SCIENCE APPLICATIONS INTERNATIONAL CORPORATION Organic Data Review Checklist - Standard Validation

	Project:	Harley-Davidson		_	Page 1 of 11		
	SDG No:	180-42938-1	Analysis:	See attached			
	Laboratory:	TestAmerica Pittsburgh	Method: Matrix:	See attached Water			
_							
	data have been su	ackage has been reviewed and the immarized. The general criteria us ination of the following:	e analytical quality co sed to assess the an	ontrol/quality assuranc alytical integrityof the	e performance data were		
		Case Narrative Analytical Holding Times Sample Preservation					
		Project Blanks					
	Project Specific QA	A/QC or contract requirements mag	y take priority over v	alidation criteria in this	procedure.		
	Overall Remarks	: Bluch dotender	-8				
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		ers: "U", not detected at the associated "UJ", not detected and associated "J", associated value estimated "R", associated value unusable or "=", compound properly identified	value estimated	ounded			
	Reviewed by:	childe 4/s	20/15 Abyr	Date:	4/20/15		
(QA Reviewed by:	CARrue		Date:	5-14-15		



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Case Narrative			
erify direct statemen	nts made within the Laboratory Ca	ase Narrative (note discrepancies).	
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I. Re-analysis and	d Secondary Dilutions		
Verify that re-analysis	s and secondary dilutions were pe	performed and reported as necessary. Determine	
appropriate results to			
Remarks:			
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III. Holding Times

VOC - Waters - unpreserved: aromatic within 7 days, non-aromatic within 14 days of sample collection

VOC - Waters - preserved: aromatic and non-aromatic within 14 days of sample collection

VOC - Soils - preserve or analyze within 48 hours of sample collection; analyze within 14 days of preservation

SVOC, Pest., PCB - Waters - extract within 7 days of sample collection, analyze within 40 days of extraction SVOC, Pest., PCB - Soils - extract within 14 days of sample collection, analyze within 40 days of extraction

Deviations:

	VOC			SVOC		Pest/PCB				
Sample #	Date	Date	Date	Date	Date	Date	Date	Date		
	Collected	Analyzed	Collected	Extracted	Analyzed	Collected	Extracted	Analyzed		
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1. If holding times are exceeded, all results are qualified as estimated (.I/L	١.	lf	holdina	times	are	exceeded.	all	results	are	gualified	25	estimate	d	7.17	П	L	ľ
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If hold	ling times :	are exceeded	by more than 2X.	reviewer may	qualify non-de	etected recult	s as unusable (R)

Remarks:		No 1354	<u> </u>		
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III. Holding Times

Metals - Waters - preserved to pH<2, 180 days from sample collection

Metals - Soils - 180 days from sample collection

Mercury - Waters - preserved to pH<2, 28 days from sample collection

Mercury - Soils - 28 days from sample collection

Deviations:

Deviations:		Metals			Mercury				
<u></u>			5	-11	D-4-		Davis	-11	
Sample #	Date	Date	Days	рН	Date	Date	Days	pН	
	Collected	Analyzed	>HT	Check	Collected	Analyzed	>HT	Check	
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- 1. If preserved samples exceed holding time, qualifty all associated results as estimated (J/UJ).
- 2. If unpreserved samples exceed holding time, qualify all associated results as unusable (R).
- 3. If holding times are exceeded by more than 2X, reviewer may qualify non-detected results as unusable (R)
- 4. If water samples are not acidified, use professional judgement. Minimally, qualify data as estimated (J) and non-detects unusable (R).
- 5. If soil samples exceed holding time, use professional judgement to qualify data.

Remarks:	144	

III. Holding Times

Sample should be preserved and analyzed according to the appropriate analytical method In general the following preservations and holding times for waters can be applied:

Sulfate, 4 degress C, 28 days

Sulfide, 4 degrees C, pH ≥9 with zinc acetate/sodium hydroxide, 7 days

Bromide/Chloride/Fluoride, no preservative required, 28 days

Nitrate/Nitrite or Ammonia, 4 degrees C, pH ≤ 2 with sulfuric acid, 28 days

Nitrate or Nitrite, 4 degrees C, 48 hours

Alkalinity, 4 degrees C, 14 days

TDS/TSS, 4degrees C, 7 days

Phosphate (total), 4 degrees C, pH < 2 with sulfuric acid, 28 days

Hexavalent Chromium, Cool 4 degress C, water- 24 hours, soil - 30 days

Deviations:

Sample #	Analyte	Date	Date	Date	Notes:
		Collected	Extracted	Analyzed	

1. If	holding	times	are	exceeded	, all	resui	ts are	qualified	as	estimated	(J/U,	J)
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- 2. If holding times are exceeded by more than 2X, reviewer may qualify non-detected results as unusable (R)
- 3. If samples were not properly preserved, use professional judgement to qualify the data

Remarks:	Au
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VI. Blanks			Page 6	3 of 11
All blanks we to analyze V	OCs and SVOCs Yes	No	el for each 12 hour period on each GC/ \(\) List documented contamination below:	s system used
Laboratory	Method Blanks:			
Date:	Lab ID #	Fraction	Compound	Conc. (ppb)
	180-138365/5	VOC.	metholem allered	0.162
Associated	d Project Blanks (e.g., e	quipment rins	sates, trip blanks, etc.)	
Date	Lab ID#	Fraction	Compound	Conc. (ppb)
499115	180-42938-6 180-42138-3	10C	Mother Charles	0,18
•				
Remarks:				

VI. Blanks (continued)

Calculate action levels based on 10X the highest blank concentration of "common laboratory solvents", VOCs (methylene chloride, acetone, toluene, 2-butanone, cyclohexane) or SVOCs (phthalates), and 5X the highest blank concentration for all other VOC, SVOC, Pesticides, and PCB compounds. Sample weights, volumes, and dilution factors must be taken into account when applying the 5X and 10X criteria. This allows the total amount of contaminant present to be considered.

Deviations:

Deviations.			
	Maximum Conc.	Action Level (ppb)	Samples Affected
Compound		· · · · · · · · · · · · · · · · · · ·	Campioo / illootoa
	Detected, (ppb)		
Motherline Chlinds	0.14	1.4	1, = 4 18 Mas
The state of the s	2 1/3	1 (
16 beach wolfland	0.18	0.9	Mars
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- 1. If compound results exceed the action levels, the data are not qualified
- 2. If compound results are below the required reporting level, report results as non-detect (U) at the reporting level
- 3. If the compound is detected above the reporting level, but below the action level, qualify as not-detected (U)
- 4. If gross contamination exists in blanks (i.e.,, saturated peaks by GC/ MS), all affected compounds in the associated samles should be qualified as unusable (R) due to interference.
- 5. If blanks were not analyzed per matrix per concentration level for each 12 hour period on each GC/MS system used to analyze VOCs and SVOCs use professional judgement to qualify data. Data may be rejected (R).

Remarks:	566	above	ald	ottal	M	
Wethylew chloude	wer al	as detect	ed wither	westwel	Sauks	
af similar (en	rela to	The trin	Stanle.			
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Hold Time Summary

Sample Number	Method	Date Collected	Analysis Dat e	Date Extracted	Days to Analysis
180-42938-1	SW846 8260C	4/8/2015	4/13/2015		5
180-42938-1	SW846 8260C	4/8/2015	4/15/2015		7
180-42938-2	SW846 8260C	4/8/2015	4/15/2015		7
180-42938-2	SW846 8260C	4/8/2015	4/16/2015		8
180-42938-3	SW846 8260C	4/9/2015	4/13/2015		4
180-42938-4	SW846 8260C	4/9/2015	4/13/2015		4
180-42938-5	SW846 8260C	4/9/2015	4/13/2015		4
180-42938-5	SW846 8260C	4/9/2015	4/15/2015		6
180-42938-6	SW846 8260C	4/9/2015	4/15/2015		6

Monday, April 20, 2015

Trip Blank Detections

Sample ID	Sample	Analyte	Result	Method	Units	Qual	
180-42938-6	HD-QC1-0/1-2	Methylene Chloride	0.14	SW846 8260C	ug/L	J	73
180-42938-3	HD-QC1-0/1-3	Tetrachloroethene	0.18	SW846 8260C	ug/L	J	σĎ
180-42938-3	HD-QC1-0/1-3	Toluene	0.28	SW846 8260C	ug/L	ı	RB
180-42938-4	HD-QC1-0/1-4	Toluene	0.30	SW846 8260C	ug/L	J	FB

Sample # 3 and # 4 are Rouse Blank and Equipment blanks. The detection of Tolura is theppieally found in the DI wester that we god from EtS. The hite of PCE is from the Rouse Blank from the pump. The suph that was collected that day had a growth The suph that they had a growth amont than the Actual love! There we nothing we'll amont than the Actual love!

4/20/15 AGM

Menday, April 20, 2015 Page 1 of 1

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IX. Matrix Spike/Matrix Spike Duplicate Information

General MS/MSD Criteria:	VOC	SVOC	Pi
percent recovery (%R)	70-130	45-135	40-
relative percent difference (RPD)	<30	<50	<

VOC	SVOC	Pest	PCB
70-130	45-135	40-140	40-140
<30	<50	<50	<50

	Project Sample(s) Spiked:	_	
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Deviations:

1 0/5	0/10	222	555	
%R	%R	RPD		
	Limits		Limits	Samples Affected
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	%R			

- 1. If the spike recovery is above the upper control limit (UCL), qualify all positive values in the unspiked sample as estimated (J) and non-detects as estimated (UJ).
- 2. If the spike recovery is below the lower control limit (LCL), qualifty positive values as estimated (J). And non-detects as estimated (UJ).
- 3. If the spike recovery is <10%, qualify non-detect values as unusable (R)
- 4. If the RPD does not meet criteria, qualify positive values in the unspiked sample as estimated (J)
- 5. Use professional judgement to qualify additional samples in the analytical group based on MS/MSD results
- 6. Use professional judgement for qualification of data for unspiked compounds

Remarks:			
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X.	Laboratory	Control	Sample	Information
/\·	Luboratory		Odilible	IIIIOIIIIauoii

General	LCS	Criteria	э:
perce	nt re	covery	(%R)

VOC	SVOC	Pest	PCB
80-120	60-120	50-130	50-130

Laboratory LCS Identifications:

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De	V/15	3414	nn	•

Deviations.				
Compound	Date	%R	Samples Affected/Qualifiers Applied	
Carbon Disalfide	4/14/15	39	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
	. ,		19,6 = R only for undituled	
			Russ	

Actions:

Action should be based on both the number of compounds outside the criterion and the magnitude of the exceedance.

- 1. If the LCS recovery is below limits but > one- half the lower limit, qualify valves as estimated (J/UJ).
- 2. If the LCS recovery is < one-half the lower limit, qualify all data for that analyte as unusable (R).
- 3. If the LCS recovery is greater than the upper limit, qualify positive valves for that analyte as estimated (J).
- 4. If more than half the compounds in this LCS are not within recovery criteria, then qualify associated detected compounds as estimated (J).
- 5. Use professional judgement for qualification of data for compounds with no LCS information

See about	