QUALIFIED DATA CONTINUED

Qualifiers

U The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

UJ The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

J The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample. A minus sign (-) indicates the numerical value has a low bias. A plus sign (+) indicates the numerical value has a high bias.

R The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified. Rejected results are not usable for any purpose.

N The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification".

NJ The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.

DataVal Reason Codes

001 Exceeded holding time.
002 Blank contamination.
003 Associated initial calibration showed elevated %RSD for compound.
004 Correlation coefficient < 0.995.
005 Average relative response factor < 0.05.
006 Associated continuing calibration showed elevated %D for compound.
007 Relative response factor < 0.05.
008 Surrogate recovery was outside limits.
009 Laboratory control sample recovery exceeded acceptance criteria.
010 Matrix spike recovery exceeded acceptance criteria.
011 The area of the internal standard exceeded acceptance criteria.
012 Retention time exceeded criteria for this compound.
013 Mass spectrum did not match the reference spectrum.
014 Tentatively identified compound (TIC).
015 Value exceeded the linear range of the instrument and was not re-analyzed.
016 Compounds/components co-elute.
017 Results reported below the quantitation limit.
018 Laboratory duplicate relative percent differences (RPD) outside acceptance criteria.
019 Field duplicate RPD outside acceptance criteria.
020 Percent difference between columns exceeded 25%.
021 Laboratory control sample RPD outside acceptance criteria.
022 Matrix spike sample RPD outside acceptance criteria.
023 Serial dilution percent difference outside acceptance criteria.
024 Retention time exceeded established window.
025 ICP Interference Check Sample had percent recoveries outside the 80%-120% criteria.
026 CRI/CRA (detection limit standard) failed acceptance criteria.
100 Other.

Data Validation Worksheet
Gas Chromatography/Mass Spectrometry

Project Name: Alhambra
Project Number: R04S07
Analysis: Semi-volatile Organic Compounds
Method Number: 8270C
Laboratory Name: USEPA Region 9 Laboratory

Performed by/Date: EJN 1/4/06

Reviewed by/Date: APJ 2/17/06

Qualified Data? NO____ YES__X__, see page(s)__24__

SDG Number	Date Sampled	#Samples/Matrix	Validation Level
03309A	04-Nov-03 thru 07-Nov-03	11 Waters	IV

Data review was performed using the following documents as guidelines (check all that are applicable):

- [X] USEPA CLP National Functional Guidelines for Organic Data Review (NFG Org.), October 1999
- [ ] USEPA CLP National Functional Guidelines for Low Concentration Organic Data Review (NFG LL Org.), June 2001
- [X] Project guidance document(s): **EPA Region IX Laboratory SOP #315**
- [ ] Analysis method

[ ] **Validated using QuikVal** (See attached QuikVal sheets for Holding Time, Surrogate, LCS and MS/MSD evaluation)

ITEMS CHECKED - LEVEL III
(Where Applicable)
Sample Receiving
Electronic Data Deliverables
Case Narrative
Holding Times
Instrument Run Logs
Initial Instrument Calibration
Continuing Instrument Calibration
Method Blanks
Surrogates
Laboratory Control Samples
Matrix Spikes/Matrix Spike Duplicates
Field Duplicates
Field QC Blanks
Reporting Limits

ITEMS CHECKED - LEVEL IV
(Where Applicable)
Sample Receiving
Electronic Data Deliverables
Case Narrative
Holding Times
Instrument Run Logs
GC/MS Instrument Performance
Initial Instrument Calibration
Continuing Instrument Calibration
Method Blanks
Surrogates
Laboratory Control Samples
Matrix Spikes/Matrix Spike Duplicates
Field Duplicates
Field QC Blanks

ITEMS CHECKED - LEVEL IV continued
(Where Applicable)
Reporting Limits
Internal Standards
Raw Data
Re-calculation of reported results
Extraction Logs
Tentatively Identified Compounds
System Performance

Data Validation Worksheet
Gas Chromatography/Mass Spectrometry

SAMPLE RECEIVING

	YES	NO	N/A
All COC forms relinquished and received with signature/date?	X		
Reported sample IDs match those listed on COC?	X		
Reported analyses/methods match those listed on COC?	X		
Lab report includes results for every sample/analysis as listed on COC?	X		
Cooler Receipt form present?	X		
Cooler Receipt form filled in completely and signed?	X		
Temperature recorded from:	Not noted		
Recorded temperature between 2C and 6C?	X		
Bubbles present in VOAs?			X

List of Anomalies/Recommended Actions

[X] **No action required**

ELECTRONIC DATA DELIVERABLES

	YES	NO	N/A
Are EDDs included with the data package?	X		
Does client require EDD check against hardcopy?		X	
Were all EDDs verified against hardcopy results?			X
Did all EDD results match reported results?			X
Were anomalies noted?			X
Was the project office/lab notified?			X

List of Anomalies/Recommended Actions

[ ] **No action required**

CLIENT NOTIFICATION

Add Memo Items of Missing Info./Corrections Below	Response Received? YES	NO
[X] **There were no memo items for this project.**		

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CASE NARRATIVES/LABORATORY REPORT FOOTNOTES

	YES	NO	N/A
Case Narrative present in data package?		X	
Are anomalies noted in the CN? (If yes, place an 'X' below)			X
Are anomalies noted in report footnotes? (If yes, place an 'X' below)	X		

THE FOLLOWING ANOMALIES WERE NOTED IN CASE NARRATIVES/LABORATORY REPORT FOOTNOTES:

Sample Delivery Group (SDG) Number:	**03309A**					
Missed extraction/analysis holding time						
Surrogate failure						
Method blank contamination	X					
Instrument blank contamination						
LCS and/or LCS RPD failure	X(1)					
MS/MSD and/or MS/MSD RPD failure	X(1)					
Laboratory duplicate failure						
Compound identification anomaly						
Elevated RSD in the ICAL	X					
Other ICAL anomalies						
Elevated %D in the CCV						
Other CCV anomalies						
Internal standard failure						
Value exceeding the linear range of the instrument						
Co-elution						
Result reported below the quantition limit						
Other notations (list below)						

List of Anomalies

☐ **No anomalies were noted in the case narrative(s)/laboratory report footnotes included with this project.**

(1) THE MS/MSD AND LCS SAMPLES WERE SPIKED AT LOW CONCENTRATIONS; LOW RECOVERIES FOR ACID ANALYTES CAUSED THEIR RESULTS TO FALL BELOW THE REPORTING LIMITS AND BE REPORTED AS "ND."

HOLDING TIMES

Enter Date as mo/day/year
DBE and DBA is calculated automatically

Sample ID	Laboratory ID	Matrix	Date Collected	Date Received	Preservation & Temp	Extraction Date	Analysis Date	DBE	DBA	Comments
AH03201 (FD1)	0311002-01	Water	4-Nov-03	5-Nov-03	3C	6-Nov-03	12-Nov-03	1	6	
AH03202 (FD1)	0311002-02	Water	4-Nov-03	5-Nov-03	3C	6-Nov-03	12-Nov-03	1	6	
AH03203 (FB)	0311002-03	Water	4-Nov-03	5-Nov-03	3C	6-Nov-03	12-Nov-03	1	6	
AH03204	0311007-01	Water	5-Nov-03	6-Nov-03	4C/5C	10-Nov-03	13-Nov-03	5	3	
AH03205 (FB)	0311007-02	Water	5-Nov-03	6-Nov-03	4C/5C	10-Nov-03	13-Nov-03	5	3	
AH03206	0311007-03	Water	5-Nov-03	6-Nov-03	4C/5C	10-Nov-03	13-Nov-03	4	3	
AH03207	0311010-01	Water	6-Nov-03	7-Nov-03	5C	10-Nov-03	13-Nov-03	4	3	
AH03208	0311010-02	Water	6-Nov-03	7-Nov-03	5C	10-Nov-03	13-Nov-03	3	3	
AH03209 (EB)	0311010-03	Water	6-Nov-03	7-Nov-03	5C	10-Nov-03	13-Nov-03	3	3	
AH03210	0311016-01	Water	7-Nov-03	10-Nov-03	4C	10-Nov-03	13-Nov-03	3	3	
AH03211	0311016-02	Water	7-Nov-03	10-Nov-03	4C	10-Nov-03	13-Nov-03	3	3	

DBE = Days before extraction (extraction date - collection date)
DBA = Days before analysis (analysis date - extraction date)

ACCEPTANCE CRITERIA:

	Aqueous
DBA - Volatiles	14
DBE - Semi-volatiles	**7**
DBA - Semi-volatiles	**40**

	Solid
DBA - Volatiles	14
DBE - Semi-volatiles	14
DBA - Semi-volatiles	40

Recommended Actions

[X] **No action required**

SURROGATE RECOVERIES

	YES	NO	N/A
Form Present?	Form I		
All samples listed?	X		
Results agree with raw data? (Level IV)	X		
Did laboratory spike project required surrogate(s)?	X		

ACCEPTANCE CRITERIA REFERENCE: EPA Region IX Laboratory SOP #315

ACCEPTANCE LIMITS:
(LIST SURROGATES SPIKED)

1,4-Dioxane-d8	50-130
2-Fluorophenol	21-110
Phenol-d5	10-110
2-Chlorophenol-d4	33-110
1,2-Dichlorobenzene-d4	16-110
Nitrobenzene-d5	35-114
2-Fluorobiphenyl	43-116
2,4,6-Tribromophenol	10-123
Terphenyl-d14	33-141

LIST ALL RECOVERIES OUTSIDE PROJECT LIMITS

Sample ID	Laboratory ID	Surrogate	Original Recovery	Re-run/ Re-ext'd Recovery	Sample DF*	Comments
						None

List of Anomalies/Recommended Actions

X **No action required**

*If sample DF > or = 5X, no qualification is required.

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SURROGATE RECOVERIES - AVERAGE RESPONSE FACTOR

CALCULATIONS:
ug/L=Ax*Is**Vt*DF*GPC/Ais*RRF*Vo*Vi
ug/Kg=Ax*Is*Vt*Df*GPC/Ais*RRF*Vi*Ws*D

Sample ID: AH03201
Laboratory ID: 0311002-01

	Surrogate: 1,4-Dioxane-d8		Surrogate: 2-Fluorophenol		Surrogate: Phenol-d5		Surrogate: 2-Chlorophenol-d4		Surrogate: 1,2-Dichlorobenzene-d4		
Ax=	40179	4.28002846	1224559	61.7058034	1559543	65.4959497	1193500	63.7620124	476807	38.9519103	Area cmpd in sample
Is=	20		20		20		20		20		Amt IS, in ng
Vt=	1		1		1		1		1		Volume of extract, in uL
Df=	1		1		1		1		1		Dilution factor
GPC=	1		1		1		1		1		1 if GPC not done, 2 if GPC done
Ais=	285336		285336		285336		285336		285336		Area IS
RRF=	0.658		1.391		1.669		1.312		0.858		RRF (average from curve)
Vi=	1		1		1		1		1		Volume of extract injected, in uL
Ws=	1		1		1		1		1		Volume of sample, in mL (or Wt in
D=	1		1		1		1		1		Dry-weight (1 if not taken into acct
%Recovery		**86**		**82**		**87**		**85**		**78**	

	Surrogate: Nitrobenzene-d5		Surrogate: 2-Fluorobiphenyl		Surrogate: 2,4,6-Tribromophenol		Surrogate: Terphenyl-d14		
Ax=	946854	47.3325618	1522747	39.4852722	270047	71.7808105	1428654	47.6121512	Area cmpd in sample
Is=	20		20		20		20		Amt IS, in ng
Vt=	1		1		1		1		Volume of extract, in uL
Df=	1		1		1		1		Dilution factor
GPC=	1		1		1		1		1 if GPC not done, 2 if GPC done
Ais=	995238		525766		809055		706857		Area IS
RRF=	0.402		1.467		0.093		0.849		RRF (average from curve)
Vi=	1		1		1		1		Volume of extract injected, in uL
Ws=	1		1		1		1		Volume of sample, in mL (or Wt in g)
D=	1		1		1		1		Dry-weight (1 if not taken into acct)
%Recovery		**95**		**79**		**96**		**95**	

CALCULATED VALUES MATCH REPORTED VALUES?	YES	NO
	X	

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METHOD BLANK ANALYSES

	YES	NO	N/A
Performed for each matrix?	X		
Performed for each GCMS system?	X		
Performed for each extraction batch?	X		
Performed for each analysis batch?			X
Form Present?	X		
Did laboratory take appropriate corrective action for blank contamination greater than project acceptance criteria?			X

ACCEPTANCE CRITERIA REFERENCE: Client

ACCEPTANCE LEVEL FOR CONTAMINATION: <RL

LIST CONTAMINANTS DETECTED IN METHOD BLANKS

Blank ID	Matrix	Compound	Concen-tration	Units	5X (or 10X)	Comments
B3K0009-BLK1	Water	1,4-Dioxane	0.6	ug/L	3	U 002
B3K0009-BLK1	Water	bis(2-Ethylhexyl)phthalate	0.9	ug/L	9	U 002

LIST ALL METHOD BLANKS AND THEIR ASSOCIATED SAMPLES

Blank ID	Matrix	Associated Samples
B3K0009-BLK1	Water	AH03201, AH03202 and AH03203
B3K0015-BLK1	Water	AH03204, AH03205, AH03206, AH03207, AH03208, AH03209, AH03210 and AH03211

List of Anomalies/Recommended Actions

☐ **No action required**

•Methylene chloride, acetone, and 2-butanone are considered common volatile laboratory contaminants (use 10X rule).

•Phthalates are considered common semi-volatile laboratory contaminants (use 10X rule).

(1) Sample results greater than 5X (or 10X) blank amount.
(2) Sample results non-detect.
(3) No associated samples.

QUALIFY 1,4-DIOXANE AND BIS(2-ETHYL-HEXYL)PHTHALATE U 002 FOR SAMPLES 0311002-01 THRU -03.

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FIELD QC BLANK ANALYSES

TRIP BLANK ANALYSES

	YES	NO	N/A
Trip Blank analyzed?			X
Form Present?			X

FIELD BLANK ANALYSES

	YES	NO	N/A
Field Blank analyzed?	X		
Form Present?	X		

EQUIPMENT BLANK ANALYSES

	YES	NO	N/A
Equipment/Rinse Blank analyzed?	X		
Form Present?	X .		

LIST CONTAMINANTS DETECTED IN TRIP, FIELD, AND EQUIPMENT BLANKS

Blank ID	Laboratory ID	Matrix	Compound	Concen-tration	Units	5X (or 10X)	Comments
AH03203 (FB)	0311002-03	Water	1,4-Dioxane	0.5	ug/L	**2.5**	**U 002**
AH03203 (FB)	0311002-03	Water	bis(2-Ethylhexyl)phthalate	0.8	ug/L	**8**	**U 002**
AH03205 (FB)	0311007-02	Water	bis(2-Ethylhexyl)phthalate	0.5	ug/L	**5**	**U 002**
AH03209 (EB)	0311010-03						**None**

List of Anomalies/Recommended Actions

No action required

•Methylene chloride, acetone, and 2-butanone are considered common volatile laboratory contaminants (use 10X rule).

•Phthalates are considered common semi-volatile laboratory contaminants (use 10X rule).

(1) Sample results greater than 5X (or 10X) blank amount.
(2) Sample results non-detect.
(3) No associated samples.

QUALIFY 1,4-DIOXANE AND BIS(2-ETHYLHEXYL)PHTHALATE U 002 FOR SAMPLES 0311002-01, -02.

QUALIFY BIS(2-ETHYLHEXYL)PHTHALATE U 002 FOR SAMPLE 0311007-03.

LABORATORY CONTROL SAMPLES (LCS/LCSD)

	YES	NO	NA
Form Present?	X		
%R and RPD within limits?		X	
Spike list match project required list?	X		
Results agree with raw data? (Level IV only)	X		

% RECOVERY AND RPD CALCULATION CHECK
Enter analysis date (mo/day/year), spike amount, LCS result, and LCSD result.
% Recoveries and RPD are automatically calculated.

Analysis Date	Spike Compound	Spike Conc	LCS Result	LCSD Results	LCS %R	LCSD %R	RPD	Agree with lab?	QC Batch Number
12-Nov-03	1,4-Dioxane	9.95	10	NA	100.5%	NA	NA	YES	B3K0009
13-Nov-03	4-Nitrophenol	10	8	NA	80.0%	NA	NA	YES	B3K0015
					#DIV/0!	#DIV/0!	#DIV/0!		
					#DIV/0!	#DIV/0!	#DIV/0!		

ACCEPTANCE CRITERIA REFERENCE: EPA Region 9 Laboratory SOP 315

ACCEPTANCE LIMITS:

%R	RPD	
see SOP	NA	** 11 SPIKE COMPOUNDS
0% - 200%	NA	** ALL OTHER COMPOUNDS

LIST ALL RECOVERIES OUTSIDE PROJECT LIMITS

LCS ID	Spike Compound	% Recovery	RPD	Comments
B3K0009-BS1	2,4-Dinitrotoluene	111	NA	**Samples ND; no qual**

Recommended Actions

☐ **No action required**

**** QC ACCEPTANCE LIMITS ARE PROVIDED IN SOP 315 FOR 11 COMPOUNDS; THE LABORATORY USED LIMITS OF 0% - 200% FOR THE REMAINING COMPOUNDS.**

MATRIX SPIKE/MATRIX SPIKE DUPLICATE ANALYSIS(MS/MSD)

	YES	NO	NA
Form Present?	X		
%R and RPD within limits?		X	
Spike list match project required list?	X		
Results agree with raw data? (Level IV only)	X		

% RECOVERY AND RPD CALCULATION CHECK
Enter analysis date (mo/day/year), spike amount, sample result, MS result, and MSD result
IF sample result is ND, enter "0". % Recoveries and RPD are automatically calculated.

Analysis Date	Spiked Sample	Spike Compound	Spike Conc	Sample Results	MS Result	MSD Results	MS %R	MSD %R	RPD	Agree with lab?	QC Batch Number
13-Nov-03	0311007-01	Acenaphthene	9.96	0	9.4	9	94.38%	90.36%	4.35%	YES*	B3K0015
							#DIV/0!	#DIV/0!	#DIV/0!		

ACCEPTANCE CRITERIA REFERENCE: EPA Region 9 Laboratory SOP 315

ACCEPTANCE LIMITS:

%R	RPD	
see SOP	NA	** 11 SPIKE COMPOUNDS
0% - 200%	NA	** ALL OTHER COMPOUNDS

LIST ALL RECOVERIES OUTSIDE PROJECT LIMITS

Sample ID	Laboratory ID	Spike Compound	% Recovery	RPD	Mx DF > or = 5X?	4X Rule Applies?	Comments
AH03204	0311007-01	2,4-Dinitrotoluene	101, 110	10 (ok)	NO	NO	**No action is taken on MS/MSD data alone,**
							and sample is ND.

Recommended Actions

- [X] **No action required**
- [ ] **Laboratory reported RPDs based on % recoveries; appropriate method is to calculate RPDs based on concentrations.**
- [X*] **Spike levels differed for MS and MSD.**
- [X] **No action is taken on MS/MSD data alone unless specified in project plan.**
- [ ] **Qualify only the parent sample unless project plan states otherwise.**

**** QC ACCEPTANCE LIMITS ARE PROVIDED IN SOP 315 FOR 11 COMPOUNDS; THE LABORATORY USED LIMITS OF 0% - 200% FOR THE REMAINING COMPOUNDS.**

(1) 4X Rule.
(2) Dilution factor ≥ 5X.
(3) The parent sample was associated with an unrelated site.

FIELD DUPLICATES

	YES	NO
Are original/field duplicate pairs identifiable?	X	
%RPD within project acceptance limits?	X	

RPD CALCULATION CHECK

IF sample result is ND, enter "0". RPD is automatically calculated

Original Sample ID	Original Lab ID	Matrix	Compound	Orig. Results	Duplicate Sample ID	Duplicate Lab ID	Dup. Results	RPD	Absolute Difference	RL	Meets Criteria?
AH03201	0311002-01	Water	1,4-Dioxane	1.4	AH03202	0311002-02	1.4	0.0%	0		YES
AH03201	0311002-01	Water	bis(2-Ethylhexyl)phthalate	1.1	AH03202	0311002-02	0.9	20.0%	0.2		YES
AH03201	0311002-01	Water	All other SVOCs	ND	AH03202	0311002-02	ND	NA	NA		YES
								#DIV/0!	0		
								#DIV/0!	0		
								#DIV/0!	0		

ACCEPTANCE CRITERIA REFERENCE: EPA Region IX Laboratory SOP #315

ACCEPTANCE LIMITS:

	20%
CRITERIA FOR AQUEOUS RESULTS AT OR NEAR THE RL	+/- 1 X RL
CRITERIA FOR SOIL RESULTS AT OR NEAR THE RL	+/- 2 X RL

LIST ALL RPD OUTSIDE PROJECT LIMITS (DO NOT INCLUDE VALUES < RL)

Original Sample ID	Original Lab ID	Compound	RPD	Comments
				None

Recommended Actions

[X] **No action required**

NC: Not calculated. The absolute difference between the sample result and the duplicate sample result is less than the reporting limit.
N/A: Not analyzed
NA: Not applicable. Calculation of the relative percent difference between the sample result and the duplicate sample result is not applicable.

REPORTING LIMITS

	YES	NO
Are the project-specified reporting limits (RLs) met for all project samples?	X	
Are the RLs for all soil samples raised by dry weight correction?	NA	
Are the RLs raised due to sample dilutions?		X
Was dilution required due to high levels of NON-TARGET analytes?		X
Was dilution required due to high levels of TARGET analytes?		X
Are any samples non-detect at a raised RL? (if so, list below)		X

REPORTING LIMITS REFERENCE: EPA Region IX Laboratory SOP #315

If NO, then list:

Compound	Samples Affected	Lab RL	Project RL	Comments
				None

ANALYTE LIST

	YES	NO
Does the reported target analyte list match the project required list?	X	

ANALYTE LIST REFERENCE: Chain of Custody

If NO, then list extra or missing compounds:

Compound	Missing?	Extra?	Comments
			None

TENTATIVELY IDENTIFIED COMPOUNDS

	YES	NO
All appropriate peaks searched and reported?	X	
Any TICs found in both samples and blanks?	X	
Reasonable identifications reported?	X	
Any TCL compounds reported as TICs?		X

Recommended Actions

[ ] **No action required**

Artifacts, unknowns, and siloxanes are not included above.

THE FOLLOWING TICs WERE FOUND IN BOTH METHOD BLANK B3K0009-BLK1 AND SAMPLES 0311002-01, -02 AND/OR -03:
BUTANE, 2-CHLORO-...; BUTANE, 2-METHOXY...; 2-PENTANOL, 2-MET...; TOLUENE; UNKNOWN AT RTs 4.69, 4.84 AND 5.97.

SYSTEM PERFORMANCE

	YES	NO
Were standard and sample chromatograms provided for all positive results?	X	
Chromatograms free of abrupt baseline shift?	X	
Chromatograms free of high background?	X	
Chromatograms free of baseline rise?	X	
Chromatograms free of extraneous peaks?	X	
Peak resolution good?	X	
Peaks free of tailing?	X	

Recommended Actions

[X] **No action required**

GC/MS INSTRUMENT PERFORMANCE CHECK

	YES	NO
Performed for all initial calibrations?	X	
Performed for all continuing calibrations and samples?	X	
Performed every 12 hours?	X	
BFB/**DFTPP** criteria within method limits?	X	
Concentration of BFB/**DFTPP** injected:	**50 ng**	

List of Anomalies/Recommended Actions

X **No action required**

LIST ALL BFB/DFTPP INJECTIONS

Date	GC/MS ID	Injection time	Ratio Check (Level IV only)	Transcript Errors (L IV)	Associated Samples
12-Nov-03	AG5973L	1023	**OK**	**NONE**	ICAL
12-Nov-03	AG5973L	1023			AH03201, AH03202 and AH03203
13-Nov-03	AG5973L	1217	**OK**	**NONE**	AH03204, AH03205, AH03206, AH03207, AH03208, AH03209, AH03210 and AH03211

LIST ALL BFB/**DFTPP** OUTSIDE CRITERIA (LEVEL IV ONLY)

Date	GC/MS ID	Injection time	Ion Abund Outside Criteria	Comments
				None

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GC/MS INSTRUMENT PERFORMANCE CHECK - DFTPP

Date: 12-Nov-03
Injection Time: 1023
Instrument ID: AG5973L

	Enter raw Abund here	Calc Automatic
51=	222731	57.17%
68=	3145	1.54%
69=	204013	52.37%
70=	1163	0.57%
127=	217941	55.94%
197=	0	0.00%
198=	389589	100.00%
199=	26557	6.82%
275=	85874	22.04%
365=	10772	2.76%
441=	40071	**10.29%**
442=	262405	67.35%
443=	51594	19.66%

Date: 13-Nov-03
Injection Time: 1217
Instrument ID: AG5973L

	Enter raw Abund here	Calc Automatic
51=	197778	49.72%
68=	1666	0.87%
69=	191104	48.04%
70=	971	0.51%
127=	212597	53.44%
197=	901	0.23%
198=	397802	100.00%
199=	26410	6.64%
275=	93354	23.47%
365=	13159	3.31%
441=	53298	**13.40%**
442=	351552	88.37%
443=	68589	19.51%

	YES	NO
CALCULATED VALUES MATCH REPORTED VALUES?	X*	

*** LABORATORY REPORTS MASS 441 RELATIVE TO MASS 443, RATHER THAN MASS 198.**

INITIAL CALIBRATION

	YES	NO
Performed before sample analysis?	X	
Calibration for each matrix?	X	
Calibration for each instrument?	X	
Any Mean RRFs below project limits?		X

ACCEPTANCE CRITERIA REFERENCE: NFG Org., October 1999

ACCEPTANCE LIMITS: Mean RRF 0.05

LIST ALL MEAN RRF THAT DO NOT MEET ACCEPTANCE CRITERIA:

Date	GC/MS ID	Compound	Mean RRF	Comments
				None

ACCEPTANCE CRITERIA REFERENCE: NFG Org., October 1999

ACCEPTANCE LIMITS: %RSD 30
CORR COEF (r) 0.995

LIST ALL %RSD AND CORRELATION COEFFICIENTS THAT DO NOT MEET ACCEPTANCE CRITERIA:

Calibration Date	GCMS ID	Matrix	Compound	Corr Coefficient or % RSD	Comments
					None

LIST ALL ICAL AND ASSOCIATED SAMPLES

Calibration Date	GCMS ID	Matrix	Associated Samples
12-Nov-03	AG5973L	Water	AH03201, AH03202, AH03203, AH03204, AH03205, AH03206, AH03207, AH03208, AH03209, AH03210 and AH03211

List of Anomalies/Recommended Actions

X **No action required**

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INITIAL CALIBRATION - AVERAGE RESPONSE FACTOR

RRF = Ax*Is/Ais*STD **Ax = Area of compound; Is = Amount (in ng) of internal standard; Ais= Area of associated internal standard; STD = Amount (in ng) of compound**

Date:	12-Nov-03
Instrument ID:	AG5973L
Compound:	1,4-Dioxane

RF1

A_x=	629203	RRF
I_s=	5	0.892253653
A_{is}=	44074	
STD=	80	

RF2

A_x=	511434	RRF
I_s=	5	0.95058548
A_{is}=	44835	
STD=	60	

RF3

A_x=	382687	RRF
I_s=	5	0.978018748
A_{is}=	48911	
STD=	40	

RF4

A_x=	284377	RRF
I_s=	5	0.976234123
A_{is}=	48550	
STD=	30	

RF5

A_x=	201559	RRF
I_s=	5	1.085307674
A_{is}=	46429	
STD=	20	

RF6

A_x=	103692	RRF
I_s=	5	1.083375125
A_{is}=	47856	
STD=	10	

RF7

A_x=	49249	RRF
I_s=	5	1.083205032
A_{is}=	45466	
STD=	5	

RF8

A_x=	21116	RRF
I_s=	5	1.137911709
A_{is}=	46392	
STD=	2	

RF9

A_x=	11902	RRF
I_s=	5	1.254453087
A_{is}=	47439	
STD=	1	

AVG. CF	**1.049038292**
SD	**0.110890811**
%RSD=	**10.5707115**

	YES	NO
CALCULATED VALUES MATCH REPORTED VALUES?	X	

	YES	NO
AMOUNTS INJECTED CONSISTENT THROUGHOUT ANALYTICAL SEQUENCE?	X	

DAILY CALIBRATION CHECK

RUN LOGS

	YES	NO	N/A
Run logs present in data package?	X		
All samples located on run logs?	X		
All dilutions located on run logs?			X
Are anomalies noted by the analyst?		X	

PREP LOGS

	YES	NO	N/A
Prep logs present in data package?	X		
All samples located on prep logs?	X		
All dilutions located on prep logs?			X
Are anomalies noted by the analyst?		X	

CONTINUING CALIBRATION

	YES	NO	N/A
Performed before sample analysis?	X		
Performed for each day of analysis?	X		
Performed for each instrument?	X		
Raw data agree with forms? (Level IV only)	X		
Any Daily RRFs below project limits?		X	

ACCEPTANCE CRITERIA REFERENCE: NFG Org., October 1999

ACCEPTANCE LIMITS: RRF 0.05

LIST ALL DAILY RRF THAT DO NOT MEET ACCEPTANCE CRITERIA:

Calibration Date	Time	GCMS ID	Compound	RRF	Comments
					None

ACCEPTANCE CRITERIA REFERENCE: NFG Org., October 1999

ACCEPTANCE LIMITS: %D 25

LIST ALL %D THAT DO NOT MEET ACCEPTANCE CRITERIA (DO NOT INCLUDE SURROGATE %D FAILURES):

Calibration Date	Time	GCMS ID	Matrix	Compound	%D	CCV Out Low	CCV Out High	Comments
								None

List of Anomalies/Recommended Actions

X **No action required**

1 PPB AND 10 PPB QL STANDARDS WERE ANALYZED NEAR THE BEGINNING OF THE 11/13/03 ANALYTICAL RUN. THE 11/12/03 RUN WAS ANALYZED DIRECTLY AFTER THE ICAL, AND QLSs WERE NOT ANALYZED. ALL COMPOUNDS RECOVERED BETWEEN 50% AND 150% IN THE QL STANDARDS ANALYZED ON 11/13/03 WITH THE FOLLOWING EXCEPTION:
RECOVERY FOR HEXACHLOROCYCLOPENTADIENE WAS 41% IN THE 11/13/03 AT 13:57 1 PPB QLS. SAMPLES WEREN'T QUALIFIED FOR THIS FAILURE.

CONTINUED

DAILY CALIBRATION CHECK CONTINUED

LIST ALL PRECEEDING CCVs AND ASSOCIATED SAMPLES

Calibration Date	Time	GCMS ID	Matrix	Associated Samples
12-Nov-03	1338	AG5973L	Water	AH03201, AH03202 and AH03203
13-Nov-03	1236	AG5973L	Water	AH03204, AH03205, AH03206, AH03207, AH03208, AH03209, AH03210 and AH03211

CONTINUING CALIBRATION - AVERAGE RESPONSE FACTOR

RRF = Ax*Is/Ais*STD

A_x = Area of compound
I_s = Amount (in ng) of internal standard
A_{is} = Area of associated internal standard
STD = Amount (in ng) of compound

Date:	12-Nov-03	
Time:	1338	
Instrument ID:	AG5973L	
Compound:	bis(2-Ethylhexyl)phthalate	
RF-CCC		
A_x=	724765	
I_s=	20	0.96981363
A_{is}=	747324	
STD=	20	
avg RRF		0.855
%D		13.43%

Date:	13-Nov-03	
Time:	1236	
Instrument ID:	AG5973L	
Compound:	1,4-Dioxane	
RF-CCC		
A_x=	214272	
I_s=	5	1.0610046
A_{is}=	50488	
STD=	20	
avg RRF		1.049
%D		1.14%

	YES	NO
CALCULATED VALUES MATCH REPORTED VALUES?	X	

	YES	NO
AMOUNTS INJECTED CONSISTENT THROUGHOUT ANALYTICAL SEQUENCE?	X	

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INTERNAL STANDARDS

	YES	NO	N/A
Form Present?	X		
All samples listed?	X		
Results agree with raw data? (Level IV only)	X		
Did laboratory spike project required internal standards?	X		
Are sample IS retention times within 30 seconds of daily ccal?	X		

List of Anomalies/Recommended Actions

X **No action required**

ACCEPTANCE CRITERIA REFERENCE: NFG Org., October 1999

ACCEPTANCE LIMITS: -50% to +100% (of the response in the daily calibration check)

LIST ALL AREAS OUTSIDE ACCEPTANCE LIMITS

Sample ID	Lab ID	Internal Standard	IS Area	IS Out Low	IS Out High	Comments
						None

LIST ALL PRECEEDING INTERNAL STANDARDS AND ASSOCIATED SAMPLES

Calibration Date	Time	GCMS ID	Matrix	Associated Samples
12-Nov-03	1338	AG5973L	Water	AH03201, AH03202 and AH03203
13-Nov-03	1236	AG5973L	Water	AH03204, AH03205, AH03206, AH03207, AH03208, AH03209, AH03210 and AH03211

ACCEPTANCE LIMITS:
(LIST INTERNAL STANDARDS SPIKED)

	Area CCAL	-50%	+100%
1,4-Dioxane-d8	50488	25244	100976
1,4-Dichlorobenzene-d4	295425	147712.5	590850
Naphthalene-d8	1072308	536154	2144616
Acenaphthene-d10	547678	273839	1095356
Phenanthrene-d10	877137	438568.5	1754274
Chrysene-d12	769934	384967	1539868
Perylene-d12	651847	325923.5	1303694

Calibration Date	Time	GCMS ID
13-Nov-03	1236	AG5973L

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METHOD COMPLIANCE - SVOCs

COMPLIANCE CRITERIA REFERENCE: EPA SW-846 METHOD 8270C

INSTRUMENT CALIBRATION

	YES	NO
Is the lowest ICAL standard at or below the DL for each analyte?	X	
Mean RRFs for N-nitroso-di-n-propylamine, Hexachlorocyclopentadiene, 2,4-Dinitrophenol and 4-Nitrophenol ≥ 0.050?	X	
%RSDs for Acenaphthene, 1,4-Dichlorobenzene, Hexachlorobutadiene, Diphenylamine, Di-n-octyl phthalate, Fluoranthene, Benzo(a)pyrene, 4-Chloro-3-methylphenol, 2,4-Dichlorophenol, 2-Nitrophenol, Phenol, Pentachlorophenol and 2,4,6-Trichlorophenol ≤ 30%?	X	

List of Anomalies/Recommended Actions

X **No action required**

CONTINUING CALIBRATION VERIFICATION

	YES	NO
Is the CCV standard at the midpoint of the ICAL for each analyte?	X	
RRFs for N-nitroso-di-n-propylamine, Hexachlorocyclopentadiene, 2,4-Dinitrophenol and 4-Nitrophenol ≥ 0.050?	X	
%Ds for Acenaphthene, 1,4-Dichlorobenzene, Hexachlorobutadiene, Diphenylamine, Di-n-octyl phthalate, Fluoranthene, Benzo(a)pyrene, 4-Chloro-3-methylphenol, 2,4-Dichlorophenol, 2-Nitrophenol, Phenol, Pentachlorophenol and 2,4,6-Trichlorophenol ≤ 20%?	X	

MDL STUDY

	YES	NO	N/A
MDL values present in the package?		X	
Is MDL study provided?		X	
Study performed within 1 year of sample analysis?			X
MDLs support laboratory reporting limits? (If no, list)			X

Compound	Comments
	RL < 3X MDL
	RL < 3X MDL
	RL < 3X MDL
	RL < 3X MDL

SAMPLE CALCULATION WORKSHEET - AVERAGE RESPONSE FACTOR

CALCULATION: ug/L=Ax*Is**Vt*DF*GPC/Ais*RRF*Vo*Vi

Sample ID: AH03211
Laboratory ID: 0311016-02
Compound: bis(2-Ethylhexyl)phthalate **REPORTED VALUE: 2.3 ug/L**

	YES	NO
Compound spectrum matches reference?	X	

Ax=	66103	**2.3236**	Area cmpd in sample
Is=	20		Amt internal standard, in ng
Vt=	1000		Volume of extract, in uL
Df=	1		Dilution factor
GPC=	1		1 if GPC not done, 2 if GPC done
Ais=	744535		Area of internal standard
RRF=	0.855		RRF (average from curve)
Vi=	1		Volume of extract injected, in uL
Ws=	893.8		Volume of sample, in mL (or Wt in g)
D=	1		Dry-weight (1 if dry-weight not taken into acct)

	YES	NO
CALCULATED VALUES MATCH REPORTED VALUES?	X	

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IDENTIFICATION AND QUANTITATION

For Level IV calculate the results of all detects for project samples, and check RT windows.
Use the worksheets labeled "RT windows" and "calculation."

☐ **Qualifications from QuikVal reports are included herein (reason codes 001, 008, 009 and 010)**
☐ **Qualifications were not indicated in QuikVal reports.**

List all samples requiring qualification here:

Sample ID	Lab ID	Compound	Result	Lab Qualifier	Calc Check	Spectra Match?	RT meets Method Criteria	Qualifier	Reason Code
AH03201	0311002-01	1,4-Dioxane	1.4		OK	YES	YES	**U**	**002 (MB,FB)**
AH03201	0311002-01	bis(2-Ethylhexyl)phthalate	1.1		OK	YES	YES	**U**	**002 (MB,FB)**
AH03202	0311002-02	1,4-Dioxane	1.4		OK	YES	YES	**U**	**002 (MB,FB)**
AH03202	0311002-02	bis(2-Ethylhexyl)phthalate	0.9	J	OK	YES	YES	**U**	**002 (MB,FB)**
AH03203	0311002-03	1,4-Dioxane	0.5	J	OK	YES	YES	**U**	**002 (MB)**
AH03203	0311002-03	bis(2-Ethylhexyl)phthalate	0.8	J	OK	YES	YES	**U**	**002 (MB)**
AH03206	0311007-03	bis(2-Ethylhexyl)phthalate	2.7		OK	YES	YES	**U**	**002 (FB)**

[X] **All Level IV sample results were re-calculated and verified to be correctly reported by the laboratory.**

CONTINUED

QUALIFIED DATA CONTINUED

Qualifiers

U The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

UJ The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

J The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample. A minus sign (-) indicates the numerical value has a low bias. A plus sign (+) indicates the numerical value has a high bias.

R The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified. Rejected results are not usable for any purpose.

N The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification".

NJ The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.

DataVal Reason Codes

001 Exceeded holding time.
002 Blank contamination.
003 Associated initial calibration showed elevated %RSD for compound.
004 Correlation coefficient < 0.995.
005 Average relative response factor < 0.05.
006 Associated continuing calibration showed elevated %D for compound.
007 Relative response factor < 0.05.
008 Surrogate recovery was outside limits.
009 Laboratory control sample recovery exceeded acceptance criteria.
010 Matrix spike recovery exceeded acceptance criteria.
011 The area of the internal standard exceeded acceptance criteria.
012 Retention time exceeded criteria for this compound.
013 Mass spectrum did not match the reference spectrum.
014 Tentatively identified compound (TIC).
015 Value exceeded the linear range of the instrument and was not re-analyzed.
016 Compounds/components co-elute.
017 Results reported below the quantitation limit.
018 Laboratory duplicate relative percent differences (RPD) outside acceptance criteria.
019 Field duplicate RPD outside acceptance criteria.
020 Percent difference between columns exceeded 25%.
021 Laboratory control sample RPD outside acceptance criteria.
022 Matrix spike sample RPD outside acceptance criteria.
023 Serial dilution percent difference outside acceptance criteria.
024 Retention time exceeded established window.
025 ICP Interference Check Sample had percent recoveries outside the 80%-120% criteria.
026 CRI/CRA (detection limit standard) failed acceptance criteria.
100 Other.

DataVal, Inc.

MEMORANDUM

TO: Carl Brickner
Environmental Scientist
USEPA Region 9 Quality Assurance Office (PMD-3)

FROM: Donna Breaux DB 3/25/06
Senior Reviewer, DataVal, Inc.

DATE: March 24, 2006

SUBJECT: Review of Analytical Data

Attached are comments resulting from DataVal's review of the following analytical data:

SITE:	Alhambra Nov. 2003 Groundwater Monitoring
SITE ACCOUNT NO.:	09 ES LA 00
CERCLIS ID NO.:	CAD980818579
CASE NO.:	R04S07
SDG NO.:	03309A
LABORATORY:	Region 9 Laboratory, Richmond, CA
ANALYSES:	Volatile Organic Compounds (524.2) and Semi-volatile Organic Compounds (8270C)
SAMPLE NO.:	18 Water Samples (see Case Summary)
COLLECTION DATES:	November 4, 5, 6 and 7, 2003
REVIEWERS:	Lisa Norosky/Donna Breaux, DataVal, Inc.

If there are any questions, please contact Donna Breaux at (415) 883-2780.

Attachment

TPO: [ ]FYI [X]Attention [ ]Action

SAMPLING ISSUES: [X]Yes [ ]No

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Data Validation Report

Case No.: R04S07
Site: Alhambra November 2003 Groundwater Monitoring
Laboratory: Region 9 Laboratory, Richmond, CA
Reviewer: Lisa Norosky/Donna Breaux, DataVal, Inc.
Date: March 24, 2006

I. Case Summary

SAMPLE INFORMATION:

VOC Samples in SDG 03309A: AH03201, AH03202, AH03203, AH03204, AH03205, AH03206, AH03207, AH03208, AH03209, AH03211, AH03210, AH03212, AH03213, AH03214, AH03215, AH03216, AH03217 and AH03218

Analysis: Volatile Organic Compounds
SOW: N/A
Concentration and Matrix: Low Concentration Waters
Collection Dates: November 4, 5, 6 and 7, 2003
Sample Receipt Dates: November 5, 6, 7 and 10, 2003
Extraction Dates: N/A
Analysis Dates: November 6, 7, 10 and 11, 2003

SVOC Samples in SDG 03309A: AH03201, AH03202, AH03203, AH03204, AH03205, AH03206, AH03207, AH03208, AH03209, AH03210 and AH03211

Analysis: Semi-volatile Organic Compounds
SOW: N/A
Concentration and Matrix: Low Concentration Waters
Collection Dates: November 4, 5, 6 and 7, 2003
Sample Receipt Dates: November 5, 6, 7 and 10, 2003
Extraction Dates: November 6 and 10, 2003
Analysis Dates: November 12 and 13, 2003

FIELD QC:

Trip Blanks (TB): None.
Field Blanks (FB): AH03203 and AH03205
Equipment Blanks (EB): AH03209 and AH03216
Background Samples (BG): None.
Field Duplicates (D1): AH03201 and AH03202