Method
Bicarb. Alkalinity, HCO3	300.		mg/L J (SB)	05/07/99	05/07/99	2.	EPA 310 1mod
Carb. Alkalinity, CO3	2.	U	mg/L U	05/07/99	05/07/99	2.	EPA 310 1mod
Alkalinity, Total as CaCO3	300.		mg/L J	05/07/99	05/07/99	2.	EPA 310.1mod
Chloride	41.		mg/L		04/28/99	5.	EPA 300.0
Iron, Ferrous, as Fe	0.04	U	mg/L U		04/28/99	0.04	SM 3500 FE D
Iron, Ferric, as Fe	0.10	U	mg/L U			0.10	SM 3500 FE D
Fluoride (Method 300.0)	1.3		mg/L		05/04/99	0.2	EPA 300.0
Nitrate as N (EPA 300.0)	6.5		mg/L		04/28/99	1.	EPA 300.0
Sulfide, total	1.	U	mg/L W(10)	05/03/99	05/03/99	1.	EPA 376 1
Sulfate (SO4)	210.		mg/L		04/28/99	50.	EPA 300.0
Total Organic Carbon	1.3		mg/L	05/18/99	05/18/99	1.0	EPA 415.1

#7299

INORGANICS ANALYSIS DATA SHEET

Lab Name: Laucks Testing Labs
SDG No. : EL010
Matrix : WATER

Sample ID : 1710145
Lab Sample ID: 9905017-01
Date Received: 05/01/99

Analyte	Result		Units	Prepped	Analyzed	Limit	Method
Bicarb. Alkalinity, HCO3	310.		mg/L J (SB)	05/07/99	05/07/99	2.	EPA 310 1mod
Carb. Alkalinity, CO3	2.	U	mg/L UJ	05/07/99	05/07/99	2.	EPA 310 1mod
Alkalinity, Total as CaCO3	310.		mg/L J	05/07/99	05/07/99	2.	EPA 310.1mod
Chloride	190.		mg/L		05/10/99	50.	EPA 300.0
Fluoride (Method 300.0)	1.	U	mg/L U		05/05/99	1.	EPA 300.0
Nitrate + Nitrite as N	22.		mg/L	05/21/99	05/21/99	0.01	EPA 353.2
Sulfide, total	1.	U	mg/L UJ(W)	05/06/99	05/06/99	1.	EPA 376 1
Sulfate (SO4)	430.		mg/L		05/05/99	50.	EPA 300.0
Total Organic Carbon	3.9		mg/L	05/18/99	05/18/99	1.0	EPA 415.1

7299

INORGANICS ANALYSIS DATA SHEET

Lab Name: Laucks Testing Labs
SDG No. : EL010
Matrix : WATER

Sample ID : 1710148
Lab Sample ID: 9905019-01
Date Received: 05/01/99

Analyte	Result	Units	Prepped	Analyzed	Limit	Method
Sulfide, total	1. U	mg/L W(10)	05/06/99	05/06/99	1.	EPA 376 1
Sulfate (SO4)	58.	mg/L		05/05/99	50.	EPA 300.0

17299

1

INORGANICS ANALYSIS DATA SHEET

Lab Name: Laucks Testing Labs Sample ID : 1710149

SDG No. : EL010 Lab Sample ID: 9905019-02

Matrix : WATER Date Received: 05/01/99

Analyte	Result		Units	Prepped	Analyzed	Limit	Method
Sulfide, total	1.	U	mg/L U(10)	05/06/99	05/06/99	1.	EPA 376 1
Sulfate (SO4)	140.		mg/L		05/05/99	50.	EPA 300.0

U7249

INORGANICS ANALYSIS DATA SHEET

Lab Name: Laucks Testing Labs
SDG No. : EL010
Matrix : WATER

Sample ID : 1710150
Lab Sample ID: 9905019-03
Date Received: 05/01/99

Analyte	Result		Units	Prepped	Analyzed	Limit	Method
Sulfide, total	1.	U	mg/L	05/06/99	05/06/99	1.	EPA 376 1
Sulfate (SO4)	58.		mg/L		05/05/99	50.	EPA 300.0

17299

INORGANICS ANALYSIS DATA SHEET

Lab Name: Laucks Testing Labs
SDG No. : EL010
Matrix : WATER

Sample ID : 1710152
Lab Sample ID: 9905058-01
Date Received: 05/04/99

Analyte	Result		Units	Prepped	Analyzed	Limit	Method
Bicarb. Alkalinity, HCO3	480.		mg/L J (SB)	05/07/99	05/07/99	2.	EPA 310 1mod
Carb. Alkalinity, CO3	2.	U	mg/L UJ	05/07/99	05/07/99	2.	EPA 310 1mod
Alkalinity, Total as CaCO3	480.		mg/L J	05/07/99	05/07/99	2.	EPA 310.1mod
Chloride	100.		mg/L		05/04/99	50.	EPA 300.0
Iron, Ferrous, as Fe	0.04	U	mg/L U		05/04/99	0.04	SM 3500 FE D
Iron, Ferric, as Fe	0.10	U	mg/L			0.10	SM 3500 FE D
Fluoride (Method 300.0)	1.	U	mg/L		05/04/99	1.	EPA 300.0
Nitrate as N (EPA 300.0)	16.		mg/L		05/04/99	1.	EPA 300.0
Sulfide, total	1.	U	mg/L UJ (10)	05/06/99	05/06/99	1.	EPA 376 1
Sulfate (SO4)	190.		mg/L		05/04/99	50.	EPA 300.0
Total Organic Carbon	2.1		mg/L	05/18/99	05/18/99	1.0	EPA 415.1

a 7299

INORGANICS ANALYSIS DATA SHEET

Lab Name: Laucks Testing Labs Sample ID : 1710154
SDG No. : EL010 Lab Sample ID: 9905058-02
Matrix : WATER Date Received: 05/04/99

Analyte	Result		Units	Prepped	Analyzed	Limit	Method
Bicarb. Alkalinity, HCO3	250.		mg/L J (SB)	05/07/99	05/07/99	2.	EPA 310 1mod
Carb. Alkalinity, CO3	2.	U	mg/L U	05/07/99	05/07/99	2.	EPA 310 1mod
Alkalinity, Total as CaCO3	250.		mg/L J	05/07/99	05/07/99	2.	EPA 310.1mod
Chloride	120.		mg/L		05/04/99	50.	EPA 300.0
Iron, Ferrous, as Fe	0.04	U	mg/L U		05/04/99	0.04	SM 3500 FE D
Iron, Ferric, as Fe	0.10	U	mg/L			0.10	SM 3500 FE D
Fluoride (Method 300.0)	1.	U	mg/L		05/04/99	1.	EPA 300.0
Nitrate as N (EPA 300.0)	4.6		mg/L		05/04/99	1.	EPA 300.0
Sulfide, total	1.	U	mg/L U (10)	05/06/99	05/06/99	1.	EPA 376 1
Sulfate (SO4)	430.		mg/L		05/04/99	50.	EPA 300.0
Total Organic Carbon	5.6		mg/L	05/18/99	05/18/99	1.0	EPA 415.1

L 7299

INORGANICS ANALYSIS DATA SHEET

Lab Name: Laucks Testing Labs Sample ID : 1710156
SDG No. : EL010 Lab Sample ID: 9905097-01
Matrix : WATER Date Received: 05/05/99

Analyte	Result		Units	Prepped	Analyzed	Limit	Method
Bicarb. Alkalinity, HCO3	240.		mg/L J (5B)	05/07/99	05/07/99	2.	EPA 310 1mod
Carb. Alkalinity, CO3	2.	U	mg/L U J	05/07/99	05/07/99	2.	EPA 310 1mod
Alkalinity, Total as CaCO3	240.		mg/L J	05/07/99	05/07/99	2.	EPA 310.1mod
Chloride	92.		mg/L		05/10/99	50.	EPA 300.0
Iron, Ferrous, as Fe	0.04	U	mg/L U (1)		05/06/99	0.04	SM 3500 FE D
Iron, Ferric, as Fe	0.10	U	mg/L U (1)			0.10	SM 3500 FE D
Fluoride (Method 300.0)	1.	U	mg/L U		05/05/99	1.	EPA 300.0
Nitrate as N (EPA 300.0)	9.9		mg/L		05/05/99	1.	EPA 300.0
Sulfide, total	1.	U	mg/L U (10)	05/11/99	05/11/99	1.	EPA 376 1
Sulfate (SO4)	240.		mg/L		05/05/99	50.	EPA 300.0
Total Organic Carbon	1.8		mg/L	05/18/99	05/18/99	1.0	EPA 415.1

47299

1

INORGANICS ANALYSIS DATA SHEET

Lab Name: Laucks Testing Labs Sample ID : 1710157
SDG No. : EL010 Lab Sample ID: 9905097-02
Matrix : WATER Date Received: 05/05/99

Analyte	Result		Units	Prepped	Analyzed	Limit	Method
Chloride	190.		mg/L		05/10/99	50.	EPA 300.0
Iron, Ferrous, as Fe	0.04	U	mg/L W(1)		05/06/99	0.04	SM 3500 FE D
Iron, Ferric, as Fe	0.10	U	mg/L W(1)			0.10	SM 3500 FE D
Fluoride (Method 300.0)	1.	U	mg/L U		05/05/99	1.	EPA 300.0
Nitrate as N (EPA 300.0)	21.		mg/L		05/05/99	1.	EPA 300.0
Sulfate (SO4)	430.		mg/L		05/05/99	50.	EPA 300.0

#7299

INORGANICS ANALYSIS DATA SHEET

Lab Name: Laucks Testing Labs
SDG No. : EL010
Matrix : WATER

Sample ID : 1710158
Lab Sample ID: 9905097-03
Date Received: 05/05/99

Analyte	Result		Units	Prepped	Analyzed	Limit	Method
Bicarb. Alkalinity, HCO3	290.		mg/L J (SB)	05/07/99	05/07/99	2.	EPA 310 1mod
Carb. Alkalinity, CO3	2.	U	mg/L W	05/07/99	05/07/99	2.	EPA 310 1mod
Alkalinity, Total as CaCO3	290.		mg/L J	05/07/99	05/07/99	2.	EPA 310.1mod
Chloride	47.		mg/L		05/10/99	10.	EPA 300.0
Iron, Ferrous, as Fe	0.04	U	mg/L W (1)		05/06/99	0.04	SM 3500 FE D
Iron, Ferric, as Fe	0.10	U	mg/L W (1)			0.10	SM 3500 FE D
Fluoride (Method 300.0)	1.	U	mg/L W		05/05/99	1.	EPA 300.0
Nitrate as N (EPA 300.0)	7.4		mg/L		05/05/99	1.	EPA 300.0
Sulfide, total	1.	U	mg/L W (10)	05/11/99	05/11/99	1.	EPA 376 1
Sulfate (SO4)	140.		mg/L		05/05/99	50.	EPA 300.0
Total Organic Carbon	2.6		mg/L	05/18/99	05/18/99	1.0	EPA 415.1

#7249

INORGANICS ANALYSIS DATA SHEET

Lab Name: Laucks Testing Labs
SDG No. : EL010
Matrix : WATER

Sample ID : 1710160
Lab Sample ID: 9905157-01
Date Received: 05/06/99

Analyte	Result		Units	Prepped	Analyzed	Limit	Method
Sulfide, total	1.	U	mg/L US(10)	05/11/99	05/11/99	1.	EPA 376 1
Sulfate (SO4)	110.		mg/L		05/10/99	50.	EPA 300.0

U7209

INORGANICS ANALYSIS DATA SHEET

Lab Name: Laucks Testing Labs Sample ID : 1710161
SDG No. : EL010 Lab Sample ID: 9905157-02
Matrix : WATER Date Received: 05/06/99

Analyte	Result		Units	Prepped	Analyzed	Limit	Method
Sulfide, total	1.	U	mg/L W)(10)	05/11/99	05/11/99	1.	EPA 376 1
Sulfate (SO4)	130.		mg/L		05/10/99	50.	EPA 300.0

#7299

INORGANICS ANALYSIS DATA SHEET

Lab Name: Laucks Testing Labs Sample ID : 1710164
SDG No. : EL010 Lab Sample ID: 9905185-01
Matrix : WATER Date Received: 05/07/99

Analyte	Result		Units	Prepped	Analyzed	Limit	Method
Sulfide, total	1.	U	mg/L U (10)	05/11/99	05/11/99	1.	EPA 376 1
Sulfate (SO4)	220.		mg/L		05/10/99	50.	EPA 300.0

A7299

INORGANICS ANALYSIS DATA SHEET

Lab Name: Laucks Testing Labs
SDG No. : EL010
Matrix : WATER

Sample ID : 1710165
Lab Sample ID: 9905285-02
Date Received: 05/07/99

Analyte	Result	Units	Prepped	Analyzed	Limit	Method
Sulfide, total	1. U	mg/L WS(10)	05/11/99	05/11/99	1.	EPA 376 1
Sulfate (SO4)	110.	mg/L		05/10/99	50.	EPA 300.0

4299

INORGANICS ANALYSIS DATA SHEET

Lab Name: Laucks Testing Labs
SDG No. : EL010
Matrix : WATER

Sample ID : 1710168
Lab Sample ID: 9905203-01
Date Received: 05/08/99

Analyte	Result	Units	Prepped	Analyzed	Limit	Method
Sulfide, total	1. U	mg/L W(10)	05/14/99	05/14/99	1.	EPA 376 1
Sulfate (SO4)	150.	mg/L		05/10/99	50.	EPA 300.0

u7249

INORGANICS ANALYSIS DATA SHEET

Lab Name: Laucks Testing Labs
SDG No. : EL010
Matrix : WATER

Sample ID : 1710169
Lab Sample ID: 9905203-02
Date Received: 05/08/99

Analyte	Result		Units	Prepped	Analyzed	Limit	Method
Sulfide, total	1.	U	mg/L (U)(10)	05/14/99	05/14/99	1.	EPA 376.1
Sulfate (SO4)	150.		mg/L		05/10/99	50.	EPA 300.0

n7295

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: MCAS El Toro

Collection Date: May 10 through May 14, 1999

LDC Report Date: July 1, 1999

Matrix: Water

Parameters: Wet Chemistry

Validation Level: Level III

Laboratory: Laucks Testing Laboratories

Sample Delivery Group (SDG): EL011

Sample Identification

1710171
1710172
1710173
1710175
1710176
1710177
1710179
1710173MS
1710173DUP

Introduction

This data review covers 9 water samples listed on the cover sheet. The analyses were per EPA Method 300.0 for Sulfate and EPA Method 376.1 for Total Sulfide.

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

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

Blank results are summarized in Section III.

Field duplicates are summarized in Section VII.

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

The following are definitions of the data qualifiers:

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

J Indicates an estimated value.

R Quality control indicates the data is not usable.

N Presumptive evidence of presence of the constituent.

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

A Indicates the finding is based upon technical validation criteria.

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

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

I. Technical Holding Times

All technical holding time requirements were met.

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

II. Calibration

a. Initial Calibration

All criteria for the initial calibration of each method were met.

b. Calibration Verification

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

III. Blanks

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

IV. Accuracy and Precision Data

a. Matrix Spike/(Matrix Spike) Duplicates

Matrix spike (MS) analyses were reviewed for each matrix as applicable with the following exceptions:

Sample	Analyte	Finding	Criteria	Flag	A or P
All samples in SDG EL011	Total Sulfide	No MS associated with these samples.	MS required.	None	P

Percent recoveries (%R) were within QC limits.

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

b. Laboratory Control Samples

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

Sample	Analyte	Finding	Criteria	Flag	A or P
All samples in SDG	Total sulfide	No LCS analysis associated with these samples.	LCS analysis required.	J	P

The samples and associated blanks are qualified as estimated (J) due to the lack of associated laboratory control samples, matrix spikes.

V. Sample Result Verification

Raw data were not reviewed for this SDG.

VI. Overall Assessment of Data

Data flags are summarized at the end of this report.

VII. Field Duplicates

Samples 1710176 and 1710177 were identified as field duplicates. No contaminant concentrations were detected in any of the samples with the following exceptions:

Analyte	Concentration (mg/L)		RPD
	1710176	1710177	
Sulfate	190	190	0

VIII. Field Blanks

No field blanks were identified in this SDG.

MCAS El Toro
Wet Chemistry - Data Qualification Summary - SDG EL011

SDG	Sample	Analyte	Flag	A or P	Reason
EL011	1710171 1710172 1710173 1710175 1710176 1710177 1710179	Total Sulfide	None	P	Matrix spike
EL011	1710171 1710172 1710173 1710175 1710176 1710177 1710179	Total Sulfide	J	P	Laboratory control samples

MCAS El Toro
Wet Chemistry - Laboratory Blank Data Qualification Summary - SDG EL011

No Sample Data Qualified in this SDG

INORGANICS ANALYSIS DATA SHEET

Lab Name: Laucks Testing Labs
SDG No. : EL011
Matrix : WATER

Sample ID : 1710171
Lab Sample ID: 9905306-01
Date Received: 05/11/99

Analyte	Result	Units	Prepped	Analyzed	Limit	Method
Sulfide, total	1. U	mg/L	05/11/99	05/11/99	1.	EPA 376 1
Sulfate (SO4)	270.	mg/L		05/27/99	50.	EPA 300.0

17249

INORGANICS ANALYSIS DATA SHEET

Lab Name: Laucks Testing Labs Sample ID : 1710172
SDG No. : EL011 Lab Sample ID: 9905306-02
Matrix : WATER Date Received: 05/11/99

Analyte	Result		Units	Prepped	Analyzed	Limit	Method
Sulfide, total	1.	U	mg/L UJ(U)	05/11/99	05/11/99	1.	EPA 376 1
Sulfate (SO4)	220.		mg/L		05/27/99	50.	EPA 300.0

A7299

INORGANICS ANALYSIS DATA SHEET

Lab Name: Laucks Testing Labs
SDG No. : EL011
Matrix : WATER

Sample ID : 1710173
Lab Sample ID: 9905306-03
Date Received: 05/11/99

Analyte	Result		Units	Prepped	Analyzed	Limit	Method
Sulfide, total	1.	U	mg/L UJ (10)	05/11/99	05/11/99	1.	EPA 376 1
Sulfate (SO4)	280.		mg/L		05/27/99	50.	EPA 300.0

17299

INORGANICS ANALYSIS DATA SHEET

Lab Name: Laucks Testing Labs
SDG No. : EL011
Matrix : WATER

Sample ID : 1710175
Lab Sample ID: 9905399-01
Date Received: 05/14/99

Analyte	Result		Units	Prepped	Analyzed	Limit	Method
Sulfide, total	1.	U	mg/L UJ(10)	05/14/99	05/14/99	1.	EPA 376 1
Sulfate (SO4)	87.		mg/L		05/27/99	5.	EPA 300.0

W 7299

INORGANICS ANALYSIS DATA SHEET

Lab Name: Laucks Testing Labs
SDG No. : EL011
Matrix : WATER

Sample ID : 1710176
Lab Sample ID: 9905399-02
Date Received: 05/14/99

Analyte	Result		Units	Prepped	Analyzed	Limit	Method
Sulfide, total	1.	U	mg/L W(10)	05/14/99	05/14/99	1.	EPA 376 1
Sulfate (SO4)	190.		mg/L		05/27/99	50.	EPA 300.0

a 7299

INORGANICS ANALYSIS DATA SHEET

Lab Name: Laucks Testing Labs
SDG No. : EL011
Matrix : WATER

Sample ID : 1710177
Lab Sample ID: 9905399-03
Date Received: 05/14/99

Analyte	Result		Units	Prepped	Analyzed	Limit	Method
Sulfide, total	1.	U	mg/L U(10)	05/14/99	05/14/99	1.	EPA 376 1
Sulfate (SO4)	190.		mg/L		05/27/99	50.	EPA 300.0

U7299

INORGANICS ANALYSIS DATA SHEET

Lab Name: Laucks Testing Labs Sample ID : 1710179
SDG No. : EL011 Lab Sample ID: 9905436-01
Matrix : WATER Date Received: 05/15/99

Analyte	Result		Units	Prepped	Analyzed	Limit	Method
Sulfide, total	1.	U	mg/L W(10)	05/21/99	05/21/99	1.	EPA 376 1
Sulfate (SO4)	220.		mg/L		05/27/99	50.	EPA 300.0

7299

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: MCAS El Toro

Collection Date: April 19 through May 3 , 1999

LDC Report Date: June 15, 1999

Matrix: Water

Parameters: Perchlorate

Validation Level: Level III

Laboratory: Columbia Analytical Services, Inc.

Sample Delivery Group (SDG): S9901379

Sample Identification

171105508
171105608
171105708
171105808
171105908
171106008
171106108
171013808
171013908
171014208
171014308
171014508
171014808
171014908/20/21
171015008
171015208
171015408
171013808MS
171013808MSD
171014908/20/21MS
171014908/20/21MSD

Introduction

This data review covers 21 water samples listed on the cover sheet. The analyses were per CADHS Method CLO_4 for Perchlorate.

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

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