
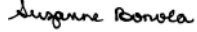


U. S. Steel Gary Works - Laboratory Report Data Review					
Laboratory Report ID:				1709538	
Laboratory Name:	ALS Environmental (Holland, MI)			Report Package Date:	9/29/2017
Project Name:	CAMU Semi-Annual Leak Detect September 2017			Review Date:	10/16/2017
Project Number:	4262-303-01-01 Phase 03				
Reviewer Name:	Angie Bouche			No. of Environ. Samples?*	2
Parameters:	PCBs, VOCs*, SVOCs*, ammonia as N, total dissolved solids, total suspended solids, total metals (As, Ba, Cd, Cr, Pb, Li, Hg, Se, Ag); hexavalent chromium (*list of compounds is in accordance with the CAMU Monitoring Program)			No. of QC Samples?*	1
Method IDs:	SW8082; SW8260B; SW8270D; SW8270D SIM (PAHs); EPA 350.1 R2.0; A2540 C-97; A2540 D-97; SW 6020A; SW7470A; SW7196A			Rejected Results?	No
Matrix:	Aqueous + QC (TB)				
*Attach copy of lab report showing sample IDs and corresponding lab IDs.				Yes	No
				N/A	Comment
Report Completeness & Sample Log-In Condition					
1 Was a signature page with appropriate authority signature provided?				X	
2 Was there a case narrative noting all known problems or anomalies?				X	
3 Were all samples received under chain-of-custody (seals used) and within appropriate temperature?				X	
4 Were all departures from standard conditions narrated (i.e., preservation acceptable, no headspace)?				X	No Departures
5 Are all field sample ID numbers cross-referenced to the laboratory ID numbers?				X	(1)
6 Are all laboratory ID numbers cross-referenced to the corresponding QC data (batch IDs provided)?				X	(1)
7 Were reference methods provided and cited appropriately?				X	
8 Were samples prepared and analyzed within holding times?				X	
Date Collected:	9/11/2017	Date Received:	9/12/2017		
9 Were all soil results reported on a dry-weight basis?					X
10 Was a percent moisture result reported for all soil and sediment samples?					X
11 If required for the project, was supporting documentation (CLP-like) provided?					X
12 If required for the project, were TICs reported?					X
13 Were all MDLs and/or RLs in accordance with project DQOs & reported in the test report?				X	
14 Was justification provided for elevated RLs (e.g., non-target interferences, etc.)?				X	
15 Is there a QAPP or SAP available as a reference for the project performed?				X	(1)
16 Are non-detects identified as ND at RL with a "U", or other (less than "<")?				X	
17 Are laboratory flags defined?				X	
Laboratory Method Blanks and Field Blanks					
1 Were appropriate types of laboratory method blanks analyzed?				X	
2 Were the laboratory method blanks analyzed at the appropriate frequency?				X	
3 Was the method blank free of contamination (i.e., less than the MDL or RL)?				X	
4 Did the method blank contamination affect the final results? If so, note on page 2.					X
5 Was a trip blank required and submitted with the samples?				X	
6 Was the trip blank free of contamination (i.e., less than the MDL or RL)?					X
7 Did the trip blank contamination affect the final results? If so, note on page 2.					X
8 Was an equipment blank required and submitted with the samples?					X
9 Was the equipment blank free of contamination (i.e., less than the MDL or RL)?					X
10 Did the equipment blank contamination affect the final results? If so, note on page 2.					X
11 Was a source water blank required and submitted with the samples?					X
12 Was the source water blank free of contamination (i.e., less than the MDL or RL)?					X
13 Did the source water blank contamination affect the final results? If so, note on page 2.					X
Surrogates					
1 Were surrogates added prior to extraction for all appropriate methods?				X	
2 Were surrogate percent recoveries within laboratory control limits?					X
3 Did the surrogate percent recoveries affect the final results? If so, note on page 2.				X	(3)
Laboratory Control Samples					
1 Were LCS performed for all appropriate methods?				X	
2 Were LCSs spiked with appropriate list of target compounds?				X	
3 Were LCS percent recoveries within laboratory control limits?				X	
4 Did the LCS percent recoveries affect the final results? If so, note on page 2.					X
5 If performed, were LCS Duplicate data provided?					X
6 Were the LCS/LCSD RPD values within laboratory control limits?					X
Matrix Spikes					
1 Were MS/MSDs required to be performed on a project sample?					X
Sample used/methods:					
2 Were MS/MSDs performed on a project sample selected by the laboratory?				X	
Sample used/methods:	LDS-01 (-01B MS/MSD): VOCs (benzene and acetone)				
3 Were MS/MSDs spiked with appropriate list of target compounds?				X	
4 Were MS/MSD percent recoveries within laboratory control limits?					X
5 Did the MS/MSD percent recoveries affect the final results? If yes, narrate.				X	(4)
6 Were the MS/MSD RPD values within laboratory control limits?				X	

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Project Number:	4262-303-01-01 Phase 03			
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Matrix:	Aqueous + QC (TB)			
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			N/A	Comment
7 Did the MS/MSD RPDs affect the final results? If so, note on page 2.			X	
<b>Field and Laboratory Duplicates</b>				
1 Was a field duplicate submitted with this SDG?			X	
Field Duplicate ID:				
2 Was the RPD values less than review criteria?				X
3 Did the field duplicate RPD results affect the final results? If so, narrate.				X
4 Was a laboratory method duplicate (MD) performed?			X	
MD ID:			LDS-02 (PCBs)	
5 Were the RPD values less than review criteria?			X	
6 Did the MD results affect the final results? If so, note on page 2.			X	
<b>Other Laboratory QC Data</b>				
1 Were internal standard data reported? (organics and inorganics by 6020)			X	(6)
2 Were IS area counts and retention times within method required limits?				X
3 Were data associated with manual integration flagged on the test reports?				X
4 Did dual-column confirmation results (PCBs) meet method-required QC limits of <25% difference?			X	
5 Was an interference check sample analyzed and were percent recoveries within QC limits?				X
6 If serial dilutions were analyzed using a project sample, were the percent differences within QC limits?				X (6)
7 Was a CRDL check sample analyzed and were the percent recoveries within QC limits?				X
8 If post-digestion spikes (PDS) were performed for metals, were percent recoveries within QC limits?				X (6)
9 If ICV/CCV was reported in the case narrative, did the ICV/CCV affect the project samples?				X
10 Were the total results greater than the dissolved results (e.g., metals)?				X
<b>Electronic Data Deliverable</b>				
1 Was an EDD provided with the deliverable?			X	
2 Was the electronic data the same as the hardcopy data?				X (7)
<b>Comment No. Description (data usability; note any estimated and/or rejected data):</b>				
1	<b>Sampling:</b> The samples were collected by ALS staff. <b>Login:</b> A custody seal was not used on the cooler; because the cooler was not shipped by a commercial courier, this was not mandatory protocol. <b>Dilutions:</b> Dilutions were needed for the following chemicals due to elevated concentrations: VOCs (-01); PAHs (-01, -02); ammonia as N (-01, -02). <b>QAPP:</b> Uniform Federal Policy - Quality Assurance Project Plan, U. S. Steel Corporation, Gary Works, Gary, Indiana, April 2016.			
2	<b>Trip Blank:</b> Chloroform detected in the trip blank sample (-03) @ 0.91 J ug/L x 5 = 4.55 ug/L; (ND for -01 and -02; NQR).			
3	<b>Surrogate Recoveries: VOCs: Samples -01 and -02:</b> dibromofluoromethane %Rec<LCL, but above >10% (target analytes 1,1,1,2-tetrachloroethane, 1,1,1-trichloroethane, 1,1,2,2-tetrachloroethane, 1,1,2-trichloroethane, 1,1-dichloroethane, 1,2,3-trichloropropane, 1,2-dibromo-3-chloropropane, 1,2-dibromomethane, 1,2-dichloroethane, 1,2-dichloropropane, bromodichloromethane, bromomethane, chloroethane, chloromethane, dibromochloromethane, dibromomethane, dichlorodifluoromethane, iodomethane, trichlorofluoromethane ND, revise to "UJ").			
4	<b>MS/MSD: VOCs - Sample 02B:</b> acetone (MS/MSD %R>UCL; revise parent sample as "J")			
5	<b>Internal Standards:</b> Included in L4 lab report; no review required for general QC data evaluation.			
6	The lab did not perform PDS or SD analysis for this batch report.			
7	<b>Reporting:</b> The laboratory provided an EDD to the database management contractor.			
Signature of Validator:  10/16/2017				
Signature of Senior Review:  10/18/2018				

Attachment 1: Cross-reference of field IDs with laboratory IDs.

#### Acronyms:

CCV: Continuing Calibration Verification

CLP-Like: Level 4 Report

CL: Control Limit

DQOs: Data Quality Objectives

EDD: Electronic Deliverable Data

FD: Field Duplicate

GC/MS: Gas Chromatography/ Mass Spectrometry

ICV: Initial Calibration Verification

IS: Internal Standard

LCL: Lower Control Limit

LCS/LCSD: Laboratory Control Sample/Duplicate

MB: Method Blank

MD: Method Duplicate

MDL: Method Detection Limit

MS/MSD: Matrix Spike/Duplicate

ND: Non Detected

NFQR: No Further Qualification Required

NQR: No Qualification Required

PDS: Post Digestion Spike

%R: Percent Recovery

RL: Reporting Limit

RPD: Relative Percent Difference

SAP: Sampling Analysis Plan

SDG: Sampling Delivery Group

SVOC: Semi-Volatile Organic Compounds

TIC: Tentatively Identified Compound

QA/QC: Quality Assurance/Quality Control

QAPP: Quality Assurance Project Plan

UCL: Upper Control limit

VOC: Volatile organic compounds

**Client:** U.S. Steel - Gary Works  
**Project:** USS Gary Semi-Annual Leak Detect 9.2017  
**Work Order:** 1709538

## Work Order Sample Summary

<u>Lab Samp ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Tag Number</u>	<u>Collection Date</u>	<u>Date Received</u>	<u>Hold</u>
1709538-02	LDS-01	Aqueous	LDS-01	9/11/2017 14:05	9/12/2017 10:05	<input type="checkbox"/>
1709538-03	LDS-02	Aqueous	LDS-02	9/11/2017 12:15	9/12/2017 10:05	<input type="checkbox"/>
1709538-04	TRIP BLANK	Aqueous	TRIP BLANK	9/11/2017 11:50	9/12/2017 10:05	<input type="checkbox"/>