

U. S. Steel Gary Works - Laboratory Report Data Review					
Laboratory Report ID:				1702878	
Laboratory Name:	ALS Environmental (Holland, MI)			Report Package Date:	3/01/2017
Project Name:	CAMU Monthly Leachate - February 2017			Review Date:	4/7/2017
Project Number:	4262-303-01-01 Phase 03				
Reviewer Name:	Suzanne Bonola			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 Progra)			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 (1)
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:	2/16/2017	Date Received:	2/16/2017		
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	X (2)
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 (4)
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:	LCS-01 (-01A MS): PCBs LCS-01 (-01H MS/-01H MSD): Hexavalent chromium LCS-02 (-02D MS/-02D MSD): Ammonia as N				
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 (5)
6 Were the MS/MSD RPD values within laboratory control limits?				X	
7 Did the MS/MSD RPDs affect the final results? If so, note on page 2.					X

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Project Number:	4262-303-01-01 Phase 03			
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Matrix:	Aqueous + QC (TB)			
*Attach copy of lab report showing sample IDs and corresponding lab IDs.		Yes	No	N/A
Field and Laboratory Duplicates				
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:	LCS-02 (-02A Dup): 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
Other Laboratory QC Data				
1 Were internal standard data reported? (organics and inorganics by 6020)				(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?				(7)
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	(8)
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	(8)
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	
Electronic Data Deliverable				
1 Was an EDD provided with the deliverable?		X		
2 Was the electronic data the same as the hardcopy data?			X	(9)
Comment No.	Description (data usability; note any estimated and/or rejected data):			
1	Sampling: The samples were collected by ALS staff. Login: A custody seal was not used on the cooler; because the cooler was not shipped by a commercial courier, this was not mandatory protocol. Dilutions: Dilutions were needed for the following chemicals due to elevated concentrations: VOCs (-01, -02); SVOCs (-01); PAHs (-01, -02); ammonia as N (-01, -02) QAPP: Uniform Federal Policy - Quality Assurance Project Plan, U. S. Steel Corporation, Gary Works, Gary, Indiana, April 2016.			
2	MB: As (MBLK-98370-98370) @ 0.002049 J x 5 = 0.0010245 mg/L (<5xMB for -01 and -02; revise to "U" at RL)			
3	Surrogate Recoveries: Sample -02: 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, dibromochloromethane, dibromomethane, dichlorodifluoromethane, iodomethane, trichlorofluoromethane ND, revise to "UJ").			
4	LCS: Iodomethane (VLCSW1-170221-R206414b) %Rec>UCL (samples -01, -02, -02 ND; NQR).			
5	MS/MSD: Lab selected client sample -01 for PCBs MS analysis. No MSD performed for PCBs.			
6	ISTD: VOCs & SVOCs - Included in L4 lab report; no review required for general QC data evaluation. Did not receive copy of the L4 lab report.			
7	PCBs Dual Column Confirmation: Did not receive copy of the L4 lab report to verify dual column confirmation.			
8	The lab did not perform PDS or SD analysis for this batch report.			
9	Reporting: The laboratory provided an EDD to the database management contractor.			
Signature of Validator:		Suzanne Bonola 4/10/2017		
Signature of Senior Review:		Suzanne Bonola 8/2/2017		

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

NQRR: 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) CAMU Monthly Leachate 2.2017
Work Order: 1702878

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>
1702878-01	LCS-01	Aqueous	LCS-01	2/16/2017 10:30	2/17/2017 13:30	<input type="checkbox"/>
1702878-02	LCS-02	Aqueous	LCS-02	2/16/2017 10:00	2/17/2017 13:30	<input type="checkbox"/>
1702878-03	Trip Blank	Aqueous	Trip Blank	2/16/2017 09:30	2/17/2017 13:30	<input type="checkbox"/>