TECHNICAL MEMORANDUM

TO: Jennifer Taylor - BRS

CC: Mark Pietrucha, P.E., LSRP – Woodard & Curran

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DATE: July 6, 2020

RE: Former Camden Labs AOC-16 Mercury Spill - Supplemental Soil Investigation (Revised)

The following memorandum summarizes Woodard & Curran's supplemental soil investigation activities for AOC-16 (Mercury Spill) at the Camden Labs site (the Site). The supplemental soil investigation was conducted pursuant to the Camden Redevelopment Agency (CRA) approved scope of work dated December 12, 2019 and revised December 30, 2019. This supplemental soil investigation was conducted to further characterize mercury impacted soils at AOC-16 subsequent to investigations previously conducted as described in Woodard & Curran's October 2019 Remedial Investigation Report (RIR)/Remedial Action Workplan (RAWP). The goal of the supplemental investigation was to gather additional data which could support development of a more favorable Impact to Ground Water Soil Remediation Standard (IGWSRS) and subsequently reduce the volume of mercury impacted soil to remediated by excavation and offsite disposal.

The following paragraphs provide a summary of previous investigations of AOC-16 documented in the October 2019 RIR/RAWP, a description of the AOC-16 supplemental soil investigation conducted in February 2020, interpretation of the supplemental soil investigation data, and an updated estimated quantities of mercury impacted soil to be remediated by excavation with offsite disposal based on same.

Background

In April 2004, the New Jersey Department of Environmental Protection (NJDEP) measured elevated levels of mercury in air while installing the former on-site weather station tower. Elevated levels of mercury were measured by the NJDEP's air monitoring equipment while excavating soils for the tower foundation. CMX conducted a soil boring investigation of the potential mercury surface spill area between December 2008 and January 2009. CMX advanced sixteen soil borings to depths ranging between four feet below ground surface (bgs) and twenty-five feet bgs. CMX collected soil samples from each of the soil borings corresponding with elevated vapor mercury readings measured if the field using a Jerome Mercury Analyzer and/or visual indications of suspected mercury impact (i.e. dark purple staining). Where mercury vapor readings were recorded for multiple intervals throughout the soil column, multiple soil samples were collected and analyzed. In addition, CMX collected soil samples from each soil boring at the six-inch interval where no indications of impact were identified in an effort to horizontally and vertically delineate the mercury contamination. Analytical results reported mercury at a concentration exceeding the NJDEP Residential Direct Contact (RDC) Soil Remediation Standard (SRS) of 23 mg/kg and/or the Non-Residential Direct Contact (NRDC) SRS of 65 mg/kg for subsurface soil samples M-1 (3,700 mg/kg), M-1A (2,100 mg/kg), M-2B (82 mg/kg), M-2D (81 mg/kg), M-5A (34 mg/kg) and M-6B (36 mg/kg). Mercury was either not detected or was reported at concentrations below the NJDEP RDCSRS for all other soil samples collected. Based on this information, CMX concluded mercury impacts to soil in AOC-16 were delineated to the RDCSRS; however, additional sampling would be required to delineate mercury soil impacts to the NJDEP Impact to Ground Water Soil Screening Level (IGWSSL) and/or develop an AOC-specific Impact to Ground Water Soil Remediation Standard (IGWSRS).

In February 2018, soil sampling activities were conducted in AOC-16 by Woodard & Curran in an effort to delineate the horizontal and vertical extent of previously identified IGWSSL mercury exceedances in soil. Five soil borings (M-8, M-9, M-10, M-11, and M-12) were advanced outbound of previously identified exceedances. A total of eight soil samples (M-8(1.5-2.0), M-8(18.0-18.5), M-9(18.0-18.5), M-10(1.5-2.0), M-10(18.0-18.5), M-11(18.0-18.5), M-12(1.5-2.0), M-12(18.0-18.5)) were collected and analyzed for mercury. With the exception of one soil sample (M-9(18.0-18.5)), mercury was either not-detected or was reported at a concentration below the NJDEP RDC/NRDC SRS and/or IGWSSL. Mercury was reported at a concentration exceeding the NJDEP IGWSSL of 0.1 mg/kg in soil sample (M-9(18.0-18.5)); however, the reported mercury concentration was below the NJDEP RDCSRS and/or NRDCSRS. Based on these results, contingency analysis for mercury using Soil Precipitation Leaching Procedure (SPLP) methods were activated for sample M-9(18.0-18.5) and M-10(1.5-2.0).

The data generated by the February 2018 soil investigation was input into the NJDEP SPLP Spreadsheet (Version 3.1, November 2013) which calculated an AOC-specific IGWSRS of 0.68 mg/kg for mercury using SPLP Spreadsheet Option 1a. All total mercury concentrations reported for the soil samples collected during the February 2018 soil sampling event were either not detected or were reported at or below the calculated AOC-specific IGWSRS.

The findings of the February 2018 soil investigation indicated that the nature and extent of mercury exceedances identified in AOC-16 were defined and, therefore, the RI of mercury impacted soils at AOC-16 was considered complete. Based on the February 2018 soil investigation results mercury impacted soils in AOC-16 were horizontally delineated as follows:

- Western Extent – Delineation soil sample (M-11) results at or below the NJDEP SRS and/or IGWSRS;
- Northern Extent – Delineation soil sample (M-12) results at or below the NJDEP SRS and/or IGWSRS;
- Eastern Extent – Delineation soil sample (M-10) results at or below the NJDEP SRS and/or IGWSRS; and
- Southern Extent – Delineation soil sample (M-8) results at or below the NJDEP SRS and/or IGWSRS.

The vertical extent of mercury impacted soils in AOC-16 was defined by total mercury concentrations reported for soil samples M-1-C, M-2E, M-3D, M-4-B, M-5-B, M-6D, and M-9. Based on the results for these samples it was estimated that the mercury impacted soils extend vertically to an approximate depth of 20 feet bgs.

It is also worth noting that mercury concentrations were reported above the AOC-specific mercury IGWSRS in soil samples collected below the water table (18-20 feet bgs); however, the following provisions of the Technical Requirements for Site Remediation (N.J.A.C. 7:26E) suggest that delineation to the IGWSRS below the water table is not required.

> *N.J.A.C. 7:26E-4.2 Remedial Investigation of soil*
>
> *(a) The person responsible for conducting the remediation shall conduct a remedial investigation of contaminated soil as follows:*
>
> *1. Within the property boundary*
>
> *:i. Delineate the horizontal and vertical extent of all soil contamination that is associated with a site-related area of concern in both the saturated and unsaturated soil to:*
>
> *(1) The residential direct contact soil remediation standard; or*

(2) The non-residential direct contact soil remediation standard if a remedial action will be implemented that will appropriately restrict the use of the entire property and the property owner has agreed to place a deed notice and engineering controls, as appropriate, on the property;

3. For soil contamination associated with a site-related area of concern, delineate the horizontal and vertical extent of all soil contamination in the unsaturated zone which contains contaminants above the impact to ground water soil remediation standard without regard to the property boundary.

In addition, mercury was not reported at a concentration exceeding the Ground Water Quality Standard (GWQS) for a ground water sample collected from a monitoring well installed in the area of mercury impacted soils. Therefore, no further investigation of ground water is required for AOC-16.

Based on the results of the February 2018 soil investigation and development of the AOC- specific IGWSRS, the estimated volume of mercury-impacted soils was 2,600 cubic yards (as discussed below, the subsequent supplemental investigation completed in February 2020 was able to reduce this volume to approximately 890 cubic yards). It should be noted that due to an inadvertent scaling issue, the previous extent of mercury impacts was over reported in the October 2019 RIR/RAWP and subsequent memorandum dated April 10, 2020. This scaling issue has been corrected and the estimated measurements and volumes presented herein confirmed in the field and corrected.

CRA intends to remediate mercury impacted soils at AOC-16 by excavation with offsite disposal and document the effectiveness of the remedy by collection of post-excavation soil samples for mercury analyses. The proposed remedy for AOC-16 mercury impacted soils was outlined Woodard & Curran's October 2019 Remedial Action Workplan submitted to NJDEP via the NJDEP Online Service on December 9, 2019.

February 2020 Supplemental Soil Boring Investigation

Given Woodard & Curran's experience with mercury in soil on similar sites, development of an IGWSRS more favorable than the NJDEP default IGWSSL and/or what was previously developed (0.68 mg/kg) is often achieved. As such, Woodard & Curran mobilized to the Site on February 12 and 13, 2020 with Enviroprobe Services, Inc. (Enviroprobe) to complete a supplemental soil investigation at AOC-16. The purpose of the supplemental soil investigation was to obtain additional data which could support development of a more favorable AOC-specific IGWSRS for mercury at AOC-16, and thereby reduce the estimated volume of mercury impacted soils to be remediated by excavation with offsite disposal.

Prior to advancement, all proposed soil borings were field located using a Trimble Geo 7X GPS unit by inputting their corresponding New Jersey State Plane coordinates obtained from available georeferenced aerial imagery. Following location, seven soil borings (SB-1 through SB-7) were advanced using a combination of hand-auger and direct push drilling techniques. Soil borings were advanced to a maximum depth of the vertical delineation of 20-feet bgs and recovered soils were field screened for the presences of mercury vapors using a Jerome 431-X Mercury Vapor Analyzer (Jerome) and logged. Soil boring logs for the February 2020 sampling event are provided in Attachment 1.

Three soil samples were collected from each soil boring (one from lowest, midpoint, and highest field measured Jerome readings in recovered soils). A total of twenty-one soil samples were collected and submitted to Hampton-Clarke Laboratories for total mercury analysis with contingent SPLP mercury analysis. A summary of the soil sampling results is presented in Table 1, depicted on Figure 1, and discussed below.

Mercury was reported at a concentration exceeding the NJDEP RDC SRS of 23 mg/kg in two soil samples (SB-3(15.5-16') and SB-5(18-18.5')). The mercury concentration reported for sample SB-5 (18-18.5') also exceeded the NJDEP NRDC SRS of 65 mg/kg. In addition, mercury was reported at concentrations exceeding the 0.68 mg/kg AOC-specific IGWSRS in seven soil samples, including: SB-3(7.5-8'), SB-3(15.5-16'), SB-4(13-13.5'), SB-4(15.5-16'), SB-5(6-6.5'),

SB-5(18-18.5'), and SB-7(19-19.5'). A tabulated summary of total mercury analytical results with comparison to SRS is provided in Table 1.

Based on the initial total mercury results, contingency analysis for mercury using SPLP methods was activated for samples SB-3(7.5-8'), SB-4(15.5-16'), and SB-7(19-19.5'). Mercury was not detected or reported at concentrations below the Default Leachate Criteria for all samples analyzed. A tabulated summary of SPLP mercury analytical results with comparison to Default Leachate Criteria is also provided in Table 1.

The data generated by the February 2020 soil investigation was added to the February 2018 SPLP data set and input into the NJDEP SPLP Spreadsheet (Version 3.1, November 2013), which calculated an AOC-specific IGWSRS of 22 mg/kg for mercury using SPLP Spreadsheet Option 1a. The SPLP calculator spreadsheet is provided in Attachment 2. Based on the findings of the February 2020 soil investigation and the updated AOC-specific IGWSRS for mercury, the horizontal extent of AOC-16 mercury impacted soils to be remediated by excavation and offsite disposal has been modified. The revised horizontal delineation of mercury impacted soils requiring remediation at AOC-16 is:

- Western Extent – Delineation achieved via samples collected from soil borings SB-2, SB-6, and M-7.
- Northern Extent – Delineation achieved via samples collected from soil borings SB-1 and M-4.
- Eastern Extent – Delineation achieved via samples collected from soil borings SB-4 and SB-7.
- Southern Extent – Delineation achieved via samples collected from soil borings SB-6, SB-7, and M-7.

The vertical extent of AOC-16 mercury impacted soils to be remediated by excavation and offsite disposal is 20 bgs (consistent with the findings of the February 2018 investigation). The horizontal and vertical delineation of mercury impacted soils based on the findings of all soil investigations completed to date are presented on Figure 1. The laboratory data package is provided as Attachment 3.

The updated estimated l areal extent of soil to be remediated is 1,200-square feet. Given an excavation depth of 20-feet bgs, the volume of AOC-16 mercury impacted soils to be remediated by excavation with offsite disposal is estimated to be 890 cubic yards.

Summary of Soil Sampling Results
February 2020
Camden Labs - Camden, New Jersey

CLIENT ID:	NJ Department of Environmental Protection			SB-1 (1.5-2')	SB-1 (5.5-6')	SB-1 (18.5-19')	SB-2 (1.5-2')	SB-2 (7.5-8')	SB-2 (18-18.5')
Lab ID:	Soil Remediation Standard			AD15743-001	AD15743-020	AD15743-021	AD15743-002	AD15743-016	AD15743-017
COLLECTION DATE:	Residential	Non-Residential	Impact to	02/12/2020	02/13/2020	02/13/2020	02/12/2020	02/13/2020	02/13/2020
SAMPLE MATRIX:	Direct Contact	Direct Contact	Ground Water	Soil	Soil	Soil	Soil	Soil	Soil
Metals (mg/kg)									
Mercury	23	65	22†	0.12	0.095 U	0.1 U	0.097 U	0.14	0.11 U
SPLP Results									
Mercury (ug/l)		40		NA	NA	NA	NA	NA	NA
pH (s.t.u.)		NA		NA	NA	NA	NA	NA	NA
Final Volume (L)		NA		NA	NA	NA	NA	NA	NA
Initial Weight (kg)		NA		NA	NA	NA	NA	NA	NA
Wet Chemistry									
% Solids	NA	NA	NA	87	88	80	86	93	76

Notes:

NRDC SRS - NJDEP Non-Residential Direct Contact Soil Remediation Standard
RDC SRS - NJDEP Residential Direct Contact Soil Remediation Standard
IGW SRS - NJDEP Impact to Groundwater Soil Remediation Standard
RL - Reporting Limit
MDL - Method Detection Limit
U - Not Detected
J - Estimated Value, result >MDL and <RL
† - AOC Specific IGW Soil Remediation Standard
-- - Compound not analyzed.

Bold/Boxed = Result exceeds NJ-IGWSRS
Highlight = Result exceeds NJ-RDCSRS
Highlight = Result exceeds NJ-NRDCSRS

Summary of Soil Sampling Results
February 2020
Camden Labs - Camden, New Jersey

CLIENT ID:	NJ Department of Environmental Protection			SB-3 (1.5-2')	SB-3 (7.5-8')	SB-3 (15.5-16')	SB-4 (1.5-2')	SB-4 (13-13.5')	SB-4 (15.5-16')
Lab ID:	Soil Remediation Standard			AD15743-003	AD15743-014	AD15743-015	AD15743-004	AD15743-018	AD15743-019
COLLECTION DATE:	Residential	Non-Residential	Impact to	02/12/2020	02/13/2020	02/13/2020	02/12/2020	02/13/2020	02/13/2020
SAMPLE MATRIX:	Direct Contact	Direct Contact	Ground Water	Soil	Soil	Soil	Soil	Soil	Soil
Metals (mg/kg)									
Mercury	23	65	22†	0.11	22	**32**	0.20	4.8	1.3
SPLP Results									
Mercury (ug/l)		40		NA	24	NA	NA	NA	0.5 U
pH (s.t.u.)		NA		NA	9.92	NA	NA	NA	9.55
Final Volume (L)		NA		NA	2	NA	NA	NA	2
Initial Weight (kg)		NA		NA	0.1	NA	NA	NA	0.1
Wet Chemistry									
% Solids	NA	NA	NA	87	94	93	88	95	92

Notes:

NRDC SRS - NJDEP Non-Residential Direct Contact Soil Remediation Standard
RDC SRS - NJDEP Residential Direct Contact Soil Remediation Standard
IGW SRS - NJDEP Impact to Groundwater Soil Remediation Standard
RL - Reporting Limit
MDL - Method Detection Limit
U - Not Detected
J - Estimated Value, result >MDL and <RL
† - AOC Specific IGW Soil Remediation Standard
-- - Compound not analyzed.
Bold/Boxed = Result exceeds NJ-IGWSRS
Highlight = Result exceeds NJ-RDCSRS
Highlight = Result exceeds NJ-NRDCSRS

Summary of Soil Sampling Results
February 2020
Camden Labs - Camden, New Jersey

CLIENT ID:	NJ Department of Environmental Protection			SB-5 (1.5-2')	SB-5 (6-6.5')	SB-5 (18-18.5')	SB-6 (1.5-2')	SB-6 (7-7.5')	SB-6 (18-18.5')
Lab ID:	Soil Remediation Standard			AD15743-005	AD15743-012	AD15743-013	AD15743-006	AD15743-008	AD15743-009
COLLECTION DATE:	Residential	Non-Residential	Impact to	02/12/2020	02/13/2020	02/13/2020	02/12/2020	02/13/2020	02/13/2020
SAMPLE MATRIX:	Direct Contact	Direct Contact	Ground Water	Soil	Soil	Soil	Soil	Soil	Soil
Metals (mg/kg)									
Mercury	23	65	22†	0.099 U	3.5	**190**	0.11	0.088 U	0.11 U
SPLP Results									
Mercury (ug/l)		40		NA	NA	NA	NA	NA	NA
pH (s.t.u.)		NA		NA	NA	NA	NA	NA	NA
Final Volume (L)		NA		NA	NA	NA	NA	NA	NA
Initial Weight (kg)		NA		NA	NA	NA	NA	NA	NA
Wet Chemistry									
% Solids	NA	NA	NA	84	93	89	80	95	79

Notes:

NRDC SRS - NJDEP Non-Residential Direct Contact Soil Remediation Standard
RDC SRS - NJDEP Residential Direct Contact Soil Remediation Standard
IGW SRS - NJDEP Impact to Groundwater Soil Remediation Standard
RL - Reporting Limit
MDL - Method Detection Limit
U - Not Detected
J - Estimated Value, result >MDL and <RL
† - AOC Specific IGW Soil Remediation Standard
-- - Compound not analyzed.
Bold/Boxed = Result exceeds NJ-IGWSRS
Highlight = Result exceeds NJ-RDCSRS
Highlight = Result exceeds NJ-NRDCSRS

Summary of Soil Sampling Results
February 2020
Camden Labs - Camden, New Jersey

CLIENT ID:	NJ Department of Environmental Protection			SB-7 (1.5-2')	SB-7 (7-7.5')	SB-7 (19-19.5')
Lab ID:	Soil Remediation Standard			AD15743-007	AD15743-010	AD15743-011
COLLECTION DATE:	Residential	Non-Residential	Impact to	02/12/2020	02/13/2020	02/13/2020
SAMPLE MATRIX:	Direct Contact	Direct Contact	Ground Water	Soil	Soil	Soil
Metals (mg/kg)						
Mercury	23	65	22†	0.10	0.11	2.4
SPLP Results						
Mercury (ug/l)		40		NA	NA	0.95
pH (s.t.u.)		NA		NA	NA	9.48
Final Volume (L)		NA		NA	NA	2
Initial Weight (kg)		NA		NA	NA	0.1
Wet Chemistry						
% Solids	NA	NA	NA	88	97	91

Notes:

NRDC SRS - NJDEP Non-Residential Direct Contact Soil Remediation Standard
RDC SRS - NJDEP Residential Direct Contact Soil Remediation Standard
IGW SRS - NJDEP Impact to Groundwater Soil Remediation Standard
RL - Reporting Limit
MDL - Method Detection Limit
U - Not Detected
J - Estimated Value, result >MDL and <RL
† - AOC Specific IGW Soil Remediation Standard
-- - Compound not analyzed.

Bold/Boxed = Result exceeds NJ-IGWSRS
Highlight = Result exceeds NJ-RDCSRS
Highlight = Result exceeds NJ-NRDCSRS

AOC-16 Hg Soil Sampling Locations

Former Camden Labs
1667 Davis Street
Camden, New Jersey

Figure 1

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Sample ID:	M-4	M-4-A	M-4-B
Lab ID:	AC41717-005	AC42354-007	AC42354-008
Collection Date:	12/11/2008	1/23/2009	1/23/2009
Sample Depth:	1.5-2.0'	15.5-16.0'	18.5-19.0'*
Mercury (mg/kg)	0.13	1.1	ND

Sample ID:	M-12(1.5-2.0)	M-12(18.0-18.5)
Lab ID:	JC60251-7	JC60251-8
Collection Date:	2/5/2018	2/5/2018
Sample Depth:	1.5-2.0	18.0-18.5 *
Mercury (mg/kg)	ND	ND

Sample ID:	M-1	M-1A	M-1-B	M-1-C	M-1-D
Lab ID:	AC41717-001	AC41717-002	AC42354-002	AC42354-003	AC42354-004
Collection Date:	12/11/2008	12/11/2008	1/23/2009	1/23/2009	1/23/2009
Sample Depth:	1.5-2.0'	3.5-4.0'	15.5-16.0'	18.0-18.5' *	20.5-21.0' *
Mercury (mg/kg)	***3700***	***2100***	0.95	ND	11

Sample ID:	SB-1 (1.5-2')	SB-1 (5.5-6')	SB-1 (18.5-19')
Lab ID:	AD15743-001	AD15743-020	AD15743-021
Collection Date:	02/12/2020	02/13/2020	02/13/2020
Sample Depth:	1.5-2.0	5.5-6.0	18.5-19.0
Mercury (mg/kg)	0.12	ND	ND

Sample ID:	M-3	M-3B	M-3D
Lab ID:	AC41717-004	AC42470-029	AC42470-031
Collection Date:	12/11/2008	1/29/2009	1/29/2009
Sample Depth:	1.5-2.0'	14.0-14.5'	19.5-20.0' *
Mercury (mg/kg)	ND	1.6	ND

Sample ID:	M-5-A	M-5-B
Lab ID:	AC42354-009	AC42354-010
Collection Date:	1/23/2009	1/23/2009
Sample Depth:	6.0-6.5'	19.5-20.0' *
Mercury (mg/kg)	***34***	ND

Sample ID:	M-9A	M-9B	M-9(18.0-18.5)
Lab ID:	AC42470-020	AC42470-021	JC60251-3
Collection Date:	1/29/2009	1/29/2009	2/5/2018
Sample Depth:	5.0-5.5'	14.0-14.5'	18.0-18.5 *
Mercury (mg/kg)	ND	1.6	0.68

Sample ID:	M-11(18.0-18.5)
Lab ID:	JC60251-6
Collection Date:	2/5/2018
Sample Depth:	18.0-18.5 *
Mercury (mg/kg)	ND

Sample ID:	M-10(1.5-2.0)	M-10(18.0-18.5)
Lab ID:	JC60251-4	JC60251-5
Collection Date:	2/5/2018	2/5/2018
Sample Depth:	1.5-2.0	18.0-18.5 *
Mercury (mg/kg)	0.048	ND

Sample ID:	SB-2 (1.5-2')	SB-2 (7.5-8')	SB-2 (18-18.5')
Lab ID:	AD15743-002	AD15743-016	AD15743-017
Collection Date:	02/12/2020	02/13/2020	02/13/2020
Sample Depth:	1.5-2.0	7.5-8.0	18.0-18.5
Mercury (mg/kg)	ND	0.14	ND

Sample ID:	SB-4 (1.5-2')	SB-4 (13-13.5')	SB-4 (15.5-16')
Lab ID:	AD15743-004	AD15743-018	AD15743-019
Collection Date:	02/12/2020	02/13/2020	02/13/2020
Sample Depth:	1.5-2.0	13.0-13.5	15.5-16.0
Mercury (mg/kg)	0.2	4.8	1.3

Sample ID:	M-2	M-2-A	M-2-B	M-2C	M-2D	M-2E
Lab ID:	AC41717-003	AC42354-005	AC42354-006	AC42470-002	AC42470-003	AC42470-004
Collection Date:	12/11/2008	1/23/2009	1/23/2009	1/29/2009	1/29/2009	1/29/2009
Sample Depth:	1.5-2.0'	11.5-12.0'	19.5-20.0'	14.0-14.5'	18.0-18.5' *	22.5-23.0' *
Mercury (mg/kg)	0.5	0.84	***82***	2.4	***81***	ND

Sample ID:	SB-3 (1.5-2')	SB-3 (7.5-8')	SB-3 (15.5-16')
Lab ID:	AD15743-003	AD15743-014	AD15743-015
Collection Date:	02/12/2020	02/13/2020	02/13/2020
Sample Depth:	1.5-2.0	7.5-8.0	15.5-16.0
Mercury (mg/kg)	0.11	22	***32***

Sample ID:	M-6A	M-6B	M-6D
Lab ID:	AC42470-005	AC42470-006	AC42470-008
Collection Date:	1/29/2009	1/29/2009	1/29/2009
Sample Depth:	14.0-14.5'	18.0-18.5' *	22.5-23.0' *
Mercury (mg/kg)	0.13	***36***	16

Sample ID:	SB-5 (1.5-2')	SB-5 (6-6.5')	SB-5 (18-18.5')
Lab ID:	AD15743-005	AD15743-012	AD15743-013
Collection Date:	02/12/2020	02/13/2020	02/13/2020
Sample Depth:	1.5-2.0	6.0-6.5	18.0-18.5
Mercury (mg/kg)	ND	3.5	***190***

Sample ID:	M-7B	M-7C
Lab ID:	AC42470-011	AC42470-012
Collection Date:	1/29/2009	1/29/2009
Sample Depth:	18.0-18.5' *	19.5-20.0' *
Mercury (mg/kg)	8.5	19

Sample ID:	SB-6 (1.5-2')	SB-6 (7-7.5')	SB-6 (18-18.5')
Lab ID:	AD15743-006	AD15743-008	AD15743-009
Collection Date:	02/12/2020	02/13/2020	02/13/2020
Sample Depth:	1.5-2.0	7.0-7.5	18.0-18.5
Mercury (mg/kg)	0.11	ND	ND

Sample ID:	SB-7 (1.5-2')	SB-7 (7-7.5')	SB-7 (19-19.5')
Lab ID:	AD15743-007	AD15743-010	AD15743-011
Collection Date:	02/12/2020	02/13/2020	02/13/2020
Sample Depth:	1.5-2.0	7.0-7.5	19.0-19.5
Mercury (mg/kg)	0.1	0.11	2.4

Sample ID:	M-8(1.5-2.0)	M-8(18.0-18.5)
Lab ID:	JC60251-1	JC60251-2
Collection Date:	2/5/2018	2/5/2018
Sample Depth:	1.5-2.0	18.0-18.5 *
Mercury (mg/kg)	ND	ND

M-12 M-4 SB-1 M-3 M-1 M-5 M-9 M-10 M-11 SB-2 SB-3 SB-4 M-2 M-6 SB-5 M-7 SB-6 SB-7 M-8

Notes:
NJ-NRDCSRS - NJDEP Non-Residential Direct Contact Soil Remediation Standard
NJ-RDCSRS - NJDEP Residential Direct Contact Soil Remediation Standard
NJ-IGWSRS - NJDEP Impact to Groundwater Site-Specific Remediation Standard
ND - Contaminant Not Detected
† - Standard Develped Using NJDEP SPLP.
* - Soil Sample Collected Below Water Table (I.e. Saturated)
Bold/Boxed = Result exceeds NJ-IGWSRS
Yellow Highlight = Result exceeds NJDEP RDC SRS
Red Highlight = Result exceeds NJDEP NRDC SRS

NJDEP RDCSRS	NJDEP NRDCSRS	NJDEP IGWSSL
23	65	22†

1 inch = 20 feet

0 5 10 20 Feet

Legend
- February 2020 Soil Borings
- February 2018 Soil Borings
- Historic Soil Borings
- Estimated Extent of Excaation (to 20' BGS)
- Site Boundary
- Parcel Boundary

WOODARD &CURRAN

Project #: 0230198.01
Map Created: March 2020

ATTACHMENT 1

Soil Boring Logs

Woodard & Curran
709 Westchester Ave, Suite L2
West Harrison, NY 10604

BORING NUMBER SB-1

CLIENT Camden Redevelopment Agency
PROJECT NAME Camden Labs
PROJECT NUMBER 230198
PROJECT LOCATION Camden, NJ
DATE STARTED 2/13/20 **COMPLETED** 2/13/20
GROUND ELEVATION _____ **HOLE SIZE** 2
DRILLING CONTRACTOR Enviroprobe Service, Inc.
GROUND WATER LEVELS:
DRILLING METHOD GeoProbe
▽ **AT TIME OF DRILLING** 20.00 ft
LOGGED BY Brenna Garmon **CHECKED BY** _____
AT END OF DRILLING ---
NOTES _____
AFTER DRILLING ---

DEPTH (ft)	RECOVERY %	U.S.C.S.	GRAPHIC LOG	Feet BGS	MATERIAL DESCRIPTION	PID (ppm)
0						
		SW		0.8	Dark brown, damp, medium dense, coarse to fine SAND, little Organic material, trace gravel. No stain. No odor.	0.013
		SC			Brown, damp, soft, CLAYEY SAND. No stain. No odor.	0.01
2				2.0		0.011
	60				Orange, dry, loose, coarse SAND. No stain. No odor.	0.015
						0.013
4						0.013
		SP				
6						0.006
						0.004
				6.7		0
					Beige, dry, loose, coarse SAND. Little orange mottling. No stain. No odor.	0
	75					0.004
8						0.003
						0.005
10						
						0.005
						0.005
12						0.003
	90	SP				0.003
						0.006
14						0.003
						0
						0
16						0.007
						0.004
						0.005
	80					0
18						0.005
						0.003
				19.0		0.003
						0.003
20				▽		

Bottom of borehole at 20.0 feet.

Woodard & Curran
709 Westchester Ave, Suite L2
West Harrison, NY 10604

BORING NUMBER SB-2

CLIENT Camden Redevelopment Agency
PROJECT NAME Camden Labs
PROJECT NUMBER 230198
PROJECT LOCATION Camden, NJ
DATE STARTED 2/13/20 **COMPLETED** 2/13/20
GROUND ELEVATION _____ **HOLE SIZE** 2
DRILLING CONTRACTOR Enviroprobe Service, Inc.
GROUND WATER LEVELS:
DRILLING METHOD GeoProbe
▽ **AT TIME OF DRILLING** 20.00 ft
LOGGED BY Brenna Garmon **CHECKED BY** _____
AT END OF DRILLING ---
NOTES _____
AFTER DRILLING ---

DEPTH (ft)	RECOVERY %	U.S.C.S.	GRAPHIC LOG	Feet BGS	MATERIAL DESCRIPTION	PID (ppm)
0						
		SW		1.0	Dark brown, damp, medium dense, coarse to fine SAND, little Organic material. No stain. No odor.	0.007
		SC		2.0	Orange brown, damp, soft, CLAYEY SAND. No stain. No odor.	0.004
2		SP		2.3	Orange, dry, dense, medium to fine SAND. No stain. No odor.	0.003
	45				No recovery.	0.004
4						
				5.0		
6		SP		7.0	Orange and light brown, dry, loose, medium dense, coarse SAND. No stain. No odor.	
8	72				Beige to white, dry, loose, coarse SAND. Little orange mottling. No stain. No odor.	
10						
12	80	SP				
14						
16						
18	72			18.6		
20				▽		

Bottom of borehole at 20.0 feet.

Woodard & Curran
709 Westchester Ave, Suite L2
West Harrison, NY 10604

BORING NUMBER SB-3

CLIENT Camden Redevelopment Agency
PROJECT NAME Camden Labs
PROJECT NUMBER 230198
PROJECT LOCATION Camden, NJ
DATE STARTED 2/13/20 **COMPLETED** 2/13/20
GROUND ELEVATION _____ **HOLE SIZE** 2
DRILLING CONTRACTOR Enviroprobe Service, Inc.
GROUND WATER LEVELS:
DRILLING METHOD GeoProbe
▽ **AT TIME OF DRILLING** 20.00 ft
LOGGED BY Brenna Garmon **CHECKED BY** _____
AT END OF DRILLING ---
NOTES _____
AFTER DRILLING ---

DEPTH (ft)	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)
0			Feet BGS		
		SW		Dark brown, dry, loose, coarse to fine SAND, little Gravel, little organic material. No stain. No odor.	0.011
			0.7		
		SC		Orange brown, damp, soft, CLAYEY SAND. No stain. No odor.	0.005
			1.7		
2		SP		Orange, dry, medium dense, coarse to medium SAND. No stain. No odor.	0.003
	45				0.004
4					
6					0.033
					0.037
			6.5		
				Beige, dry, loose, coarse SAND. Little orange mottling. No stain. No odor.	0.031
	63				0.077
8					0.18
					0.298
10					
					0.188
					0.148
12					0.103
	60	SP			0.035
					0.019
14					
16					0.28
					0.281
					0.082
	70				0.043
18					0.024
					0.004
			18.5		
20			▽		

Bottom of borehole at 20.0 feet.

Woodard & Curran
709 Westchester Ave, Suite L2
West Harrison, NY 10604

BORING NUMBER SB-4

CLIENT Camden Redevelopment Agency
PROJECT NAME Camden Labs
PROJECT NUMBER 230198
PROJECT LOCATION Camden, NJ
DATE STARTED 2/13/20 **COMPLETED** 2/13/20
GROUND ELEVATION _____ **HOLE SIZE** 2
DRILLING CONTRACTOR Enviroprobe Service, Inc.
GROUND WATER LEVELS:
DRILLING METHOD GeoProbe
▽ **AT TIME OF DRILLING** 20.00 ft
LOGGED BY Brenna Garmon **CHECKED BY** _____
AT END OF DRILLING ---
NOTES _____
AFTER DRILLING ---

DEPTH (ft)	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)
0			Feet BGS		
		SW		Dark brown, damp, medium dense, coarse to fine SAND, little Organic material. No stain. No odor.	
				0.8	0.005
		SC		Orange brown, damp, soft, CLAYEY SAND. No stain. No odor.	0
2					0
				2.1	
	55			Orange, dry, loose, GRAVELLY SAND. No stain. No odor.	0
					0
4		SP			
				5.5	
6		SP		Orange brown, dry, medium dense, coarse SAND. No stain. No odor.	0.004
					0
				6.7	
				Beige, dry, loose, coarse SAND. Little orange and gray mottling. No stain. No odor.	0.003
	55				0.004
8					0
10					
					0.006
					0.004
12					0.003
	80	SP			0.004
					0.037
					0.038
14					0.038
					0.008
16					0.047
					0.011
					0.011
	77				0.003
18					0.005
					0.003
				18.8	0.003
20				▽	

Bottom of borehole at 20.0 feet.

Woodard & Curran
709 Westchester Ave, Suite L2
West Harrison, NY 10604

BORING NUMBER SB-5

CLIENT Camden Redevelopment Agency
PROJECT NAME Camden Labs
PROJECT NUMBER 230198
PROJECT LOCATION Camden, NJ
DATE STARTED 2/13/20 **COMPLETED** 2/13/20
GROUND ELEVATION _____ **HOLE SIZE** 2
DRILLING CONTRACTOR Enviroprobe Service, Inc.
GROUND WATER LEVELS:
DRILLING METHOD GeoProbe
▽ **AT TIME OF DRILLING** 20.00 ft
LOGGED BY Brenna Garmon **CHECKED BY** _____
AT END OF DRILLING ---
NOTES _____
AFTER DRILLING ---

DEPTH (ft)	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)
0				Feet BGS	
		SW		Brown, damp, medium dense, coarse to fine SAND, little Organic material. No stain. No odor.	
				1.0	
		SC		Orange brown, dry, stiff, CLAYEY SAND. No stain. No odor.	0.008
2					0.005
	53			2.7	
				No recovery.	0
4					
				5.0	
		SP		Orange, dry, loose, coarse SAND, little Gravel. No stain. No odor.	
6				6.3	
				Beige to white, dry loose, coarse to medium SAND. Little orange mottling throughout. No stain. No odor.	0.016
					0.01
8	75				
					0.009
					0.004
10					
					0.008
12					
	80	SP			0.011
					0.009
14					
					0.021
16					
					0.017
					0.009
18	92				
					0.201
					0.329
				19.6	0.048
20				▽	0.008

Bottom of borehole at 20.0 feet.

Woodard & Curran
709 Westchester Ave, Suite L2
West Harrison, NY 10604

BORING NUMBER SB-6

CLIENT Camden Redevelopment Agency
PROJECT NAME Camden Labs
PROJECT NUMBER 230198
PROJECT LOCATION Camden, NJ
DATE STARTED 2/13/20 **COMPLETED** 2/13/20
GROUND ELEVATION _____ **HOLE SIZE** 2
DRILLING CONTRACTOR Enviroprobe Service, Inc.
GROUND WATER LEVELS:
DRILLING METHOD GeoProbe
▽ **AT TIME OF DRILLING** 20.00 ft
LOGGED BY Brenna Garmon **CHECKED BY** _____
AT END OF DRILLING ---
NOTES _____
AFTER DRILLING ---

DEPTH (ft)	RECOVERY %	U.S.C.S.	GRAPHIC LOG	Feet BGS	MATERIAL DESCRIPTION	PID (ppm)
0						
		SW		0.8	Dark brown, damp, loose, coarse to fine SAND, little Organic materials, trace gravel. No stain. No odor.	
2		SC		2.2	Orange brown, damp, dense, CLAYEY SAND. No stain. No odor.	0.007
	47					0
4		SP		5.5	Orange brown, damp, medium dense, coarse to medium SAND, some Gravel. No stain. No odor.	
6		SP		7.0	Light orange, dry, loose, medium SAND. No stain. No odor.	0
8	73	SP		8.7	Beige with some orange mottling, dry, loose, medium SAND. No stain. No odor.	0
						0
10				10.0	No recovery.	
		SP		10.5	Brown, orange, and beige, dry, loose, interbedded medium SAND. No stain. No odor.	
12		SP		17.0	Beige to white, dry, loose, coarse SAND. Some orange and brown mottling. No stain. No odor.	0.003
	80					0
14						0
						0
16						0
18	88	SP		19.4	Beige to white, medium dense, coarse SAND. No stain. No odor. Dry until 18.58' then wet.	0
						0
20				▽		0

Bottom of borehole at 20.0 feet.

Woodard & Curran
709 Westchester Ave, Suite L2
West Harrison, NY 10604

BORING NUMBER SB-7

CLIENT Camden Redevelopment Agency
PROJECT NAME Camden Labs
PROJECT NUMBER 230198
PROJECT LOCATION Camden, NJ
DATE STARTED 2/13/20 **COMPLETED** 2/13/20
GROUND ELEVATION _____ **HOLE SIZE** 2
DRILLING CONTRACTOR Enviroprobe Service, Inc.
GROUND WATER LEVELS:
DRILLING METHOD GeoProbe
▽ **AT TIME OF DRILLING** 20.00 ft
LOGGED BY Brenna Garmon **CHECKED BY** _____
AT END OF DRILLING ---
NOTES _____
AFTER DRILLING ---

DEPTH (ft)	RECOVERY %	U.S.C.S.	GRAPHIC LOG	Feet BGS	MATERIAL DESCRIPTION	PID (ppm)
0						
		SW		1.0	Orange brown, damp, medium dense, very coarse to medium SAND, little Organic material. No stain. No odor.	
		SW		1.7	Dark brown, dry, dense, coarse to fine SAND, little Gravel. No stain. No odor.	0.003
2		SC		2.7	Orange brown, damp, medium dense, CLAYEY SAND. No stain. No odor.	0
	60					
		SP			Orange, dry, loose, coarse to medium SAND, trace Gravel. No stain. No odor.	0
4						
6				6.0		
		SP			Beige, dry, loose, coarse SAND. No stain. No odor. Little orange mottling from 10-14'.	0.003
						0
8	67					0
10						
		SP				0.003
12						
	80					0
						0
14				14.0		
					No recovery.	0
				15.0		
16		SP		16.0	Brown and beige, dry, loose, coarse SAND. No stain. No odor.	0.003
		SP			Beige with orange mottling, dry, medium dense, coarse to medium SAND. No stain. No odor.	0
	75					0.003
18						
				18.8		0.005
				▽		
20						

Bottom of borehole at 20.0 feet.

ATTACHMENT 2

SPLP Calculator

NJDEP SPLP Spreadsheet, V3.1, November 2013

Case name/area of concern:	Camden Labs / AOC-16
Case number:	
Sampling date:	Various
Contaminant:	Mercury (total)
CAS No:	7439-97-6
Water solubility (mg/L)	NA
Aqueous reporting limit (µg/L):	5.00E-02
Soil reporting limit (mg/kg):	1.00E-01
Health-based GWQC (µg/L)	2.00E+00
DAF (20, or site-specific if approved):	**20**
Leachate Criterion (µg/L):	4.00E+01
Henry's law constant (dimensionless):	0.00E+00

CALCULATE SITE SPECIFIC IGW STANDARD

Reset Spreadshee

Print Results

Instructions

CLICK HERE if chemical is not on drop-down list, or to enter alternate GWQC

Print to file

Exit

NOTE:
USE ONE PAGE PER CONTAMINANT, do not leave empty rows between samples
Do not enter samples with soil concentrations at or below the reporting limit
When leachate concentration is non-detect, enter the aqueous reporting limit
Enter site-specific dilution-attenuation factor (DAF) if desired

Data entry cells (do not skip rows)

Optional data entry

Calculated or locked cells

Indicates that Alternative Remediation Standard needs to be recalculated

Sample ID	Soil sample weight (kg)	Leachate Volume (L)	Total Soil Concentration (mg/kg)	SPLP Leachate Concentration (µg/L)	Final pH of Leachate (except VOCs)	Optional data				Kd (L/kg)	% Contaminant in Leachate	Field leachate concentration (µg/L)	Pass or fail?
						Sampling Depth (ft)	Soil Type	Organic Carbon (mg/kg)	Organic Carbon (%)				
M-10(1.5-2.0)	0.1003	2.005	0.048	0.2	6.22					220.0	8.33	0.22	PASS
SB-4(15.5-16)	0.1	2	1.3	0.5	9.55					2580.0	0.77	0.50	PASS
M-9(18-18.5)	0.1004	2.009	0.68	0.68	8.22					980.0	2.00	0.69	PASS
SB-7(19-19.5)	0.1	2	2.4	0.95	9.48					2506.3	0.79	0.96	PASS
SB-3(7.5-8)	0.1	2	22	24	9.92					896.7	2.18	24.53	PASS

SPLP RESULTS for

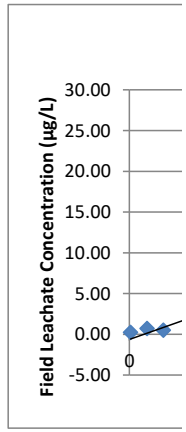
OPTION 1a: All adjusted leachate concentrations are below the leachate criterion

REMEDIATION STANDARD = 22 mg/kg

OPTION 1b: Simple inspection of tabulated results to find highest acceptable standard
EVERYTHING PASSED, OPTION 1b NOT VALID

OPTION 2: Remediation standard using site-specific Kd value
Kd ratio = 11.73, USE MINIMUM Kd
Kd USED FOR CALCULATING STANDARD = 220.01 L/kg
result before rounding = 8.8065 mg/kg
REMEDIATION STANDARD = 9 mg/kg

OPTION 3: Remediation standard using linear regression
Number of points = 5
Soil concentration midrange = 11.02
Number of points above midrange = 1
Enough points above midrange? NO
R-Square high enough? YES
Leachate criterion within range of leachate concentrations? NO
OPTION 3 NOT VALID



ATTACHMENT 3

Laboratory Data Package

Hampton-Clarke
Analytical & Field Services

175 ROUTE 46 WEST, UNIT D · FAIRFIELD, NJ 07004
2 MADISON ROAD, FAIRFIELD, NJ 07004
800-426-9992 · 973-244-9770
FAX: 973-244-9787
WWW.HCVLAB.COM

Project: Camden Labs

Client PO: 0230198

Report To: Woodard & Curran
2 Executive Campus
Suite 125
Cherry Hill, NJ 08002
Attn: Rob Fisler

Received Date: 2/14/2020

Report Date: 3/13/2020

Deliverables: NJDEP-R

Lab ID: AD15743

Lab Project No: 0021436

Sean Berls - Quality Assurance Officer OR **Jean Revolus - Laboratory Director**

NJ (07071) NY (ELAP11408) CT (PH-0671)
PA (68-00463) KY (90124)

NELAP ACCREDITED TNI LABORATORY

Hampton-Clarke
WBE/DBE/SBE 800-426-9992

Table of Contents - 0021436

Sample Summary

Client: Woodard & Curran
Project: Camden Labs

HC Project #: 0021436

Lab#	SampleID	Matrix	Collection Date	Receipt Date
AD15743-001	SB-1 (1.5-2')	Soil	2/12/2020	2/14/2020
AD15743-002	SB-2 (1.5-2')	Soil	2/12/2020	2/14/2020
AD15743-003	SB-3 (1.5-2')	Soil	2/12/2020	2/14/2020
AD15743-004	SB-4 (1.5-2')	Soil	2/12/2020	2/14/2020
AD15743-005	SB-5 (1.5-2')	Soil	2/12/2020	2/14/2020
AD15743-006	SB-6 (1.5-2')	Soil	2/12/2020	2/14/2020
AD15743-007	SB-7 (1.5-2')	Soil	2/12/2020	2/14/2020
AD15743-008	SB-6 (7-7.5')	Soil	2/13/2020	2/14/2020
AD15743-009	SB-6 (18-18.5')	Soil	2/13/2020	2/14/2020
AD15743-010	SB-7 (7-7.5')	Soil	2/13/2020	2/14/2020
AD15743-011	SB-7 (19-19.5')	Soil	2/13/2020	2/14/2020
AD15743-012	SB-5 (6-6.5')	Soil	2/13/2020	2/14/2020
AD15743-013	SB-5 (18-18.5')	Soil	2/13/2020	2/14/2020
AD15743-014	SB-3 (7.5-8')	Soil	2/13/2020	2/14/2020
AD15743-015	SB-3 (15.5-16')	Soil	2/13/2020	2/14/2020
AD15743-016	SB-2 (7.5-8')	Soil	2/13/2020	2/14/2020
AD15743-017	SB-2 (18-18.5')	Soil	2/13/2020	2/14/2020
AD15743-018	SB-4 (13-13.5')	Soil	2/13/2020	2/14/2020
AD15743-019	SB-4 (15.5-16')	Soil	2/13/2020	2/14/2020
AD15743-020	SB-1 (5.5-6')	Soil	2/13/2020	2/14/2020
AD15743-021	SB-1 (18.5-19')	Soil	2/13/2020	2/14/2020

HC Case Narrative

Client: Woodard and Curran
Project: Camden Labs

HC Project: 0021436

This case narrative is in the form of an exception report. Method specific and/or QA/QC anomalies related to this report only are detailed below.

Metals Analysis:

Samples AD15743-013, -014, -015, -018 were reported at a dilution for Hg due to concentration over calibration range.

SPLP Metals Analysis:

Sample AD15743-014 was reported at a dilution for Hg due to concentration over calibration range.

Wet Chemistry Analysis:

Data conforms to method requirements.

Sean Berls
Quality Assurance Officer

Or

Jean Revolus
Laboratory Director

3/16/20
Date

HC Executive Summary

Client: Woodard & Curran
Project: Camden Labs
HC Project #: 0021436

Lab#: AD15743-001 **Sample ID: SB-1 (1.5-2')**

Analyte	Units	RL	Result	Analytical Method
Mercury	mg/kg	0.096	0.12	EPA 7471B

Lab#: AD15743-003 **Sample ID: SB-3 (1.5-2')**

Analyte	Units	RL	Result	Analytical Method
Mercury	mg/kg	0.096	0.11	EPA 7471B

Lab#: AD15743-004 **Sample ID: SB-4 (1.5-2')**

Analyte	Units	RL	Result	Analytical Method
Mercury	mg/kg	0.095	0.20	EPA 7471B

Lab#: AD15743-006 **Sample ID: SB-6 (1.5-2')**

Analyte	Units	RL	Result	Analytical Method
Mercury	mg/kg	0.10	0.11	EPA 7471B

Lab#: AD15743-007 **Sample ID: SB-7 (1.5-2')**

Analyte	Units	RL	Result	Analytical Method
Mercury	mg/kg	0.095	0.10	EPA 7471B

Lab#: AD15743-010 **Sample ID: SB-7 (7-7.5')**

Analyte	Units	RL	Result	Analytical Method
Mercury	mg/kg	0.086	0.11	EPA 7471B

Lab#: AD15743-011 **Sample ID: SB-7 (19-19.5')**

Analyte	Units	RL	Result	Analytical Method
Mercury	mg/l	0.00050	0.00095	EPA 7471B
Mercury	mg/kg	0.092	2.4	EPA 7471B

Lab#: AD15743-012 **Sample ID: SB-5 (6-6.5')**

Analyte	Units	RL	Result	Analytical Method
Mercury	mg/kg	0.090	3.5	EPA 7471B

Lab#: AD15743-013 **Sample ID: SB-5 (18-18.5')**

Analyte	Units	RL	Result	Analytical Method
Mercury	mg/kg	4.7	190	EPA 7471B

HC Executive Summary

Client: Woodard & Curran
HC Project #: 0021436
Project: Camden Labs

Lab#: AD15743-014 **Sample ID: SB-3 (7.5-8')**

Analyte	Units	RL	Result	Analytical Method
Mercury	mg/kg	0.89	22	EPA 7471B
Mercury	mg/l	0.0010	0.024	EPA 7471B

Lab#: AD15743-015 **Sample ID: SB-3 (15.5-16')**

Analyte	Units	RL	Result	Analytical Method
Mercury	mg/kg	0.90	32	EPA 7471B

Lab#: AD15743-016 **Sample ID: SB-2 (7.5-8')**

Analyte	Units	RL	Result	Analytical Method
Mercury	mg/kg	0.090	0.14	EPA 7471B

Lab#: AD15743-018 **Sample ID: SB-4 (13-13.5')**

Analyte	Units	RL	Result	Analytical Method
Mercury	mg/kg	0.18	4.8	EPA 7471B

Lab#: AD15743-019 **Sample ID: SB-4 (15.5-16')**

Analyte	Units	RL	Result	Analytical Method
Mercury	mg/kg	0.091	1.3	EPA 7471B

HC Report of Analysis

Client: Woodard & Curran
Project: Camden Labs

HC Project #: 0021436

Sample ID: SB-1 (1.5-2')
Lab#: AD15743-001
Matrix: Soil

Collection Date: 2/12/2020
Receipt Date: 2/14/2020

% Solids SM2540G

Analyte	DF	Units	RL	Result
% Solids	1	percent		87

Mercury (Soil/Waste) 7471B

Analyte	DF	Units	RL	Result
Mercury	1	mg/kg	0.096	0.12

Sample ID: SB-2 (1.5-2')
Lab#: AD15743-002
Matrix: Soil

Collection Date: 2/12/2020
Receipt Date: 2/14/2020

% Solids SM2540G

Analyte	DF	Units	RL	Result
% Solids	1	percent		86

Mercury (Soil/Waste) 7471B

Analyte	DF	Units	RL	Result
Mercury	1	mg/kg	0.097	ND

Sample ID: SB-3 (1.5-2')
Lab#: AD15743-003
Matrix: Soil

Collection Date: 2/12/2020
Receipt Date: 2/14/2020

% Solids SM2540G

Analyte	DF	Units	RL	Result
% Solids	1	percent		87

Mercury (Soil/Waste) 7471B

Analyte	DF	Units	RL	Result
Mercury	1	mg/kg	0.096	0.11

Sample ID: SB-4 (1.5-2')
Lab#: AD15743-004
Matrix: Soil

Collection Date: 2/12/2020
Receipt Date: 2/14/2020

% Solids SM2540G

Analyte	DF	Units	RL	Result
% Solids	1	percent		88

Mercury (Soil/Waste) 7471B

Analyte	DF	Units	RL	Result
Mercury	1	mg/kg	0.095	0.20

Sample ID: SB-5 (1.5-2')
Lab#: AD15743-005
Matrix: Soil

Collection Date: 2/12/2020
Receipt Date: 2/14/2020

% Solids SM2540G

Analyte	DF	Units	RL	Result
% Solids	1	percent		84

Mercury (Soil/Waste) 7471B

Analyte	DF	Units	RL	Result
Mercury	1	mg/kg	0.099	ND

Sample ID: SB-6 (1.5-2')
Lab#: AD15743-006
Matrix: Soil

Collection Date: 2/12/2020
Receipt Date: 2/14/2020

% Solids SM2540G

Analyte	DF	Units	RL	Result
% Solids	1	percent		80

Mercury (Soil/Waste) 7471B

Analyte	DF	Units	RL	Result
Mercury	1	mg/kg	0.10	0.11

Sample ID: SB-7 (1.5-2')
Lab#: AD15743-007
Matrix: Soil

Collection Date: 2/12/2020
Receipt Date: 2/14/2020

% Solids SM2540G

Analyte	DF	Units	RL	Result
% Solids	1	percent		88

Mercury (Soil/Waste) 7471B

Analyte	DF	Units	RL	Result
Mercury	1	mg/kg	0.095	0.10

Sample ID: SB-6 (7-7.5')
Lab#: AD15743-008
Matrix: Soil

Collection Date: 2/13/2020
Receipt Date: 2/14/2020

% Solids SM2540G

Analyte	DF	Units	RL	Result
% Solids	1	percent		95

Mercury (Soil/Waste) 7471B

Analyte	DF	Units	RL	Result
Mercury	1	mg/kg	0.088	ND

Sample ID: SB-6 (18-18.5')
Lab#: AD15743-009
Matrix: Soil

Collection Date: 2/13/2020
Receipt Date: 2/14/2020

% Solids SM2540G

Analyte	DF	Units	RL	Result
% Solids	1	percent		79

Mercury (Soil/Waste) 7471B

Analyte	DF	Units	RL	Result
Mercury	1	mg/kg	0.11	ND

Sample ID: SB-7 (7-7.5')
Lab#: AD15743-010
Matrix: Soil

Collection Date: 2/13/2020
Receipt Date: 2/14/2020

% Solids SM2540G

Analyte	DF	Units	RL	Result
% Solids	1	percent		97

Mercury (Soil/Waste) 7471B

Analyte	DF	Units	RL	Result
Mercury	1	mg/kg	0.086	0.11

Sample ID: SB-7 (19-19.5')
Lab#: AD15743-011
Matrix: Soil

Collection Date: 2/13/2020
Receipt Date: 2/14/2020

% Solids SM2540G

Analyte	DF	Units	RL	Result
% Solids	1	percent		91

Mercury (Soil/Waste) 7471B

Analyte	DF	Units	RL	Result
Mercury	1	mg/kg	0.092	2.4

Mercury (SPLP) 7471A

Analyte	DF	Units	RL	Result
Mercury	1	mg/l	0.00050	0.00095

pH (SM4500-H+ B-00)

Analyte	DF	Units	RL	Result
SPLP PH	1	ph units		9.48

SPLP VOLUMES

Analyte	DF	Units	RL	Result
SPLP Final Volume	1	ml		2000
SPLP Initial Weight	1	grams		100

Sample ID: SB-5 (6-6.5')
Lab#: AD15743-012
Matrix: Soil

Collection Date: 2/13/2020
Receipt Date: 2/14/2020

% Solids SM2540G

Analyte	DF	Units	RL	Result
% Solids	1	percent		93

Mercury (Soil/Waste) 7471B

Analyte	DF	Units	RL	Result
Mercury	1	mg/kg	0.090	3.5

Sample ID: SB-5 (18-18.5')
Lab#: AD15743-013
Matrix: Soil

Collection Date: 2/13/2020
Receipt Date: 2/14/2020

% Solids SM2540G

Analyte	DF	Units	RL	Result
% Solids	1	percent		89

Mercury (Soil/Waste) 7471B

Analyte	DF	Units	RL	Result
Mercury	50	mg/kg	4.7	190

Sample ID: SB-3 (7.5-8')
Lab#: AD15743-014
Matrix: Soil

Collection Date: 2/13/2020
Receipt Date: 2/14/2020

% Solids SM2540G

Analyte	DF	Units	RL	Result
% Solids	1	percent		94

Mercury (Soil/Waste) 7471B

Analyte	DF	Units	RL	Result
Mercury	10	mg/kg	0.89	22

Mercury (SPLP) 7471A

Analyte	DF	Units	RL	Result
Mercury	2	mg/l	0.0010	0.024

pH (SM4500-H+ B-00)

Analyte	DF	Units	RL	Result
SPLP PH	1	ph units		9.92

SPLP VOLUMES

Analyte	DF	Units	RL	Result
SPLP Final Volume	1	ml		2000
SPLP Initial Weight	1	grams		100

Sample ID: SB-3 (15.5-16')
Lab#: AD15743-015
Matrix: Soil

Collection Date: 2/13/2020
Receipt Date: 2/14/2020

% Solids SM2540G

Analyte	DF	Units	RL	Result
% Solids	1	percent		93

Mercury (Soil/Waste) 7471B

Analyte	DF	Units	RL	Result
Mercury	10	mg/kg	0.90	32

Sample ID: SB-2 (7.5-8')
Lab#: AD15743-016
Matrix: Soil

Collection Date: 2/13/2020
Receipt Date: 2/14/2020

% Solids SM2540G

Analyte	DF	Units	RL	Result
% Solids	1	percent		93

Mercury (Soil/Waste) 7471B

Analyte	DF	Units	RL	Result
Mercury	1	mg/kg	0.090	0.14

Sample ID: SB-2 (18-18.5')
Lab#: AD15743-017
Matrix: Soil

Collection Date: 2/13/2020
Receipt Date: 2/14/2020

% Solids SM2540G

Analyte	DF	Units	RL	Result
% Solids	1	percent		76

Mercury (Soil/Waste) 7471B

Analyte	DF	Units	RL	Result
Mercury	1	mg/kg	0.11	ND

Sample ID: SB-4 (13-13.5')
Lab#: AD15743-018
Matrix: Soil

Collection Date: 2/13/2020
Receipt Date: 2/14/2020

% Solids SM2540G

Analyte	DF	Units	RL	Result
% Solids	1	percent		95

Mercury (Soil/Waste) 7471B

Analyte	DF	Units	RL	Result
Mercury	2	mg/kg	0.18	4.8

Sample ID: SB-4 (15.5-16')
Lab#: AD15743-019
Matrix: Soil

Collection Date: 2/13/2020
Receipt Date: 2/14/2020

% Solids SM2540G

Analyte	DF	Units	RL	Result
% Solids	1	percent		92

Mercury (Soil/Waste) 7471B

Analyte	DF	Units	RL	Result
Mercury	1	mg/kg	0.091	1.3

Mercury (SPLP) 7471A

Analyte	DF	Units	RL	Result
Mercury	1	mg/l	0.00050	ND

pH (SM4500-H+ B-00)

Analyte	DF	Units	RL	Result
SPLP PH	1	ph units		9.55

SPLP VOLUMES

Analyte	DF	Units	RL	Result
SPLP Final Volume	1	ml		2000
SPLP Initial Weight	1	grams		100

Sample ID: SB-1 (5.5-6')
Lab#: AD15743-020
Matrix: Soil

Collection Date: 2/13/2020
Receipt Date: 2/14/2020

% Solids SM2540G

Analyte	DF	Units	RL	Result
% Solids	1	percent		88

Mercury (Soil/Waste) 7471B

Analyte	DF	Units	RL	Result
Mercury	1	mg/kg	0.095	ND

Sample ID: SB-1 (18.5-19')
Lab#: AD15743-021
Matrix: Soil

Collection Date: 2/13/2020
Receipt Date: 2/14/2020

% Solids SM2540G

Analyte	DF	Units	RL	Result
% Solids	1	percent		80

Mercury (Soil/Waste) 7471B

Analyte	DF	Units	RL	Result
Mercury	1	mg/kg	0.10	ND

HC Reporting Limit Definitions/Data Qualifiers

REPORTING DEFINITIONS

DF = Dilution Factor

LCS = Laboratory Control Spike

MBS = Method Blank Spike

MS = Matrix Spike

MSD = Matrix Spike Duplicate

MDL = Method Detection Limit

NA = Not Applicable

ND = Not Detected

PS = Post Digestion Spike

RL* = Reporting Limit

RT = Retention Time

**Samples with elevated Reporting Limits (RLs) as a result of a dilution may not achieve client reporting limits in some cases. The elevated RLs are unavoidable consequences of sample dilution required to quantitate target analytes that exceed the calibration range of the instrument.*

DATA QUALIFIERS

A- Indicates that the Tentatively Identified Compound (TIC) is suspected to be an aldol-condensation product. These compounds are by-products of acetone and methylene chloride used in the extraction process.

B- Indicates analyte was present in the Method Blank and sample.

d- For Pesticide and PCB analysis, the concentration between primary and secondary columns is greater than 40%. The lower concentration is generally reported.

E- Indicates the concentration exceeded the upper calibration range of the instrument.

J- Indicates the value is estimated because it is either a Tentatively Identified Compound (TIC) or the reported concentration is greater than the MDL but less than the RL. For samples results between the MDL and RL there is a possibility of false positives or misidentification at the quantitation levels. Additionally, the acceptance criteria for QC samples may not be met.

R- Retention Time is out.

Y- Indicates a contaminant found in the blank at less than 10% of the concentration of a contaminant found in the sample.

Laboratory Chronicle

Client: Woodard & Curran
Project: Camden Labs

HC Project #: 0021436

Lab#: AD15743-001 **Sample ID: SB-1 (1.5-2')**

Test Code	Prep Method	Prep Date	By	Analytical Method	Analysis Date	By
% Solids SM2540G				SM 2540G	2/15/20 00:00	jessica
Mercury (Soil/Waste) 7471B	EPA 7471B	02/18/20 08:30	dlucca	EPA 7471B	2/20/20 17:20	OA

Lab#: AD15743-002 **Sample ID: SB-2 (1.5-2')**

Test Code	Prep Method	Prep Date	By	Analytical Method	Analysis Date	By
% Solids SM2540G				SM 2540G	2/15/20 00:00	jessica
Mercury (Soil/Waste) 7471B	EPA 7471B	02/18/20 08:30	bransaw	EPA 7471B	2/19/20 12:41	BA

Lab#: AD15743-003 **Sample ID: SB-3 (1.5-2')**

Test Code	Prep Method	Prep Date	By	Analytical Method	Analysis Date	By
% Solids SM2540G				SM 2540G	2/15/20 00:00	jessica
Mercury (Soil/Waste) 7471B	EPA 7471B	02/18/20 08:30	bransaw	EPA 7471B	2/19/20 12:45	BA

Lab#: AD15743-004 **Sample ID: SB-4 (1.5-2')**

Test Code	Prep Method	Prep Date	By	Analytical Method	Analysis Date	By
% Solids SM2540G				SM 2540G	2/15/20 00:00	jessica
Mercury (Soil/Waste) 7471B	EPA 7471B	02/18/20 08:30	bransaw	EPA 7471B	2/19/20 12:46	BA

Lab#: AD15743-005 **Sample ID: SB-5 (1.5-2')**

Test Code	Prep Method	Prep Date	By	Analytical Method	Analysis Date	By
% Solids SM2540G				SM 2540G	2/15/20 00:00	jessica
Mercury (Soil/Waste) 7471B	EPA 7471B	02/18/20 08:30	bransaw	EPA 7471B	2/19/20 12:48	BA

Laboratory Chronicle

Client: Woodard & Curran
Project: Camden Labs

HC Project #: 0021436

Lab#: AD15743-006 **Sample ID: SB-6 (1.5-2')**

Test Code	Prep Method	Prep Date	By	Analytical Method	Analysis Date	By
% Solids SM2540G				SM 2540G	2/15/20 00:00	jessica
Mercury (Soil/Waste) 7471B	EPA 7471B	02/18/20 08:30	bransaw	EPA 7471B	2/19/20 12:35	BA

Lab#: AD15743-007 **Sample ID: SB-7 (1.5-2')**

Test Code	Prep Method	Prep Date	By	Analytical Method	Analysis Date	By
% Solids SM2540G				SM 2540G	2/15/20 00:00	jessica
Mercury (Soil/Waste) 7471B	EPA 7471B	02/18/20 08:30	bransaw	EPA 7471B	2/19/20 12:49	BA

Lab#: AD15743-008 **Sample ID: SB-6 (7-7.5')**

Test Code	Prep Method	Prep Date	By	Analytical Method	Analysis Date	By
% Solids SM2540G				SM 2540G	2/15/20 00:00	jessica
Mercury (Soil/Waste) 7471B	EPA 7471B	02/18/20 08:30	bransaw	EPA 7471B	2/19/20 12:50	BA

Lab#: AD15743-009 **Sample ID: SB-6 (18-18.5')**

Test Code	Prep Method	Prep Date	By	Analytical Method	Analysis Date	By
% Solids SM2540G				SM 2540G	2/15/20 00:00	jessica
Mercury (Soil/Waste) 7471B	EPA 7471B	02/18/20 08:30	bransaw	EPA 7471B	2/19/20 12:52	BA

Lab#: AD15743-010 **Sample ID: SB-7 (7-7.5')**

Test Code	Prep Method	Prep Date	By	Analytical Method	Analysis Date	By
% Solids SM2540G				SM 2540G	2/15/20 00:00	jessica
Mercury (Soil/Waste) 7471B	EPA 7471B	02/18/20 08:30	bransaw	EPA 7471B	2/19/20 12:53	BA

Laboratory Chronicle

Client: Woodard & Curran
Project: Camden Labs

HC Project #: 0021436

Lab#: AD15743-011 **Sample ID: SB-7 (19-19.5')**

Test Code	Prep Method	Prep Date	By	Analytical Method	Analysis Date	By
% Solids SM2540G				SM 2540G	2/15/20 00:00	jessica
Mercury (Soil/Waste) 7471B	EPA 7471B	02/18/20 08:30	bransaw	EPA 7471B	2/19/20 12:54	BA
Mercury (SPLP) 7471A	EPA 7471B	02/26/20 12:00	BAdeola	EPA 7471B	2/27/20 11:50	BA
pH (SM4500-H+ B-00)		02/24/20 16:02	Ababajide	SM4500-H+B00	2/25/20 16:07	Ababajide
SPLP Metals Extraction	EPA 1312	02/24/20 16:02	Ababajide		2/25/20 16:07	Ababajide
SPLP VOLUMES		02/24/20 16:02	Ababajide	NA	2/25/20 16:07	Ababajide

Lab#: AD15743-012 **Sample ID: SB-5 (6-6.5')**

Test Code	Prep Method	Prep Date	By	Analytical Method	Analysis Date	By
% Solids SM2540G				SM 2540G	2/15/20 00:00	jessica
Mercury (Soil/Waste) 7471B	EPA 7471B	02/18/20 08:30	bransaw	EPA 7471B	2/19/20 12:56	BA

Lab#: AD15743-013 **Sample ID: SB-5 (18-18.5')**

Test Code	Prep Method	Prep Date	By	Analytical Method	Analysis Date	By
% Solids SM2540G				SM 2540G	2/15/20 00:00	jessica
Mercury (Soil/Waste) 7471B	EPA 7471B	02/18/20 08:30	bransaw	EPA 7471B	2/19/20 15:27	OA

Lab#: AD15743-014 **Sample ID: SB-3 (7.5-8')**

Test Code	Prep Method	Prep Date	By	Analytical Method	Analysis Date	By
% Solids SM2540G				SM 2540G	2/15/20 00:00	jessica
Mercury (Soil/Waste) 7471B	EPA 7471B	02/18/20 08:30	bransaw	EPA 7471B	2/19/20 15:29	OA
Mercury (SPLP) 7471A	EPA 7471B	02/26/20 12:00	BAdeola	EPA 7471B	2/27/20 13:36	BA
pH (SM4500-H+ B-00)		02/24/20 16:02	Ababajide	SM4500-H+B00	2/25/20 16:07	Ababajide
SPLP Metals Extraction	EPA 1312	02/24/20 16:02	Ababajide		2/25/20 16:07	Ababajide
SPLP VOLUMES		02/24/20 16:02	Ababajide	NA	2/25/20 16:07	Ababajide

Laboratory Chronicle

Client: Woodard & Curran
Project: Camden Labs

HC Project #: 0021436

Lab#: AD15743-015 **Sample ID: SB-3 (15.5-16')**

Test Code	Prep Method	Prep Date	By	Analytical Method	Analysis Date	By
% Solids SM2540G				SM 2540G	2/15/20 00:00	jessica
Mercury (Soil/Waste) 7471B	EPA 7471B	02/18/20 08:30	bransaw	EPA 7471B	2/19/20 15:31	OA

Lab#: AD15743-016 **Sample ID: SB-2 (7.5-8')**

Test Code	Prep Method	Prep Date	By	Analytical Method	Analysis Date	By
% Solids SM2540G				SM 2540G	2/15/20 00:00	jessica
Mercury (Soil/Waste) 7471B	EPA 7471B	02/18/20 08:30	bransaw	EPA 7471B	2/19/20 13:06	BA

Lab#: AD15743-017 **Sample ID: SB-2 (18-18.5')**

Test Code	Prep Method	Prep Date	By	Analytical Method	Analysis Date	By
% Solids SM2540G				SM 2540G	2/15/20 00:00	jessica
Mercury (Soil/Waste) 7471B	EPA 7471B	02/18/20 08:30	bransaw	EPA 7471B	2/19/20 13:07	BA

Lab#: AD15743-018 **Sample ID: SB-4 (13-13.5')**

Test Code	Prep Method	Prep Date	By	Analytical Method	Analysis Date	By
% Solids SM2540G				SM 2540G	2/15/20 00:00	jessica
Mercury (Soil/Waste) 7471B	EPA 7471B	02/18/20 08:30	bransaw	EPA 7471B	2/19/20 15:33	OA

Lab#: AD15743-019 **Sample ID: SB-4 (15.5-16')**

Test Code	Prep Method	Prep Date	By	Analytical Method	Analysis Date	By
% Solids SM2540G				SM 2540G	2/15/20 00:00	jessica
Mercury (Soil/Waste) 7471B	EPA 7471B	02/18/20 08:30	bransaw	EPA 7471B	2/19/20 13:10	BA
Mercury (SPLP) 7471A	EPA 7471B	02/26/20 12:00	BAdeola	EPA 7471B	2/27/20 11:56	BA
pH (SM4500-H+ B-00)		02/24/20 16:02	Ababajide	SM4500-H+B00	2/25/20 16:20	Ababajide
SPLP Metals Extraction	EPA 1312	02/24/20 16:02	Ababajide		2/25/20 16:20	Ababajide
SPLP VOLUMES		02/24/20 16:02	Ababajide	NA	2/25/20 16:20	Ababajide

Laboratory Chronicle

Client: Woodard & Curran
Project: Camden Labs

HC Project #: 0021436

Lab#: AD15743-020 **Sample ID: SB-1 (5.5-6')**

Test Code	Prep Method	Prep Date	By	Analytical Method	Analysis Date	By
% Solids SM2540G				SM 2540G	2/15/20 00:00	jessica
Mercury (Soil/Waste) 7471B	EPA 7471B	02/18/20 08:30	bransaw	EPA 7471B	2/19/20 13:12	BA

Lab#: AD15743-021 **Sample ID: SB-1 (18.5-19')**

Test Code	Prep Method	Prep Date	By	Analytical Method	Analysis Date	By
% Solids SM2540G				SM 2540G	2/15/20 00:00	jessica
Mercury (Soil/Waste) 7471B	EPA 7471B	02/18/20 08:30	bransaw	EPA 7471B	2/19/20 13:13	BA

Chain of Custody

0021436 0033

Hampton-Clarke, Inc. (WBE/DBE/SBE)

175 Route 46 West and 2 Madison Road, Fairfield, New Jersey 07004
Ph: 800-426-9992 | 973-244-9770 Fax: 973-244-9787 | 973-439-1458
Service Center: 137-D Gaither Drive, Mount Laurel, New Jersey 08054
Ph (Service Center): 856-780-6057 Fax: 856-780-6056

Hampton-Clarke WBE/DBE/SBE 800-426-9992

A Women-Owned, Disadvantaged, Small Business Enterprise

NELAC/NJ #07071 | PA #68-00463 | NY #11408 | CT #PH-0671 | KY #90124 | DE HSCA Approved

CHAIN OF CUSTODY RECORD

Project # (Lab Use Only): 0021436

Page 1 of 3

3) Reporting Requirements (Please Circle)

Turnaround	Report Type	Electronic Data Deliv.
When Available:	Summary	NJ Hazsite
1 Business Day (100%)*	Results + QC (Waste)	Excel Reg. NJ / NY / PA
2 Business Days (75%)*	Reduced:	EnviroData
3 Business Days (50%)*	[X] NJ [ ] NY	EQuIS:
4 Business Days (35%)*	[ ] PA [ ] Other___	[ ] 4-File [ ] EZ
5 Business Days (25%)	NJ Full / NY ASP CatB	[ ] NYDEC
8 Business Days (Stand.)	NY ASP CatA	[ ] Region 2 or 5
Other:_____		Other:_____

* Expedited TAT Not Always Available. Please Check with Lab.

Customer Information

1a) Customer: Woodard + Curran
Address: 2 Executive Campus Ste 125
Cherry Hill, NJ
1b) Email/Cell/Fax/Ph: rfisler@woodardcurran.com
1c) Send Invoice to:
1d) Send Report to:

Project Information

2a) Project: Camden Labs
0230198
2b) Project Mgr: Rob Fisler
2c) Project Location (City/State): Camden, NJ
2d) Quote/PO # (If Applicable):

FOR LAB USE ONLY ↓

Batch # AD15743

===> Check If Contingent ===>

Matrix Codes
DW - Drinking Water S - Soil A - Air
GW - Ground Water SL - Sludge
WW - Waste Water OL - Oil
OT - Other (please specify under item 9, Comments)

7) Analysis (specify methods & parameter lists)

<=== Check If Contingent <===

Lab Sample #	4) Customer Sample ID	5) Matrix	6) Sample Date	6) Sample Time	Sample Type: Composite (C)	Sample Type: Grab (G)	Mercury	Mercury via SPLP	8) # of Bottles: None	MeOH	En Core	NaOH	HCl	H2SO4	HNO3	Other:	9) Comments
001	SB-1 (1.5-2')	S	2-12-20	10:00		G	5	H	1								
002	SB-2 (1.5-2')	S		10:25		G											
003	SB-3 (1.5-2')	S		10:40		G											
004	SB-4 (1.5-2')	S		10:55		G											
005	SB-5 (1.5-2')	S		11:15		G											
006	SB-6 (1.5-2')	S		11:30		G											
007	SB-7 (1.5-2')	S		12:00		G											
008	SB-6 (7-7.5')	S	2-13-20	10:30		G											
009	SB-6 (18-18.5')	S		10:35		G											
010	SB-7 (7-7.5')	S		11:05		G											

10) Relinquished by:	Accepted by:	Date	Time
		2-14-20	1020
		2/14/20	220
		2/14/20	440

11) Sampler (print name): Brenna Garmon Date: 2-14-20

Additional Notes

5 - Please analyze on 5 Day TAT!

H - Hold pending Mercury results

Comments, Notes, Special Requirements, HAZARDS

Indicate if low-level methods required to meet current groundwater standards (SPLP for soil):
- [ ] BN or BNA (8270D SIM)
- [ ] VOC (8260C SIM or 8011)
- [ ] SPLP (BN, BNA, Metals)
- [ ] 1,4 Dioxane

For NJ LSRP projects, indicate which standards need to be met:
- [X] NJDEP GWQS
- [X] NJDEP SRS
- [X] NJDEP SPLP
- [ ] Other (specify):

Check if applicable:
- [ ] Project-Specific Reporting Limits
- [ ] High Contaminant Concentrations
- [ ] NJ LSRP Project (also check boxes above/right)

Cooler Temperature: 2.6°C

Please note NUMBERED items. If not completed your analytical work may be delayed.
A fee of $5/sample will be assessed for storage should sample not be activated for any analysis.

Internal use: sampling plan (check box) HC [ ] or client [ ] FSP#

0021436 0034

Hampton-Clarke, Inc. (WBE/DBE/SBE)

175 Route 46 West and 2 Madison Road, Fairfield, New Jersey 07004
Ph: 800-426-9992 | 973-244-9770 Fax: 973-244-9787 | 973-439-1458
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CHAIN OF CUSTODY RECORD

Project # (Lab Use Only): 0021436

3) Reporting Requirements (Please Circle)

Turnaround	Report Type	Electronic Data Deliv.
When Available:	Summary	NJ Hazsite
1 Business Day (100%)*	Results + QC (Waste)	Excel Reg. NJ / NY / PA
2 Business Days (75%)*	Reduced:	EnviroData
3 Business Days (50%)*	[X] NJ [ ] NY	EQuIS:
4 Business Days (35%)*	[ ] PA [ ] Other___	[ ] 4-File [ ] EZ
5 Business Days (25%)	NJ Full / NY ASP CatB	[ ] NYDEC
8 Business Days (Stand.)	NY ASP CatA	[ ] Region 2 or 5
Other:		Other:

* Expedited TAT Not Always Available. Please Check with Lab.

Customer Information

1a) Customer: Woodard + Curran
Address: 2 Executive Campus, Ste 125
Cherry Hill NJ
1b) Email/Cell/Fax/Ph: rfisler@woodardcurran.com
1c) Send Invoice to:
1d) Send Report to:

Project Information

2a) Project: Camden Labs
0230198
2b) Project Mgr: Rob Fisler
2c) Project Location (City/State): Camden, NJ
2d) Quote/PO # (If Applicable):

FOR LAB USE ONLY ↓

Batch # A015743

Matrix Codes
DW - Drinking Water; S - Soil; A - Air; GW - Ground Water; SL - Sludge; WW - Waste Water; OL - Oil; OT - Other (please specify under item 9, Comments)

===> Check If Contingent ===>

7) Analysis (specify methods & parameter lists)

<=== Check If Contingent <===

Lab Sample #	4) Customer Sample ID	5) Matrix	6) Sample Date	6) Sample Time	Sample Type: Composite (C)	Sample Type: Grab (G)	Mercury	Mercury via SPLP	8) # of Bottles: None	MeOH	En Core	NaOH	HCl	H2SO4	HNO3	Other:	9) Comments
011	SB-7 (19-19.5')	S	2-13-20	11:00		G	5	H	1								
012	SB-5 (6-6.5')	S		11:45		G											
013	SB-5 (18-18.5')	S		12:05		G											
014	SB-3 (7.5-8')	S		12:25		G											
015	SB-3 (15.5-16')	S		12:40		G											
016	SB-2 (7.5-8')	S		13:05		G											
017	SB-2 (18-18.5')	S		13:15		G											
018	SB-4 (13-13.5')	S		14:35		G											
019	SB-4 (15.5-16')	S		14:45		G											
020	SB-1 (5.5-6')	S		14:05													

10) Relinquished by:	Accepted by:	Date	Time
		2/14/20	1020
		2/14/20	1220
		2/14/20	1440

11) Sampler (print name): Brenna Garmon Date: 2-14-20

Additional Notes
5 - Analyze on 5 day TAT! H - Hold pending Mercury results

Comments, Notes, Special Requirements, HAZARDS

Indicate if low-level methods required to meet current groundwater standards (SPLP for soil):
- [ ] BN or BNA (8270D SIM)
- [ ] VOC (8260C SIM or 8011)
- [ ] SPLP (BN, BNA, Metals)
- [ ] 1,4 Dioxane

For NJ LSRP projects, indicate which standards need to be met:
- [X] NJDEP GWQS
- [X] NJDEP SRS
- [X] NJDEP SPLP
- [ ] Other (specify):

Check if applicable:
- [ ] Project-Specific Reporting Limits
- [ ] High Contaminant Concentrations
- [ ] NJ LSRP Project (also check boxes above/right)

Cooler Temperature: 2.6

Please note NUMBERED items. If not completed your analytical work may be delayed.
A fee of $5/sample will be assessed for storage should sample not be activated for any analysis.

Internal use: sampling plan (check box) HC [ ] or client [ ] FSP#

0021436 0035

Hampton-Clarke, Inc. (WBE/DBE/SBE)

175 Route 46 West and 2 Madison Road, Fairfield, New Jersey 07004
Ph: 800-426-9992 | 973-244-9770 Fax: 973-244-9787 | 973-439-1458
Service Center: 137-D Gaither Drive, Mount Laurel, New Jersey 08054
Ph (Service Center): 856-780-6057 Fax: 856-780-6056

Hampton-Clarke WBE/DBE/SBE 800-426-9992
A Women-Owned, Disadvantaged, Small Business Enterprise

NELAC/NJ #07071 | PA #68-00463 | NY #11408 | CT #PH-0671 | KY #90124 | DE HSCA Approved

CHAIN OF CUSTODY RECORD

Project # (Lab Use Only): 0021436

3) Reporting Requirements (Please Circle)

Turnaround	Report Type	Electronic Data Deliv.
When Available:	Summary	NJ Hazsite
1 Business Day (100%)*	Results + QC (Waste)	Excel Reg. NJ / NY / PA
2 Business Days (75%)*	Reduced:	EnviroData
3 Business Days (50%)*	[X] NJ [ ] NY	EQuIS:
4 Business Days (35%)*	[ ] PA [ ] Other___	[ ] 4-File [ ] EZ
5 Business Days (25%)	NJ Full / NY ASP CatB	[ ] NYDEC
8 Business Days (Stand.)	NY ASP CatA	[ ] Region 2 or 5
Other:		Other:

* Expedited TAT Not Always Available. Please Check with Lab.

Customer Information

1a) Customer: Woodard + Curran
Address: 2 Executive Campus, Ste 125
Cherry Hill, NJ
1b) Email/Cell/Fax/Ph: cfisler@woodardcurran.com
1c) Send Invoice to:
1d) Send Report to:

Project Information

2a) Project: Camden Labs
0230198
2b) Project Mgr: Rob Fisler
2c) Project Location (City/State): Camden, NJ
2d) Quote/PO # (If Applicable):

FOR LAB USE ONLY ↓

Batch # ADV543

===> Check If Contingent ===>

Matrix Codes
DW - Drinking Water S - Soil A - Air
GW - Ground Water SL - Sludge
WW - Waste Water OL - Oil
OT - Other (please specify under item 9, Comments)

7) Analysis (specify methods & parameter lists)

<=== Check If Contingent <===

Lab Sample #	4) Customer Sample ID	5) Matrix	6) Sample Date	6) Sample Time	Sample Type: Composite (C)	Sample Type: Grab (G)	Mercury	Mercury via SPLP	8) # of Bottles: None	MeOH	En Core	NaOH	HCl	H2SO4	HNO3	Other:	9) Comments
021	SB-1 (18.5-19')	S	2-13-20	14:15		G	5	H	1								

10) Relinquished by:

Accepted by:	Date	Time
	2-14-20	1040
	2/14/20	220
	2/14/20	440

11) Sampler (print name): Brenna Garmon Date: 2-14-20

Additional Notes
5- Analyze on 5 day TAT! H- Hold pending Mercury results

Comments, Notes, Special Requirements, HAZARDS

Indicate if low-level methods required to meet current groundwater standards (SPLP for soil):
[ ] BN or BNA (8270D SIM)
[ ] VOC (8260C SIM or 8011)
[ ] SPLP (BN, BNA, Metals)
[ ] 1,4 Dioxane

For NJ LSRP projects, indicate which standards need to be met:
[ ] NJDEP GWQS
[X] NJDEP SRS
[X] NJDEP SPLP
[ ] Other (specify):

Check if applicable:
[ ] Project-Specific Reporting Limits
[ ] High Contaminant Concentrations
[ ] NJ LSRP Project (also check boxes above/right)

Cooler Temperature: 2.6

Please note NUMBERED items. If not completed your analytical work may be delayed.
A fee of $5/sample will be assessed for storage should sample not be activated for any analysis.

Internal use: sampling plan (check box) HC [ ] or client [ ] FSP#

PROJECT MODIFICATIONS

Client: WOODARD-NJ
Project: Camden Labs

HC Project #: 0021436

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anna192.168.1.39
2/24/2020 12:18:19 PM

Per Rob Fisler activate following samples for mercury-SPLP on a 5-Day TAT.

•AD15743-014 - [SB-3 (7.5-8)];
•AD15743-019 - [SB-4 (15.5-16)]; and
•AD15743-011 - [SB-7 (19-19.5)].

CONDITION UPON RECEIPT

Batch Number AD15743 Entered By: maxwell
Date Entered 2/14/2020 7:04:00 PM

1	Yes	Is there a corresponding COC included with the samples?
2	Yes	Are the samples in a container such as a cooler or Ice chest?
3	Yes	Are the COC seals intact?
4	T-461	<--- Thermometer ID. Please specify the Temperature inside the container (in degC). 2.6C
5	Yes	Are the samples refrigerated (where required)/have they arrived on ice?
6	Yes	Are the samples within the holding times for the parameters listed on the COC? IF no, list parameters and samples:
7	Yes	Are all of the sample bottles intact? If no, specify sample numbers broken/leaking
8	Yes	Are all of the sample labels or numbers legible? If no specify:
9	Yes	Do the contents match the COC? If no, specify
10	Yes	Is there enough sample sent for the analyses listed on the COC? If no, specify:
11	Yes	Are samples preserved correctly?
12	Yes	Was temperature blank present (Place comment below if not)? If not was temperature of samples verified?
13	NA	Other comments ...Specify
14	NA	Corrective actions (Specify item number and corrective action taken).

Internal Chain of Custody

Lab#:	DateTime:	Loc or User	Bot Nu	A/M	Analysis
AD15743-001	02/14/20 16:40	MAXW	0	M	Received
AD15743-001	02/14/20 19:03	MAXW	0	M	Login
AD15743-001	02/14/20 20:35	R12	1	A	NONE
AD15743-002	02/14/20 16:40	MAXW	0	M	Received
AD15743-002	02/14/20 19:03	MAXW	0	M	Login
AD15743-002	02/14/20 20:35	R12	1	A	NONE
AD15743-002	02/18/20 13:46	BR	1	A	Hg
AD15743-002	02/18/20 13:47	BR	1	A	r12
AD15743-003	02/14/20 16:40	MAXW	0	M	Received
AD15743-003	02/14/20 19:03	MAXW	0	M	Login
AD15743-003	02/14/20 20:35	R12	1	A	NONE
AD15743-003	02/18/20 13:46	BR	1	A	Hg
AD15743-003	02/18/20 13:47	BR	1	A	r12
AD15743-004	02/14/20 16:40	MAXW	0	M	Received
AD15743-004	02/14/20 19:03	MAXW	0	M	Login
AD15743-004	02/14/20 20:35	R12	1	A	NONE
AD15743-004	02/18/20 13:46	BR	1	A	Hg
AD15743-004	02/18/20 13:47	BR	1	A	r12
AD15743-005	02/14/20 16:40	MAXW	0	M	Received
AD15743-005	02/14/20 19:03	MAXW	0	M	Login
AD15743-005	02/14/20 20:35	R12	1	A	NONE
AD15743-005	02/18/20 13:46	BR	1	A	Hg
AD15743-005	02/18/20 13:47	BR	1	A	r12
AD15743-006	02/14/20 16:40	MAXW	0	M	Received
AD15743-006	02/14/20 19:03	MAXW	0	M	Login
AD15743-006	02/14/20 20:35	R12	1	A	NONE
AD15743-006	02/18/20 13:46	BR	1	A	Hg
AD15743-006	02/18/20 13:47	BR	1	A	r12
AD15743-007	02/14/20 16:40	MAXW	0	M	Received
AD15743-007	02/14/20 19:03	MAXW	0	M	Login
AD15743-007	02/14/20 20:35	R12	1	A	NONE
AD15743-007	02/18/20 13:46	BR	1	A	Hg
AD15743-007	02/18/20 13:47	BR	1	A	r12
AD15743-008	02/14/20 16:40	MAXW	0	M	Received
AD15743-008	02/14/20 19:03	MAXW	0	M	Login
AD15743-008	02/14/20 20:35	R12	1	A	NONE
AD15743-008	02/18/20 13:46	BR	1	A	Hg
AD15743-008	02/18/20 13:47	BR	1	A	r12
AD15743-009	02/14/20 16:40	MAXW	0	M	Received
AD15743-009	02/14/20 19:03	MAXW	0	M	Login
AD15743-009	02/14/20 20:35	R12	1	A	NONE
AD15743-009	02/18/20 13:46	BR	1	A	Hg
AD15743-009	02/18/20 13:47	BR	1	A	r12
AD15743-010	02/14/20 16:40	MAXW	0	M	Received
AD15743-010	02/14/20 19:03	MAXW	0	M	Login
AD15743-010	02/14/20 20:35	R12	1	A	NONE
AD15743-010	02/18/20 13:46	BR	1	A	Hg
AD15743-010	02/18/20 13:47	BR	1	A	r12
AD15743-011	02/14/20 16:40	MAXW	0	M	Received
AD15743-011	02/14/20 19:03	MAXW	0	M	Login
AD15743-011	02/14/20 20:35	R12	1	A	NONE
AD15743-011	02/18/20 13:46	BR	1	A	Hg
AD15743-011	02/18/20 13:47	BR	1	A	r12
AD15743-011	02/24/20 16:02	AB	1	A	TCLP/SPLP
AD15743-011	02/24/20 20:39	AB	1	A	r12
AD15743-012	02/14/20 16:40	MAXW	0	M	Received
AD15743-012	02/14/20 19:03	MAXW	0	M	Login
AD15743-012	02/14/20 20:35	R12	1	A	NONE
AD15743-012	02/18/20 13:46	BR	1	A	Hg
AD15743-012	02/18/20 13:47	BR	1	A	r12
AD15743-013	02/14/20 16:40	MAXW	0	M	Received
AD15743-013	02/14/20 19:03	MAXW	0	M	Login
AD15743-013	02/14/20 20:35	R12	1	A	NONE
AD15743-013	02/18/20 13:46	BR	1	A	Hg
AD15743-013	02/18/20 13:47	BR	1	A	r12
AD15743-014	02/14/20 16:40	MAXW	0	M	Received
AD15743-014	02/14/20 19:03	MAXW	0	M	Login
AD15743-014	02/14/20 20:35	R12	1	A	NONE
AD15743-014	02/18/20 13:46	BR	1	A	Hg
AD15743-014	02/18/20 13:47	BR	1	A	r12
AD15743-014	02/24/20 16:02	AB	1	A	TCLP/SPLP
AD15743-014	02/24/20 20:39	AB	1	A	r12
AD15743-015	02/14/20 16:40	MAXW	0	M	Received
AD15743-015	02/14/20 19:03	MAXW	0	M	Login
AD15743-015	02/14/20 20:35	R12	1	A	NONE
AD15743-015	02/18/20 13:46	BR	1	A	Hg
AD15743-015	02/18/20 13:47	BR	1	A	r12
AD15743-016	02/14/20 16:40	MAXW	0	M	Received
AD15743-016	02/14/20 19:03	MAXW	0	M	Login
AD15743-016	02/14/20 20:35	R12	1	A	NONE
AD15743-016	02/18/20 13:46	BR	1	A	Hg
AD15743-016	02/18/20 13:47	BR	1	A	r12
AD15743-017	02/14/20 16:40	MAXW	0	M	Received
AD15743-017	02/14/20 19:03	MAXW	0	M	Login
AD15743-017	02/14/20 20:35	R12	1	A	NONE
AD15743-017	02/18/20 13:46	BR	1	A	Hg
AD15743-017	02/18/20 13:47	BR	1	A	r12
AD15743-018	02/14/20 16:40	MAXW	0	M	Received
AD15743-018	02/14/20 19:03	MAXW	0	M	Login
AD15743-018	02/14/20 20:35	R12	1	A	NONE
AD15743-018	02/18/20 13:46	BR	1	A	Hg
AD15743-018	02/18/20 13:47	BR	1	A	r12
AD15743-019	02/14/20 16:40	MAXW	0	M	Received
AD15743-019	02/14/20 19:03	MAXW	0	M	Login
AD15743-019	02/14/20 20:35	R12	1	A	NONE
AD15743-019	02/18/20 13:46	BR	1	A	Hg
AD15743-019	02/18/20 13:47	BR	1	A	r12
AD15743-019	02/24/20 16:02	AB	1	A	TCLP/SPLP
AD15743-019	02/24/20 20:39	AB	1	A	r12
AD15743-020	02/14/20 16:40	MAXW	0	M	Received
AD15743-020	02/14/20 19:03	MAXW	0	M	Login
AD15743-020	02/14/20 20:35	R12	1	A	NONE
AD15743-020	02/18/20 13:46	BR	1	A	Hg
AD15743-020	02/18/20 13:47	BR	1	A	r12
AD15743-021	02/14/20 16:40	MAXW	0	M	Received
AD15743-021	02/14/20 19:03	MAXW	0	M	Login
AD15743-021	02/14/20 20:35	R12	1	A	NONE
AD15743-021	02/18/20 13:46	BR	1	A	Hg
AD15743-021	02/18/20 13:47	BR	1	A	r12

Samples marked as received are stored in coolers or refrigerator R12, or R24 at 4 deg C until Login

Metal Data

Form1
Inorganic Analysis Data Sheet

Sample ID:	AD15743-001	% Solid:	87	Lab Name:	Hampton-Clarke	Nras No:	
Client Id:	SB-1 (1.5-2')	Units:	MG/KG	Lab Code:		Sdg No:	
Matrix:	SOIL	Date Rec:	2/15/2020	Contract:		Case No:	
Level:	LOW						

Cas No.	Analyte	RL	Conc	Dil Fact	Initial Wt/Vol	Final Wt/Vol	Analysis Date	Prep Batch	File:	Seq Num	M	Instr
7439-97-6	Mercury	0.096	0.12	1	0.15	25	02/20/20	82633	H25395S	28	CV	HGCV3A

Comments: _____

_____

Flag Codes:

U or ND - Indicates Compound was not found above the detection/reporting limit
P - ICP-AES
CV -ColdVapor
MS - ICP-MS

Form1
Inorganic Analysis Data Sheet

Sample ID:	AD15743-002	% Solid:	86	Lab Name:	Hampton-Clarke	Nras No:	
Client Id:	SB-2 (1.5-2')	Units:	MG/KG	Lab Code:		Sdg No:	
Matrix:	SOIL	Date Rec:	2/15/2020	Contract:		Case No:	
Level:	LOW						

Cas No.	Analyte	RL	Conc	Dil Fact	Initial Wt/Vol	Final Wt/Vol	Analysis Date	Prep Batch	File:	Seq Num	M	Instr
7439-97-6	Mercury	0.097	ND	1	0.15	25	02/19/20	82635	H25397S	20	CV	HGCV3A

Comments: _____

_____

Flag Codes:

U or ND - Indicates Compound was not found above the detection/reporting limit
P - ICP-AES
CV -ColdVapor
MS - ICP-MS

Form1
Inorganic Analysis Data Sheet

Sample ID:	AD15743-003	% Solid:	87	Lab Name:	Hampton-Clarke	Nras No:	
Client Id:	SB-3 (1.5-2')	Units:	MG/KG	Lab Code:		Sdg No:	
Matrix:	SOIL	Date Rec:	2/15/2020	Contract:		Case No:	
Level:	LOW						

Cas No.	Analyte	RL	Conc	Dil Fact	Initial Wt/Vol	Final Wt/Vol	Analysis Date	Prep Batch	File:	Seq Num	M	Instr
7439-97-6	Mercury	0.096	0.11	1	0.15	25	02/19/20	82635	H25397S	23	CV	HGCV3A

Comments: _____

_____

Flag Codes:

U or ND - Indicates Compound was not found above the detection/reporting limit
P - ICP-AES
CV -ColdVapor
MS - ICP-MS

Form1
Inorganic Analysis Data Sheet

Sample ID:	AD15743-004	% Solid:	88	Lab Name:	Hampton-Clarke	Nras No:	
Client Id:	SB-4 (1.5-2')	Units:	MG/KG	Lab Code:		Sdg No:	
Matrix:	SOIL	Date Rec:	2/15/2020	Contract:		Case No:	
Level:	LOW						

Cas No.	Analyte	RL	Conc	Dil Fact	Initial Wt/Vol	Final Wt/Vol	Analysis Date	Prep Batch	File:	Seq Num	M	Instr
7439-97-6	Mercury	0.095	0.20	1	0.15	25	02/19/20	82635	H25397S	24	CV	HGCV3A

Comments: _____

_____

Flag Codes:

U or ND - Indicates Compound was not found above the detection/reporting limit
P - ICP-AES
CV -ColdVapor
MS - ICP-MS

Form1
Inorganic Analysis Data Sheet

Sample ID:	AD15743-005	% Solid:	84	Lab Name:	Hampton-Clarke	Nras No:	
Client Id:	SB-5 (1.5-2')	Units:	MG/KG	Lab Code:		Sdg No:	
Matrix:	SOIL	Date Rec:	2/15/2020	Contract:		Case No:	
Level:	LOW						

Cas No.	Analyte	RL	Conc	Dil Fact	Initial Wt/Vol	Final Wt/Vol	Analysis Date	Prep Batch	File:	Seq Num	M	Instr
7439-97-6	Mercury	0.099	ND	1	0.15	25	02/19/20	82635	H25397S	25	CV	HGCV3A

Comments: _____

_____

Flag Codes:

U or ND - Indicates Compound was not found above the detection/reporting limit
P - ICP-AES
CV -ColdVapor
MS - ICP-MS

Form1
Inorganic Analysis Data Sheet

Sample ID:	AD15743-006	% Solid:	80	Lab Name:	Hampton-Clarke	Nras No:	
Client Id:	SB-6 (1.5-2')	Units:	MG/KG	Lab Code:		Sdg No:	
Matrix:	SOIL	Date Rec:	2/15/2020	Contract:		Case No:	
Level:	LOW						

Cas No.	Analyte	RL	Conc	Dil Fact	Initial Wt/Vol	Final Wt/Vol	Analysis Date	Prep Batch	File:	Seq Num	M	Instr
7439-97-6	Mercury	0.10	0.11	1	0.15	25	02/19/20	82635	H25397S	16	CV	HGCV3A

Comments: _____

_____

Flag Codes:

U or ND - Indicates Compound was not found above the detection/reporting limit
P - ICP-AES
CV -ColdVapor
MS - ICP-MS

Form1
Inorganic Analysis Data Sheet

Sample ID:	AD15743-007	% Solid:	88	Lab Name:	Hampton-Clarke	Nras No:	
Client Id:	SB-7 (1.5-2')	Units:	MG/KG	Lab Code:		Sdg No:	
Matrix:	SOIL	Date Rec:	2/15/2020	Contract:		Case No:	
Level:	LOW						

Cas No.	Analyte	RL	Conc	Dil Fact	Initial Wt/Vol	Final Wt/Vol	Analysis Date	Prep Batch	File:	Seq Num	M	Instr
7439-97-6	Mercury	0.095	0.10	1	0.15	25	02/19/20	82635	H25397S	26	CV	HGCV3A

Comments: _____

Flag Codes:

U or ND - Indicates Compound was not found above the detection/reporting limit
P - ICP-AES
CV -ColdVapor
MS - ICP-MS

Form1
Inorganic Analysis Data Sheet

Sample ID:	AD15743-008	% Solid:	95	Lab Name:	Hampton-Clarke	Nras No:	
Client Id:	SB-6 (7-7.5')	Units:	MG/KG	Lab Code:		Sdg No:	
Matrix:	SOIL	Date Rec:	2/15/2020	Contract:		Case No:	
Level:	LOW						

Cas No.	Analyte	RL	Conc	Dil Fact	Initial Wt/Vol	Final Wt/Vol	Analysis Date	Prep Batch	File:	Seq Num	M	Instr
7439-97-6	Mercury	0.088	ND	1	0.15	25	02/19/20	82635	H25397S	27	CV	HGCV3A

Comments: _____

_____

Flag Codes:

U or ND - Indicates Compound was not found above the detection/reporting limit
P - ICP-AES
CV -ColdVapor
MS - ICP-MS

Form1
Inorganic Analysis Data Sheet

Sample ID:	AD15743-009	% Solid:	79	Lab Name:	Hampton-Clarke	Nras No:	
Client Id:	SB-6 (18-18.5')	Units:	MG/KG	Lab Code:		Sdg No:	
Matrix:	SOIL	Date Rec:	2/15/2020	Contract:		Case No:	
Level:	LOW						

Cas No.	Analyte	RL	Conc	Dil Fact	Initial Wt/Vol	Final Wt/Vol	Analysis Date	Prep Batch	File:	Seq Num	M	Instr
7439-97-6	Mercury	0.11	ND	1	0.15	25	02/19/20	82635	H25397S	28	CV	HGCV3A

Comments: _____

_____

Flag Codes:

U or ND - Indicates Compound was not found above the detection/reporting limit
P - ICP-AES
CV -ColdVapor
MS - ICP-MS

Form1
Inorganic Analysis Data Sheet

Sample ID:	AD15743-010	% Solid:	97	Lab Name:	Hampton-Clarke	Nras No:	
Client Id:	SB-7 (7-7.5')	Units:	MG/KG	Lab Code:		Sdg No:	
Matrix:	SOIL	Date Rec:	2/15/2020	Contract:		Case No:	
Level:	LOW						

Cas No.	Analyte	RL	Conc	Dil Fact	Initial Wt/Vol	Final Wt/Vol	Analysis Date	Prep Batch	File:	Seq Num	M	Instr
7439-97-6	Mercury	0.086	0.11	1	0.15	25	02/19/20	82635	H25397S	29	CV	HGCV3A

Comments: _____

_____

Flag Codes:

U or ND - Indicates Compound was not found above the detection/reporting limit
P - ICP-AES
CV -ColdVapor
MS - ICP-MS

Form1
Inorganic Analysis Data Sheet

Sample ID:	AD15743-011	% Solid:	91	Lab Name:	Hampton-Clarke	Nras No:	
Client Id:	SB-7 (19-19.5')	Units:	MG/KG	Lab Code:		Sdg No:	
Matrix:	SOIL	Date Rec:	2/15/2020	Contract:		Case No:	
Level:	LOW						

Cas No.	Analyte	RL	Conc	Dil Fact	Initial Wt/Vol	Final Wt/Vol	Analysis Date	Prep Batch	File:	Seq Num	M	Instr
7439-97-6	Mercury	0.092	2.4	1	0.15	25	02/19/20	82635	H25397S	30	CV	HGCV3A

Comments: _____

_____

Flag Codes:

U or ND - Indicates Compound was not found above the detection/reporting limit
P - ICP-AES
CV -ColdVapor
MS - ICP-MS

Form1
Inorganic Analysis Data Sheet

Sample ID:	AD15743-012	% Solid:	93	Lab Name:	Hampton-Clarke	Nras No:	
Client Id:	SB-5 (6-6.5')	Units:	MG/KG	Lab Code:		Sdg No:	
Matrix:	SOIL	Date Rec:	2/15/2020	Contract:		Case No:	
Level:	LOW						

Cas No.	Analyte	RL	Conc	Dil Fact	Initial Wt/Vol	Final Wt/Vol	Analysis Date	Prep Batch	File:	Seq Num	M	Instr
7439-97-6	Mercury	0.090	3.5	1	0.15	25	02/19/20	82635	H25397S	31	CV	HGCV3A

Comments: _____

_____

Flag Codes:

U or ND - Indicates Compound was not found above the detection/reporting limit
P - ICP-AES
CV -ColdVapor
MS - ICP-MS

Form1
Inorganic Analysis Data Sheet

Sample ID:	AD15743-013	% Solid:	89	Lab Name:	Hampton-Clarke	Nras No:	
Client Id:	SB-5 (18-18.5')	Units:	MG/KG	Lab Code:		Sdg No:	
Matrix:	SOIL	Date Rec:	2/15/2020	Contract:		Case No:	
Level:	LOW						

Cas No.	Analyte	RL	Conc	Dil Fact	Initial Wt/Vol	Final Wt/Vol	Analysis Date	Prep Batch	File:	Seq Num	M	Instr
7439-97-6	Mercury	4.7	190	50	0.15	25	02/19/20	82635	H25397Sb	11	CV	HGCV3A

Comments: _____

_____

Flag Codes:

U or ND - Indicates Compound was not found above the detection/reporting limit
P - ICP-AES
CV -ColdVapor
MS - ICP-MS

Form1
Inorganic Analysis Data Sheet

Sample ID:	AD15743-014	% Solid:	94	Lab Name:	Hampton-Clarke	Nras No:	
Client Id:	SB-3 (7.5-8')	Units:	MG/KG	Lab Code:		Sdg No:	
Matrix:	SOIL	Date Rec:	2/15/2020	Contract:		Case No:	
Level:	LOW						

Cas No.	Analyte	RL	Conc	Dil Fact	Initial Wt/Vol	Final Wt/Vol	Analysis Date	Prep Batch	File:	Seq Num	M	Instr
7439-97-6	Mercury	0.89	22	10	0.15	25	02/19/20	82635	H25397Sb	12	CV	HGCV3A

Comments: _____

_____

Flag Codes:

U or ND - Indicates Compound was not found above the detection/reporting limit
P - ICP-AES
CV -ColdVapor
MS - ICP-MS

Form1
Inorganic Analysis Data Sheet

Sample ID:	AD15743-015	% Solid:	93	Lab Name:	Hampton-Clarke	Nras No:	
Client Id:	SB-3 (15.5-16')	Units:	MG/KG	Lab Code:		Sdg No:	
Matrix:	SOIL	Date Rec:	2/15/2020	Contract:		Case No:	
Level:	LOW						

Cas No.	Analyte	RL	Conc	Dil Fact	Initial Wt/Vol	Final Wt/Vol	Analysis Date	Prep Batch	File:	Seq Num	M	Instr
7439-97-6	Mercury	0.90	32	10	0.15	25	02/19/20	82635	H25397Sb	13	CV	HGCV3A

Comments: _____

_____

Flag Codes:

U or ND - Indicates Compound was not found above the detection/reporting limit
P - ICP-AES
CV -ColdVapor
MS - ICP-MS

Form1
Inorganic Analysis Data Sheet

Sample ID:	AD15743-016	% Solid:	93	Lab Name:	Hampton-Clarke	Nras No:	
Client Id:	SB-2 (7.5-8')	Units:	MG/KG	Lab Code:		Sdg No:	
Matrix:	SOIL	Date Rec:	2/15/2020	Contract:		Case No:	
Level:	LOW						

Cas No.	Analyte	RL	Conc	Dil Fact	Initial Wt/Vol	Final Wt/Vol	Analysis Date	Prep Batch	File:	Seq Num	M	Instr
7439-97-6	Mercury	0.090	0.14	1	0.15	25	02/19/20	82635	H25397S	37	CV	HGCV3A

Comments: _____

_____

Flag Codes:

U or ND - Indicates Compound was not found above the detection/reporting limit
P - ICP-AES
CV -ColdVapor
MS - ICP-MS

Form1
Inorganic Analysis Data Sheet

Sample ID:	AD15743-017	% Solid:	76	Lab Name:	Hampton-Clarke	Nras No:	
Client Id:	SB-2 (18-18.5')	Units:	MG/KG	Lab Code:		Sdg No:	
Matrix:	SOIL	Date Rec:	2/15/2020	Contract:		Case No:	
Level:	LOW						

Cas No.	Analyte	RL	Conc	Dil Fact	Initial Wt/Vol	Final Wt/Vol	Analysis Date	Prep Batch	File:	Seq Num	M	Instr
7439-97-6	Mercury	0.11	ND	1	0.15	25	02/19/20	82635	H25397S	38	CV	HGCV3A

Comments: _____

_____

Flag Codes:

U or ND - Indicates Compound was not found above the detection/reporting limit
P - ICP-AES
CV -ColdVapor
MS - ICP-MS

Form1
Inorganic Analysis Data Sheet

Sample ID:	AD15743-018	% Solid:	95	Lab Name:	Hampton-Clarke	Nras No:	
Client Id:	SB-4 (13-13.5')	Units:	MG/KG	Lab Code:		Sdg No:	
Matrix:	SOIL	Date Rec:	2/15/2020	Contract:		Case No:	
Level:	LOW						

Cas No.	Analyte	RL	Conc	Dil Fact	Initial Wt/Vol	Final Wt/Vol	Analysis Date	Prep Batch	File:	Seq Num	M	Instr
7439-97-6	Mercury	0.18	4.8	2	0.15	25	02/19/20	82635	H25397Sb	14	CV	HGCV3A

Comments: _____

_____

Flag Codes:

U or ND - Indicates Compound was not found above the detection/reporting limit
P - ICP-AES
CV -ColdVapor
MS - ICP-MS

Form1
Inorganic Analysis Data Sheet

Sample ID:	AD15743-019	% Solid:	92	Lab Name:	Hampton-Clarke	Nras No:	
Client Id:	SB-4 (15.5-16')	Units:	MG/KG	Lab Code:		Sdg No:	
Matrix:	SOIL	Date Rec:	2/15/2020	Contract:		Case No:	
Level:	LOW						

Cas No.	Analyte	RL	Conc	Dil Fact	Initial Wt/Vol	Final Wt/Vol	Analysis Date	Prep Batch	File:	Seq Num	M	Instr
7439-97-6	Mercury	0.091	1.3	1	0.15	25	02/19/20	82635	H25397S	40	CV	HGCV3A

Comments: _____

_____

Flag Codes:

U or ND - Indicates Compound was not found above the detection/reporting limit
P - ICP-AES
CV -ColdVapor
MS - ICP-MS

Form1
Inorganic Analysis Data Sheet

Sample ID:	AD15743-020	% Solid:	88	Lab Name:	Hampton-Clarke	Nras No:	
Client Id:	SB-1 (5.5-6')	Units:	MG/KG	Lab Code:		Sdg No:	
Matrix:	SOIL	Date Rec:	2/15/2020	Contract:		Case No:	
Level:	LOW						

Cas No.	Analyte	RL	Conc	Dil Fact	Initial Wt/Vol	Final Wt/Vol	Analysis Date	Prep Batch	File:	Seq Num	M	Instr
7439-97-6	Mercury	0.095	ND	1	0.15	25	02/19/20	82635	H25397S	41	CV	HGCV3A

Comments: _____

_____

Flag Codes:

U or ND - Indicates Compound was not found above the detection/reporting limit
P - ICP-AES
CV -ColdVapor
MS - ICP-MS

Form1
Inorganic Analysis Data Sheet

Sample ID:	AD15743-021	% Solid:	80	Lab Name:	Hampton-Clarke	Nras No:	
Client Id:	SB-1 (18.5-19')	Units:	MG/KG	Lab Code:		Sdg No:	
Matrix:	SOIL	Date Rec:	2/15/2020	Contract:		Case No:	
Level:	LOW						

Cas No.	Analyte	RL	Conc	Dil Fact	Initial Wt/Vol	Final Wt/Vol	Analysis Date	Prep Batch	File:	Seq Num	M	Instr
7439-97-6	Mercury	0.10	ND	1	0.15	25	02/19/20	82635	H25397S	42	CV	HGCV3A

Comments: _____

_____

Flag Codes:

U or ND - Indicates Compound was not found above the detection/reporting limit
P - ICP-AES
CV -ColdVapor
MS - ICP-MS

Form1
Inorganic Analysis Data Sheet

Sample ID: MB 82633 [167] % Solid: 0 Lab Name: Hampton-Clarke
Client Id: MB 82633 [167] Units: MG/KG Lab Code:
Matrix: SOIL
Level: LOW

Cas No.	Analyte	RL	Conc	Dil Fact	Initial Wt/Vol	Final Wt/Vol	Analysis Date	Prep Batch	File:	Seq Num	M	Instr
7439-97-6	Mercury	0.083	ND	1	0.15	25	02/20/20	82633	H25395S	11	CV	HGCV3A

Comments: _____

_____

Flag Codes:

U or ND - Indicates Compound was not found above the detection/reporting limit
P - ICP-AES
CV -ColdVapor
MS - ICP-MS

Form1
Inorganic Analysis Data Sheet

Sample ID: MB 82635 (167) % Solid: 0 Lab Name: Hampton-Clarke
Client Id: MB 82635 (167) Units: MG/KG Lab Code:
Matrix: SOIL
Level: LOW

Cas No.	Analyte	RL	Conc	Dil Fact	Initial Wt/Vol	Final Wt/Vol	Analysis Date	Prep Batch	File:	Seq Num	M	Instr
7439-97-6	Mercury	0.083	ND	1	0.15	25	02/19/20	82635	H25397S	11	CV	HGCV3A

Comments: _____

Flag Codes:

U or ND - Indicates Compound was not found above the detection/reporting limit
P - ICP-AES
CV -ColdVapor
MS - ICP-MS

FORM 2
(ICV/CCV Summary)

Date Analyzed: 02/19/20
Data File: H25397S
Prep Batch: 82635
Analytical Method: 6010D, 6020B, 7470A, 7471B
Instrument: HGCV3A
Units: All units in ppm except Hg and icp-ms in ppb
Project Number: 0021436

Lab Name: Hampton-Clarke
Lab Code:
Contract:
Nras No:
Sdg No:
Case No:
ICV/CCV SOURCE: SCP Science

		ICV (2)-9		CCV-21		CCV-33		CCV-43							
Analyte	ICV/CCV Amt		Rec		Rec		Rec		Rec	Rec	Rec	Rec	Rec	Rec	Rec
Mercury	20/10	20.65000	103	10.73000	107	10.45000	104	10.70000	107						

Notes:
a-indicates analyte failed the ICV limits for 6010D, 6020B
b-indicates analyte failed the ICV limits for 200.7 or 200.8
c-indicates analyte failed the CCV limits for 200.7/200.8/245.1/6010C,6020B, Hg 7470A,7471B
d-indicates analyte failed the CCV limits Hg 7470A/7471B

Qc Limits:
ICV - 200.7 (95-105) 6010D/6020B/200.8 (90-110)
CCV- 200.7/200.8/6010D/245.1, Hg 7470A/ 7471B (90-110)

FORM 2
(ICV/CCV Summary)

Date Analyzed: 02/19/20
Data File: H25397Sb
Prep Batch: 82635
Analytical Method: 6010D, 6020B, 7470A, 7471B
Instrument: HGCV3A
Units: All units in ppm except Hg and icp-ms in ppb
Project Number: 0021436

Lab Name: Hampton-Clarke
Lab Code:
Contract:
Nras No:
Sdg No:
Case No:
ICV/CCV SOURCE: SCP Science

		ICV (2)-9		CCV-15									
Analyte	ICV/CCV Amt		Rec		Rec	Rec	Rec	Rec	Rec	Rec	Rec	Rec	Rec
Mercury	20/10	18.88000	94	10.09000	101								

Notes:
a-indicates analyte failed the ICV limits for 6010D, 6020B
b-indicates analyte failed the ICV limits for 200.7 or 200.8
c-indicates analyte failed the CCV limits for 200.7/200.8/245.1/6010C,6020B, Hg 7470A,7471B
d-indicates analyte failed the CCV limits Hg 7470A/7471B

Qc Limits:
ICV - 200.7 (95-105) 6010D/6020B/200.8 (90-110)
CCV- 200.7/200.8/6010D/245.1, Hg 7470A/ 7471B (90-110)

FORM 2
(ICV/CCV Summary)

Date Analyzed: 02/20/20
Data File: H25395S
Prep Batch: 82633
Analytical Method: 6010D, 6020B, 7470A, 7471B
Instrument: HGCV3A
Units: All units in ppm except Hg and icp-ms in ppb
Project Number: 0021436

Lab Name: Hampton-Clarke
Lab Code:
Contract:
Nras No:
Sdg No:
Case No:
ICV/CCV SOURCE: SCP Science

		ICV (2)-9		CCV-21		CCV-29						
Analyte	ICV/CCV Amt		Rec		Rec		Rec	Rec	Rec	Rec	Rec	Rec
Mercury	20/10	20.13000	101	10.13000	101	10.16000	102					

Notes: a-indicates analyte failed the ICV limits for 6010D, 6020B
b-indicates analyte failed the ICV limits for 200.7 or 200.8
c-indicates analyte failed the CCV limits for 200.7/200.8/245.1/6010C,6020B, Hg 7470A,7471B
d-indicates analyte failed the CCV limits Hg 7470A/7471B

Qc Limits: ICV - 200.7 (95-105) 6010D/6020B/200.8 (90-110)
CCV- 200.7/200.8/6010D/245.1, Hg 7470A/ 7471B (90-110)

FORM 3
(ICB/CCB/MB Summary)

Date Analyzed: 02/19/20
Data File: H25397S
Prep Batch: 82635
Reporting Limits Used: 6010D, 6020B, 7470A, 7471B
Instrument: HGCV3A
Units: All units in ppm except Hg and icp-ms in ppb
Project Number: 0021436

Lab Name: Hampton-Clarke
Lab Code:
Contract:
Nras No:
Sdg No:
Case No:

Analyte	ICB-10	CCB-22	CCB-34	CCB-44	MB 82635 (167)-11
Mercury	.5 U	.5 U	.5 U	.5 U	83 U

Notes: a -for methods 7470A, 7471B indicates absolute value of result found above the reporting limits in ICB/CCB/MB.
for methods 6010D, 6020B indicates absolute value of result found above the reporting limit in CCB or above 1/2 the reporting limit in ICB/MB.

u-indicates result below reporting criteria.

FORM 3
(ICB/CCB/MB Summary)

Date Analyzed: 02/20/20
Data File: H25395S
Prep Batch: 82633
Reporting Limits Used: 6010D, 6020B, 7470A, 7471B
Instrument: HGCV3A
Units: All units in ppm except Hg and icp-ms in ppb
Project Number: 0021436

Lab Name: Hampton-Clarke
Lab Code:
Contract:
Nras No:
Sdg No:
Case No:

Analyte	ICB-10	CCB-22	CCB-30	MB 82633 [167]-11
Mercury	.5 U	.5 U	.5 U	83 U

Notes: a -for methods 7470A, 7471B indicates absolute value of result found above the reporting limits in ICB/CCB/MB.
for methods 6010D, 6020B indicates absolute value of result found above the reporting limit in CCB or above 1/2 the reporting limit in ICB/MB.

u-indicates result below reporting criteria.

FORM 3
(ICB/CCB/MB Summary)

Date Analyzed: 02/19/20
Data File: H25397Sb
Prep Batch: 82635
Reporting Limits Used: 6010D, 6020B, 7470A, 7471B
Instrument: HGCV3A
Units: All units in ppm except Hg and icp-ms in ppb
Project Number: 0021436

Lab Name: Hampton-Clarke
Lab Code:
Contract:
Nras No:
Sdg No:
Case No:

Analyte	ICB-10	CCB-16
Mercury	.5 U	.5 U

Notes: a -for methods 7470A, 7471B indicates absolute value of result found above the reporting limits in ICB/CCB/MB.
for methods 6010D, 6020B indicates absolute value of result found above the reporting limit in CCB or above 1/2 the reporting limit in ICB/MB.

u-indicates result below reporting criteria.

FORM5/FORM7

SPIKE RECOVERY DATA

PREP BATCH: 82633

Instrument Type: ICP/HG

Analytical Method(s):6010D/200.7/7470A/7471B/245.1 ICP units in ppm, ICPMS and Hg in ppb

TxtQcType: LCSMR Matrix: SOIL SampleID: LCS MR 4D

Analyte	BatchId	DF	Data Fil	Seq#:	Spk Conc:	Spk Adde	Recov	Qual	Lo Lim	Hi Lim
Mercury	82633	4	H25395S	15	6.4010	41.64	61		39	110

TxtQcType: LCS Matrix: SOIL SampleID: LCS 4D

Analyte	BatchId	DF	Data Fil	Seq#:	Spk Conc:	Spk Adde	Recov	Qual	Lo Lim	Hi Lim
Mercury	82633	4	H25395S	14	6.5990	41.64	63		39	110

TxtQcType: MSD Matrix: SOIL SampleID: AD15698-001

Analyte	BatchId	DF	Data Fil	Seq#:	NS Data Fil	Seq#	Spk Conc:	NS Conc:	Spk Adde	Recov	Qual	Lo Lim	Hi Lim
Mercury	82633	1	H25395S	19	H25395S	16	10.4300	.5U	10	104		75	125

TxtQcType: MS Matrix: SOIL SampleID: AD15698-001

Analyte	BatchId	DF	Data Fil	Seq#:	NS Data Fil	Seq#	Spk Conc:	NS Conc:	Spk Adde	Recov	Qual	Lo Lim	Hi Lim
Mercury	82633	1	H25395S	18	H25395S	16	10.3500	.5U	10	104		75	125

a-Indicates Recovery Failed the criteria b-Indicates Recovery Failed the criteria but non spike concentration >4*spike amount

FORM5/FORM7

SPIKE RECOVERY DATA

PREP BATCH: 82635

Instrument Type: ICP/HG

Analytical Method(s):6010D/200.7/7470A/7471B/245.1

ICP units in ppm, ICPMS and Hg in ppb

TxtQcType: LCSMR Matrix: SOIL SampleID: LCS MR 4D

Analyte	BatchId	DF	Data Fil	Seq#:	Spk Conc:	Spk Adde	Recov	Qual	Lo Lim	Hi Lim
Mercury	82635	4	H25397S	15	7.4060	41.64	71		39	110

TxtQcType: LCS Matrix: SOIL SampleID: LCS 4D

Analyte	BatchId	DF	Data Fil	Seq#:	Spk Conc:	Spk Adde	Recov	Qual	Lo Lim	Hi Lim
Mercury	82635	4	H25397S	14	7.8680	41.64	76		39	110

TxtQcType: MSD Matrix: SOIL SampleID: AD15743-006

Analyte	BatchId	DF	Data Fil	Seq#:	NS Data Fil	Seq#	Spk Conc:	NS Conc:	Spk Adde	Recov	Qual	Lo Lim	Hi Lim
Mercury	82635	1	H25397S	19	H25397S	16	11.3600	0.5210	10	108		75	125

TxtQcType: MS Matrix: SOIL SampleID: AD15743-006

Analyte	BatchId	DF	Data Fil	Seq#:	NS Data Fil	Seq#	Spk Conc:	NS Conc:	Spk Adde	Recov	Qual	Lo Lim	Hi Lim
Mercury	82635	1	H25397S	18	H25397S	16	11.4300	0.5210	10	109		75	125

a-Indicates Recovery Failed the criteria b-Indicates Recovery Failed the criteria but non spike concentration >4*spike amount

FORM6/FORM9

RPD/%Difference Data

PREP BATCH: 82633

Instrument Type: ICP/HG

Analytical Method(s):6010D/200.7/7470A/7471B/245.1 ICP units in ppm, ICPMS and Hg in ppb

TxtQcType: LCSMR Matrix: SOIL SampleID: LCS MR 4D

Analyte	BatchId	Data Fil	Seq#:	NS File	Seq#	Result 1	Result 2	RPD	Limit
Mercury	82633	H25395S	15	H25395S	14	6.4010	6.5990	3	20

TxtQcType: MR Matrix: SOIL SampleID: AD15698-001

Analyte	BatchId	Data Fil	Seq#:	NS File	Seq#	Result 1	Result 2	RPD	Limit
Mercury	82633	H25395S	17	H25395S	16	.5U	.5U	---	20

TxtQcType: MSD Matrix: SOIL SampleID: AD15698-001

Analyte	BatchId	Data Fil	Seq#:	MS File	Seq#	Result 1	Result 2	RPD	Limit
Mercury	82633	H25395S	19	H25395S	18	10.4300	10.3500	.77	20

a-Indicates Rpd Failed the criteria

b-Method Rep Out but concentrations < 5*RL

c-Serial dilution Out but conc < 10 * IDL

FORM6/FORM9

RPD/%Difference Data

PREP BATCH: 82635

Instrument Type: ICP/HG

Analytical Method(s):6010D/200.7/7470A/7471B/245.1 ICP units in ppm, ICPMS and Hg in ppb

TxtQcType: LCSMR Matrix: SOIL SampleID: LCS MR 4D

Analyte	BatchId	Data Fil	Seq#:	NS File	Seq#	Result 1	Result 2	RPD		Limit
Mercury	82635	H25397S	15	H25397S	14	7.4060	7.8680	6		20

TxtQcType: MR Matrix: SOIL SampleID: AD15743-006

Analyte	BatchId	Data Fil	Seq#:	NS File	Seq#	Result 1	Result 2	RPD		Limit
Mercury	82635	H25397S	17	H25397S	16	1.6180	0.5210	103	b	20

TxtQcType: MSD Matrix: SOIL SampleID: AD15743-006

Analyte	BatchId	Data Fil	Seq#:	MS File	Seq#	Result 1	Result 2	RPD		Limit
Mercury	82635	H25397S	19	H25397S	18	11.3600	11.4300	.61		20

a-Indicates Rpd Failed the criteria

b-Method Rep Out but concentrations < 5*RL

c-Serial dilution Out but conc < 10 * IDL

HG SAMPLE PREPARATION LOG

Hampton-Clarke/Veritech

ANALYTICAL METHOD: 245.1 7470A (7471B) OTHER_____

Batch No.:* 25395

QC Number: 82633

Matrix: Soil

Analyst: DL

Prep Date: 2/18/20

Review By: BA

LAB ID#	MERCURY		COMMENTS	STANDARDS
	INITIAL	FINAL		
Method blank	25 mL	25 mL		CAL CURVE BLK 0ppb V- 321860
LCS	0.15g			
LCSD				STD 0.2 ppb V- 321861
1 15698-001				STD 0.5 ppb V- 321862
MR -001				STD 1.0 ppb V- 321863
MS -001				STD 2.0 ppb V- 321864
MSD -001				STD 5.0 ppb V- 321865
2 15704-001				STD 10.0 ppb V- 321866
3 -003				STD 25.0 ppb V- 321867
4 -005				ICV 10.0 ppb V- 321858
5 15684-001				CCV 20.0 ppb V- 321859
6 15687-001				
7 15676-002				
8 ~~15743-001~~	CB			Balance used: B-032
9 15743-001	2/18/20			Pipettes used: 143 152 159
10				
11				Hot Block used: 7
12				
13				
14				
15				
16				
17				
18				
19				
20				

Lot Numbers	Volume (mL)	Acid	Volume (mL)	Lot #
$KMnO_4$: V- 321814	3.75mL	HNO3		V-
$K_2S_2O_8$: V-		HCl		V-
NH_2OH: V- 317822	1.5mL	H2SO4		V-
		Aqua Regia	1.25mL	V- 321857

**Block Temp.: 97.7 °C

Time in Block: 10:00am

Time Out of Block: 10:30am

Spike Volume & Lot #

☐ LCS V- 13005 0.15g 0.25 ml

☐ MS V- 321826 0.250 ml

☐ Standards/Control Batch B- 28542

Start time: 8:30am End Time: 10:30am

**Temperature
245.1 / 7470A: 90-95C
7471B : 92-98C

Relinquished By: DL

*25 mLs of each standard was digested with this batch using the same reagents and at the same time as the above samples. The preparation of each standard may be referenced in Veriprog using the standard batch number and the corresponding V #s.

HG PREP 2016

HG SAMPLE PREPARATION LOG

Hampton-Clarke/Veritech

ANALYTICAL METHOD: 245.1 7470A (7471B) OTHER_____

Batch No.:* 25397

QC Number: 82635

Matrix: SOIL

Analyst: BR

Prep Date: 2/18/20

Review By: BA

LAB ID#	MERCURY		COMMENTS	STANDARDS
	INITIAL	FINAL		
Method blank	25mL	25mL		CAL CURVE BLK 0ppb V- 321908
LCS	.15g			
LCSD				STD 0.2 ppb V- 321909
1 16743 -006				STD 0.5 ppb V- 321910
2 MR15743 -006				STD 1.0 ppb V- 321911
3 15743 -006				STD 2.0 ppb V- 321912
4 15743 -006				STD 5.0 ppb V- 321913
5 15743 -002				STD 10.0 ppb V- 321914
6 -003				STD 25.0 ppb V- 321915
7 -004				ICV 10.0 ppb V- 321906
8 -005				CCV 20.0 ppb V- 321906 321907
9 -007				
10 -008				
11 -009				Balance used: 038
12 -010				Pipettes used: 143, 152, 159
13 -011				
14 -012				Hot Block used: 6
15 -013				
16 -014				
17 -015				
18 -016				
19 -017				
20 -018				
-09				
-020				
-021				

Lot Numbers	Volume (mL)	Acid	Volume (mL)	Lot #
$KMnO_4$: V- 317828	3.75mL	HNO3		V-
$K_2S_2O_8$: V-		HCl		V-
NH_2OH: V- 317822	1.5mL	H2SO4		V-
		Aqua Regia	1.25mL	V- 321905

**Block Temp.: °C 93

Time in Block: 1:30pm

Time Out of Block: 2:30pm

Spike Volume & Lot #

☐ LCS V- 13005 (0.15 / 0.25 ml)

☐ MS V- 321826 (0.250 ml)

☐ Standards/Control Batch B- 28545

Start time: 8:30am End Time: 2:30pm

**Temperature
245.1 / 7470A: 90-95C
7471B : 92-98C

Relinquished By: BR

*25 mLs of each standard was digested with this batch using the same reagents and at the same time as the above samples. The preparation of each standard may be referenced in Veriprog using the standard batch number and the corresponding V #s.

HG PREP 2016

Run Log

Data File: W:\METALS.FRM\ICPDATA\New\HGCV3A\H25397S.txt

Analysis Date: 02/19/20 **Instrument:** HGCV3A

Sample Id	DF	Qc Type	Time	Run #	Test Group	Rept Limit Matrix	Qc Matrix	Anal Method	Prep Batch	Comments:	Stds:
Calibration Blank	1	CAL	12:13	1							0
.2 PPB	1	CAL	12:14	2							0
.5 PPB	1	CAL	12:15	3							0
1 PPB	1	CAL	12:17	4							0
2 PPB	1	CAL	12:18	5							0
5 PPB	1	CAL	12:19	6							0
10 PPB	1	CAL	12:21	7							0
25 PPB	1	CAL	12:22	8							0
ICV (2)	1	ICV	12:24	9							0
ICB	1	ICB	12:26	10							0
MB 82635 (167)	1	MB	12:27	11	HG-SOIL	SOIL	SOIL	SW846	82635		0
LCS 82635	1	NA	12:28	12	HG-SOIL	SOIL	SOIL	SW846	82635	CONC.HIGH	0
LCS MR 82635	1	NA	12:30	13	HG-SOIL	SOIL	SOIL	SW846	82635	CONC.HIGH	0
LCS 4D	4	LCS	12:32	14	HG-SOIL	SOIL	SOIL	SW846	82635		0
LCS MR 4D	4	LCS	12:33	15	HG-SOIL	SOIL	SOIL	SW846	82635		0
AD15743-006	1	SMP	12:35	16	HG-SOIL	SOIL	SOIL	SW846	82635		0
AD15743-006	1	MR	12:36	17	HG-SOIL	SOIL	SOIL	SW846	82635		0
AD15743-006	1	MS	12:37	18	HG-SOIL	SOIL	SOIL	SW846	82635		0
AD15743-006	1	MSD	12:39	19	HG-SOIL	SOIL	SOIL	SW846	82635		0
AD15743-002	1	SMP	12:41	20	HG-SOIL	SOIL	SOIL	SW846	82635		0
CCV	1	CCV	12:42	21							0
CCB	1	CCB	12:44	22							0
AD15743-003	1	SMP	12:45	23	HG-SOIL	SOIL	SOIL	SW846	82635		0
AD15743-004	1	SMP	12:46	24	HG-SOIL	SOIL	SOIL	SW846	82635		0
AD15743-005	1	SMP	12:48	25	HG-SOIL	SOIL	SOIL	SW846	82635		0
AD15743-007	1	SMP	12:49	26	HG-SOIL	SOIL	SOIL	SW846	82635		0
AD15743-008	1	SMP	12:50	27	HG-SOIL	SOIL	SOIL	SW846	82635		0
AD15743-009	1	SMP	12:52	28	HG-SOIL	SOIL	SOIL	SW846	82635		0
AD15743-010	1	SMP	12:53	29	HG-SOIL	SOIL	SOIL	SW846	82635		0
AD15743-011	1	SMP	12:54	30	HG-SOIL	SOIL	SOIL	SW846	82635		0
AD15743-012	1	SMP	12:56	31	HG-SOIL	SOIL	SOIL	SW846	82635		0
AD15743-013	1	NA	12:58	32	HG-SOIL	SOIL	SOIL	SW846	82635	CONC.HIGH	0
CCV	1	CCV	12:59	33							0
CCB	1	CCB	13:01	34							0
AD15743-014	1	NA	13:02	35	HG-SOIL	SOIL	SOIL	SW846	82635	CONC.HIGH	0
AD15743-015	1	NA	13:04	36	HG-SOIL	SOIL	SOIL	SW846	82635	CONC.HIGH	0
AD15743-016	1	SMP	13:06	37	HG-SOIL	SOIL	SOIL	SW846	82635		0
AD15743-017	1	SMP	13:07	38	HG-SOIL	SOIL	SOIL	SW846	82635		0
AD15743-018	1	NA	13:09	39	HG-SOIL	SOIL	SOIL	SW846	82635	CONC.HIGH	0
AD15743-019	1	SMP	13:10	40	HG-SOIL	SOIL	SOIL	SW846	82635		0
AD15743-020	1	SMP	13:12	41	HG-SOIL	SOIL	SOIL	SW846	82635		0
AD15743-021	1	SMP	13:13	42	HG-SOIL	SOIL	SOIL	SW846	82635		0
CCV	1	CCV	13:14	43							0
CCB	1	CCB	13:16	44							0

Comments/Reviewedby:

BAdeola
192.168.1.120 2/19/2020 1:47:38 PM

RUN IS OK

2/19/20

Note: ICP-MS dilution factor column does not reflect dilution which is performed prior to analysis. Secondary analytical dilution is documented on prep log. Dilution Factor:_____

Standard/Batch/SnCl2 Lot #:

V-321969

Run Log

Data File: W:\METALS.FRM\ICPDATA\New\HGCV3A\H25397Sb.txt

Analysis Date: 02/19/20 **Instrument:** HGCV3A

Sample Id	DF	Qc Type	Time	Run #	Test Group	Rept Limit Matrix	Qc Matrix	Anal Method	Prep Batch	Comments:	Stds:
Calibration Blank	1	CAL	15:13	1							0
2 PPB	1	CAL	15:14	2							0
5 PPB	1	CAL	15:16	3							0
1 PPB	1	CAL	15:17	4							0
2 PPB	1	CAL	15:18	5							0
5 PPB	1	CAL	15:20	6							0
10 PPB	1	CAL	15:21	7							0
25 PPB	1	CAL	15:23	8							0
ICV (2)	1	ICV	15:24	9							0
ICB	1	ICB	15:26	10							0
AD15743-013	50	SMP	15:27	11	HG-SOIL	SOIL	SOIL	SW846	82635		0
AD15743-014	10	SMP	15:29	12	HG-SOIL	SOIL	SOIL	SW846	82635		0
AD15743-015	10	SMP	15:31	13	HG-SOIL	SOIL	SOIL	SW846	82635		0
AD15743-018	2	SMP	15:33	14	HG-SOIL	SOIL	SOIL	SW846	82635		0
CCV	1	CCV	15:34	15							0
CCB	1	CCB	15:36	16							0

Comments/Reviewedby:

BAdeola
192.168.1.120 2/19/2020 4:03:43 PM

RUN IS OK

2/19/20

Note: ICP-MS dilution factor column does not reflect dilution which is performed prior to analysis. Secondary analytical dilution is documented on prep log. Dilution Factor:_____

Standard/Batch/SnCl2 Lot #:

V-321969

Run Log

Data File: W:\METALS.FRM\ICPDATA\New\HGCV3A\H25395S.txt

Analysis Date: 02/20/20 **Instrument:** HGCV3A

Sample Id	DF	Qc Type	Time	Run #	Test Group	Rept Limit Matrix	Qc Matrix	Anal Method	Prep Batch	Comments:	Stds:
Calibration Blank	1	CAL	16:41	1							0
.2 PPB	1	CAL	16:42	2							0
.5 PPB	1	CAL	16:43	3							0
1 PPB	1	CAL	16:45	4							0
2 PPB	1	CAL	16:46	5							0
5 PPB	1	CAL	16:47	6							0
10 PPB	1	CAL	16:49	7							0
25 PPB	1	CAL	16:50	8							0
ICV (2)	1	ICV	16:52	9							0
ICB	1	ICB	16:54	10							0
MB 82633 [1671]	1	MB	16:55	11		SOIL	SOIL	SW846	82633		0
LCS 82633	1	NA	16:57	12		SOIL	SOIL	SW846	82633	over calibration limit	0
LCS MR 82633	1	NA	16:58	13		SOIL	SOIL	SW846	82633	over calibration limit	0
LCS 4D	4	LCS	17:00	14		SOIL	SOIL	SW846	82633		0
LCS MR 4D	4	LCS	17:01	15		SOIL	SOIL	SW846	82633		0
AD15698-001	1	SMP	17:03	16	HG-SOIL	SOIL	SOIL	SW846	82633		0
AD15698-001	1	MR	17:04	17	HG-SOIL	SOIL	SOIL	SW846	82633		0
AD15698-001	1	MS	17:05	18	HG-SOIL	SOIL	SOIL	SW846	82633		0
AD15698-001	1	MSD	17:07	19	HG-SOIL	SOIL	SOIL	SW846	82633		0
AD15704-001	1	SMP	17:09	20	HG-SOIL	SOIL	SOIL	SW846	82633		0
CCV	1	CCV	17:10	21							0
CCB	1	CCB	17:12	22							0
AD15704-003	1	SMP	17:13	23	HG-SOIL	SOIL	SOIL	SW846	82633		0
AD15704-005	1	SMP	17:15	24	HG-SOIL	SOIL	SOIL	SW846	82633		0
AD15684-001	1	SMP	17:16	25	HG-SOIL	SOIL	SOIL	SW846	82633		0
AD15687-001	1	SMP	17:17	26	HG-SOIL	SOIL	SOIL	SW846	82633		0
AD15676-002	1	SMP	17:18	27	HG-SOIL	SOIL	SOIL	SW846	82633		0
AD15743-001	1	SMP	17:20	28	HG-SOIL	SOIL	SOIL	SW846	82633		0
CCV	1	CCV	17:21	29							0
CCB	1	CCB	17:23	30							0

Comments/Reviewedby:

elufem
192.168.1.120 2/20/2020 5:32:08 PM

RUN IS OK

2 2/21/20

Note: ICP-MS dilution factor column does not reflect dilution which is performed prior to analysis. Secondary analytical dilution is documented on prep log. Dilution Factor:_____

Standard/Batch/SnCl2 Lot #:

V-322126

SPLP Metal Data

Form1
Inorganic Analysis Data Sheet

Sample ID:	AD15743-011	% Solid:	0	Lab Name:	Hampton-Clarke	Nras No:	
Client Id:	SB-7 (19-19.5')	Units:	MG/L	Lab Code:		Sdg No:	
Matrix:	SPLP	Date Rec:	2/15/2020	Contract:		Case No:	
Level:	LOW						

Cas No.	Analyte	RL	Conc	Dil Fact	Initial Wt/Vol	Final Wt/Vol	Analysis Date	Prep Batch	File:	Seq Num	M	Instr
7439-97-6	Mercury	0.00050	0.00095	1	25	25	02/27/20	82669	H25430SP	14	CV	HGCV3A

Comments: _____

_____

Flag Codes:

U or ND - Indicates Compound was not found above the detection/reporting limit
P - ICP-AES
CV -ColdVapor
MS - ICP-MS

Form1
Inorganic Analysis Data Sheet

Sample ID:	AD15743-014	% Solid:	0	Lab Name:	Hampton-Clarke	Nras No:	
Client Id:	SB-3 (7.5-8')	Units:	MG/L	Lab Code:		Sdg No:	
Matrix:	SPLP	Date Rec:	2/15/2020	Contract:		Case No:	
Level:	LOW						

Cas No.	Analyte	RL	Conc	Dil Fact	Initial Wt/Vol	Final Wt/Vol	Analysis Date	Prep Batch	File:	Seq Num	M	Instr
7439-97-6	Mercury	0.0010	0.024	2	25	25	02/27/20	82669	H25430SPb	11	CV	HGCV3A

Comments: _____

_____

Flag Codes:

U or ND - Indicates Compound was not found above the detection/reporting limit
P - ICP-AES
CV -ColdVapor
MS - ICP-MS

Form1
Inorganic Analysis Data Sheet

Sample ID:	AD15743-019	% Solid:	0	Lab Name:	Hampton-Clarke	Nras No:	
Client Id:	SB-4 (15.5-16')	Units:	MG/L	Lab Code:		Sdg No:	
Matrix:	SPLP	Date Rec:	2/15/2020	Contract:		Case No:	
Level:	LOW						

Cas No.	Analyte	RL	Conc	Dil Fact	Initial Wt/Vol	Final Wt/Vol	Analysis Date	Prep Batch	File:	Seq Num	M	Instr
7439-97-6	Mercury	0.00050	ND	1	25	25	02/27/20	82669	H25430SP	18	CV	HGCV3A

Comments: _____

_____

Flag Codes:

U or ND - Indicates Compound was not found above the detection/reporting limit
P - ICP-AES
CV -ColdVapor
MS - ICP-MS

Form1
Inorganic Analysis Data Sheet

Sample ID: MB 82669 (1) % Solid: 0 Lab Name: Hampton-Clarke
Client Id: MB 82669 (1) Units: MG/L Lab Code:
Matrix: SPLP
Level: LOW

Cas No.	Analyte	RL	Conc	Dil Fact	Initial Wt/Vol	Final Wt/Vol	Analysis Date	Prep Batch	File:	Seq Num	M	Instr
7439-97-6	Mercury	0.00050	ND	1	25	25	02/27/20	82669	H25430SP	11	CV	HGCV3A

Comments: _____

_____

Flag Codes:

U or ND - Indicates Compound was not found above the detection/reporting limit
P - ICP-AES
CV -ColdVapor
MS - ICP-MS

FORM 2
(ICV/CCV Summary)

Date Analyzed: 02/27/20
Data File: H25430SP
Prep Batch: 82669
Analytical Method: 6010D, 6020B, 7470A, 7471B
Instrument: HGCV3A
Units: All units in ppm except Hg and icp-ms in ppb
Project Number: 0021436

Lab Name: Hampton-Clarke
Lab Code:
Contract:
Nras No:
Sdg No:
Case No:
ICV/CCV SOURCE: SCP Science

		ICV (2)-9		CCV-20							
Analyte	ICV/CCV Amt		Rec		Rec	Rec	Rec	Rec	Rec	Rec	Rec
Mercury	20/10	20.76000	104	9.87700	99						

Notes:
a-indicates analyte failed the ICV limits for 6010D, 6020B
b-indicates analyte failed the ICV limits for 200.7 or 200.8
c-indicates analyte failed the CCV limits for 200.7/200.8/245.1/6010C,6020B, Hg 7470A,7471B
d-indicates analyte failed the CCV limits Hg 7470A/7471B

Qc Limits:
ICV - 200.7 (95-105) 6010D/6020B/200.8 (90-110)
CCV- 200.7/200.8/6010D/245.1, Hg 7470A/ 7471B (90-110)

FORM 2
(ICV/CCV Summary)

Date Analyzed: 02/27/20
Data File: H25430SPb
Prep Batch: 82669
Analytical Method: 6010D, 6020B, 7470A, 7471B
Instrument: HGCV3A
Units: All units in ppm except Hg and icp-ms in ppb
Project Number: 0021436

Lab Name: Hampton-Clarke
Lab Code:
Contract:
Nras No:
Sdg No:
Case No:
ICV/CCV SOURCE: SCP Science

		ICV (2)-9		CCV-12							
Analyte	ICV/CCV Amt		Rec		Rec	Rec	Rec	Rec	Rec	Rec	Rec
Mercury	20/10	20.54000	103	9.85000	98						

Notes:
a-indicates analyte failed the ICV limits for 6010D, 6020B
b-indicates analyte failed the ICV limits for 200.7 or 200.8
c-indicates analyte failed the CCV limits for 200.7/200.8/245.1/6010C,6020B, Hg 7470A,7471B
d-indicates analyte failed the CCV limits Hg 7470A/7471B

Qc Limits:
ICV - 200.7 (95-105) 6010D/6020B/200.8 (90-110)
CCV- 200.7/200.8/6010D/245.1, Hg 7470A/ 7471B (90-110)

FORM 3
(ICB/CCB/MB Summary)

Date Analyzed: 02/27/20
Data File: H25430SP
Prep Batch: 82669
Reporting Limits Used: 6010D, 6020B, 7470A, 7471B
Instrument: HGCV3A
Units: All units in ppm except Hg and icp-ms in ppb
Project Number: 0021436

Lab Name: Hampton-Clarke
Lab Code:
Contract:
Nras No:
Sdg No:
Case No:

Analyte	ICB-10	CCB-21	MB 82669 (1)-11	EF V-321256-19
Mercury	.5 U	.5 U	.5 U	.5 U

Notes: a -for methods 7470A, 7471B indicates absolute value of result found above the reporting limits in ICB/CCB/MB.
for methods 6010D, 6020B indicates absolute value of result found above the reporting limit in CCB or above 1/2 the reporting limit in ICB/MB.

u-indicates result below reporting criteria.

FORM 3
(ICB/CCB/MB Summary)

Date Analyzed: 02/27/20
Data File: H25430SPb
Prep Batch: 82669
Reporting Limits Used: 6010D, 6020B, 7470A, 7471B
Instrument: HGCV3A
Units: All units in ppm except Hg and icp-ms in ppb
Project Number: 0021436

Lab Name: Hampton-Clarke
Lab Code:
Contract:
Nras No:
Sdg No:
Case No:

Analyte	ICB-10	CCB-13
Mercury	.5 U	.5 U

Notes: a -for methods 7470A, 7471B indicates absolute value of result found above the reporting limits in ICB/CCB/MB.
for methods 6010D, 6020B indicates absolute value of result found above the reporting limit in CCB or above 1/2 the reporting limit in ICB/MB.

u-indicates result below reporting criteria.

FORM5/FORM7

SPIKE RECOVERY DATA

PREP BATCH: 82669

Instrument Type: ICP/HG

Analytical Method(s):6010D/200.7/7470A/7471B/245.1

ICP units in ppm, ICPMS and Hg in ppb

TxtQcType: LCSMR Matrix: SPLP SampleID: LCS MR 82669

Analyte	BatchId	DF	Data Fil	Seq#:	Spk Conc:	Spk Adde	Recov	Qual	Lo Lim	Hi Lim
Mercury	82669	1	H25430SP	13	9.9880	10	100		80	120

TxtQcType: LCS Matrix: SPLP SampleID: LCS 82669

Analyte	BatchId	DF	Data Fil	Seq#:	Spk Conc:	Spk Adde	Recov	Qual	Lo Lim	Hi Lim
Mercury	82669	1	H25430SP	12	10.1600	10	102		80	120

TxtQcType: MS Matrix: SPLP SampleID: AD15743-011

Analyte	BatchId	DF	Data Fil	Seq#:	NS Data Fil	Seq#	Spk Conc:	NS Conc:	Spk Adde	Recov	Qual	Lo Lim	Hi Lim
Mercury	82669	1	H25430SP	16	H25430SP	14	12.0400	0.9480	10.000	111		50	

a-Indicates Recovery Failed the criteria b-Indicates Recovery Failed the criteria but non spike concentration >4*spike amount

FORM6/FORM9

RPD/%Difference Data

PREP BATCH: 82669

Instrument Type: ICP/HG

Analytical Method(s):6010D/200.7/7470A/7471B/245.1 ICP units in ppm, ICPMS and Hg in ppb

TxtQcType: LCSMR Matrix: SPLP SampleID: LCS MR 82669

Analyte	BatchId	Data Fil	Seq#:	NS File	Seq#	Result 1	Result 2	RPD	Limit
Mercury	82669	H25430SP	13	H25430SP	12	9.9880	10.1600	1.7	20

TxtQcType: MR Matrix: SPLP SampleID: AD15743-011

Analyte	BatchId	Data Fil	Seq#:	NS File	Seq#	Result 1	Result 2	RPD	Limit
Mercury	82669	H25430SP	15	H25430SP	14	0.9440	0.9480	0.42	20

a-Indicates Rpd Failed the criteria

b-Method Rep Out but concentrations < 5*RL

c-Serial dilution Out but conc < 10 * IDL

HG SAMPLE PREPARATION LOG

Hampton-Clarke/Veritech

ANALYTICAL METHOD: 245.1 (7470A) 7471B **OTHER**________

Batch No.:* 25430

QC Number: 32669

Matrix: SPLR

Analyst: SA

Prep Date: 2/28/20

Review By: Oja

LAB ID#	MERCURY INITIAL	MERCURY FINAL	COMMENTS	STANDARDS
Method blank	25ml	25ml		CAL CURVE BLK 0ppb V- 322451
LCS	↓	↓		
LCSD				STD 0.2 ppb V- 322452
1 15743-011				STD 0.5 ppb V- 322453
MR 15743 -011				STD 1.0 ppb V- 322454
MS 15743 -011				STD 2.0 ppb V- 322455
~~MSD~~ -014				STD 5.0 ppb V- 322456
2 -019				STD 10.0 ppb V- 322457
3 V322256	↓	↓		STD 25.0 ppb V- 322458
4				ICV 10.0 ppb V- 322449
5				CCV 20.0 ppb V- 322450
6				
7				
8				Balance used: N/A
9				Pipettes used: 143,152,159
10				
11				Hot Block used: 7
12				
13				
14				
15				
16				
17				
18				
19				
20				

Lot Numbers	Volume (mL)	Acid	Volume (mL)	Lot #
KMnO4: V- 321314	3.75ml	HNO3	0.625ml	V- 12883
K2S2O8: V- 320109	2ml	HCl		V-
NH2OH: V- 317322	1.5ml	H2SO4	1.25ml	V- 13045
		Aqua Regia		V-

**Block Temp.: 92.5 °C

Time In Block: 12:30

Time Out of Block: 14:30

Spike Volume & Lot #

LCS V- 322448 0.15ml (0.25 ml)

MS V- 322448 0.250 ml

Standards/Control Batch B- 28597

Start time: 12:30 End Time: 14:30

**Temperature

245.1 / 7470A: 90-95C

7471B : 92-98C

Relinquished By: SA

*25 mLs of each standard was digested with this batch using the same reagents and at the same time as the above samples. The preparation of each standard may be referenced in Veriprog using the standard batch number and the corresponding V #s.

HG PREP 2016

Run Log

Data File: W:\METALS.FRM\ICPDATA\New\HGCV3A\H25430SP.txt

Analysis Date: 02/27/20 **Instrument:** HGCV3A

Sample Id	DF	Qc Type	Time	Run #	Test Group	Rept Limit Matrix	Qc Matrix	Anal Method	Prep Batch	Comments:	Stds:
Calibration Blank	1	CAL	11:30	1							0
.2 PPB	1	CAL	11:32	2							0
.5 PPB	1	CAL	11:33	3							0
1 PPB	1	CAL	11:34	4							0
2 PPB	1	CAL	11:36	5							0
5 PPB	1	CAL	11:37	6							0
10 PPB	1	CAL	11:38	7							0
25 PPB	1	CAL	11:40	8							0
ICV (2)	1	ICV	11:42	9							0
ICB	1	ICB	11:44	10							0
MB 82669 (1)	1	MB	11:45	11	HG-SPLP	SPLP	SPLP	SW846	82669		0
LCS 82669	1	LCS	11:46	12	HG-SPLP	SPLP	SPLP	SW846	82669		0
LCS MR 82669	1	LCS	11:48	13	HG-SPLP	SPLP	SPLP	SW846	82669		0
AD15743-011	1	SMP	11:50	14	HG-SPLP	SPLP	SPLP	SW846	82669		0
AD15743-011	1	MR	11:51	15	HG-SPLP	SPLP	SPLP	SW846	82669		0
AD15743-011	1	MS	11:52	16	HG-SPLP	SPLP	SPLP	SW846	82669		0
AD15743-014	1	NA	11:54	17	HG-SPLP	SPLP	SPLP	SW846	82669	CONC HIGH	0
AD15743-019	1	SMP	11:56	18	HG-SPLP	SPLP	SPLP	SW846	82669		0
EF V-321256	1	EF	11:57	19	HG-SPLP	SPLP	SPLP	SW846	82669		V-321256(SPLP FLUID WARNING)
CCV	1	CCV	11:59	20							0
CCB	1	CCB	12:00	21							0

Comments/Reviewedby:

BAdeola
192.168.1.120 2/27/2020 12:52:09 PM

RUN IS OK

3/2/20

Note: ICP-MS dilution factor column does not reflect dilution which is performed prior to analysis. Secondary analytical dilution is documented on prep log. Dilution Factor:_____

Standard/Batch/SnCl2 Lot #:

V-322540

Run Log

Data File: W:\METALS.FRM\ICPDATA\New\HGCV3A\H25430SPb.txt

Analysis Date: 02/27/20 **Instrument:** HGCV3A

Sample Id	DF	Qc Type	Time	Run #	Test Group	Rept Limit Matrix	Qc Matrix	Anal Method	Prep Batch	Comments:	Stds:
Calibration Blank	1	CAL	13:21	1							0
.2 PPB	1	CAL	13:23	2							0
.5 PPB	1	CAL	13:24	3							0
1 PPB	1	CAL	13:25	4							0
2 PPB	1	CAL	13:26	5							0
5 PPB	1	CAL	13:28	6							0
10 PPB	1	CAL	13:29	7							0
25 PPB	1	CAL	13:31	8							0
ICV (2)	1	ICV	13:33	9							0
ICB	1	ICB	13:34	10							0
AD15743-014	2	SMP	13:36	11	HG-SPLP	SPLP	SPLP	SW846	82669		0
CCV	1	CCV	13:37	12							0
CCB	1	CCB	13:39	13							0

Comments/Reviewedby:

BAdeola
192.168.1.120 3/2/2020 4:08:11 PM

RUN IS OK

3/2/20

Note: ICP-MS dilution factor column does not reflect dilution which is performed prior to analysis. Secondary analytical dilution is documented on prep log. Dilution Factor:_____

Standard/Batch/SnCl2 Lot #:

V-322540

Wet Chemistry Data

VERITECH Wet Chem Form1 Analysis Summary
% Solids

TestGroupName: % Solids SM2540G **Project #: 0021436**

TestGroup: %SOLIDS

Lab#	Client SampleID	Matrix	Dilution:	Result	Units:	RL	Prep Date	Analysis Date	Received Date	Collect Date
AD15743-001	SB-1 (1.5-2')	Soil	1	87	Percent			02/15/20	02/14/20	02/12/20
AD15743-002	SB-2 (1.5-2')	Soil	1	86	Percent			02/15/20	02/14/20	02/12/20
AD15743-003	SB-3 (1.5-2')	Soil	1	87	Percent			02/15/20	02/14/20	02/12/20
AD15743-004	SB-4 (1.5-2')	Soil	1	88	Percent			02/15/20	02/14/20	02/12/20
AD15743-005	SB-5 (1.5-2')	Soil	1	84	Percent			02/15/20	02/14/20	02/12/20
AD15743-006	SB-6 (1.5-2')	Soil	1	80	Percent			02/15/20	02/14/20	02/12/20
AD15743-007	SB-7 (1.5-2')	Soil	1	88	Percent			02/15/20	02/14/20	02/12/20
AD15743-008	SB-6 (7-7.5')	Soil	1	95	Percent			02/15/20	02/14/20	02/13/20
AD15743-009	SB-6 (18-18.5')	Soil	1	79	Percent			02/15/20	02/14/20	02/13/20
AD15743-010	SB-7 (7-7.5')	Soil	1	97	Percent			02/15/20	02/14/20	02/13/20
AD15743-011	SB-7 (19-19.5')	Soil	1	91	Percent			02/15/20	02/14/20	02/13/20
AD15743-012	SB-5 (6-6.5')	Soil	1	93	Percent			02/15/20	02/14/20	02/13/20
AD15743-013	SB-5 (18-18.5')	Soil	1	89	Percent			02/15/20	02/14/20	02/13/20
AD15743-014	SB-3 (7.5-8')	Soil	1	94	Percent			02/15/20	02/14/20	02/13/20
AD15743-015	SB-3 (15.5-16')	Soil	1	93	Percent			02/15/20	02/14/20	02/13/20
AD15743-016	SB-2 (7.5-8')	Soil	1	93	Percent			02/15/20	02/14/20	02/13/20
AD15743-017	SB-2 (18-18.5')	Soil	1	76	Percent			02/15/20	02/14/20	02/13/20
AD15743-018	SB-4 (13-13.5')	Soil	1	95	Percent			02/15/20	02/14/20	02/13/20
AD15743-019	SB-4 (15.5-16')	Soil	1	92	Percent			02/15/20	02/14/20	02/13/20
AD15743-020	SB-1 (5.5-6')	Soil	1	88	Percent			02/15/20	02/14/20	02/13/20
AD15743-021	SB-1 (18.5-19')	Soil	1	80	Percent			02/15/20	02/14/20	02/13/20

% Solids Report

Analysis Type: SOLIDS-SS
BatchID: SOLIDS-SS-10294

QcType	SampleID:	Rounded Result	Raw Result	Units	Tare Weight	Wet Weight	Dry Weight	Analysis Date	Analyzed By	QC RPD	Rpd Limit
DUP	AD15743-008	94	94.00324	Percent	1.33	13.67	12.94	02/15/20	jessica	0.6	5
Sample	AD15743-001	87	86.77932	Percent	1.33	11.39	10.06	02/15/20	jessica		
Sample	AD15743-002	86	85.93530	Percent	1.33	15.55	13.55	02/15/20	jessica		
Sample	AD15743-003	87	87.21872	Percent	1.32	12.43	11.01	02/15/20	jessica		
Sample	AD15743-004	88	87.90497	Percent	1.32	10.58	9.46	02/15/20	jessica		
Sample	AD15743-005	84	84.04605	Percent	1.32	13.48	11.54	02/15/20	jessica		
Sample	AD15743-006	80	80.31968	Percent	1.32	11.33	9.37	02/15/20	jessica		
Sample	AD15743-007	88	88.46154	Percent	1.32	9.90	8.90	02/15/20	jessica		
Sample	AD15743-008	95	94.56522	Percent	1.33	14.21	13.51	02/15/20	jessica		
Sample	AD15743-009	79	79.12206	Percent	1.31	10.65	8.69	02/15/20	jessica		
Sample	AD15743-010	97	96.86869	Percent	1.32	11.22	10.91	02/15/20	jessica		
Sample	AD15743-011	91	90.62812	Percent	1.32	11.35	10.41	02/15/20	jessica		
Sample	AD15743-012	93	93.12268	Percent	1.32	12.08	11.33	02/15/20	jessica		
Sample	AD15743-013	89	89.12015	Percent	1.32	11.89	10.73	02/15/20	jessica		
Sample	AD15743-014	94	93.65505	Percent	1.32	12.51	11.80	02/15/20	jessica		
Sample	AD15743-015	93	92.61954	Percent	1.33	10.95	10.24	02/15/20	jessica		
Sample	AD15743-016	93	92.76373	Percent	1.33	12.80	11.97	02/15/20	jessica		
Sample	AD15743-017	76	76.08200	Percent	1.32	14.49	11.34	02/15/20	jessica		
Sample	AD15743-018	95	94.85294	Percent	1.31	12.19	11.63	02/15/20	jessica		
Sample	AD15743-019	92	92.24739	Percent	1.32	12.80	11.91	02/15/20	jessica		
Sample	AD15743-020	88	87.86181	Percent	1.32	12.03	10.73	02/15/20	jessica		

* - Indicates Failed Rpd Criteria

% Solids Report

Analysis Type: SOLIDS-SS
BatchID: SOLIDS-SS-10295

QcType	SampleID:	Rounded Result	Raw Result	Units	Tare Weight	Wet Weight	Dry Weight	Analysis Date	Analyzed By	QC RPD	Rpd Limit
DUP	AD15743-021	81	81.38075	Percent	1.33	10.89	9.11	02/15/20	jessica	1.8	5
Sample	AD15743-021	80	79.89510	Percent	1.33	12.77	10.47	02/15/20	jessica		
Sample	AD15751-001	78	78.07018	Percent	1.31	14.99	11.99	02/15/20	jessica		
Sample	AD15751-002	82	82.23388	Percent	1.33	14.67	12.30	02/15/20	jessica		
Sample	AD15751-003	81	81.32660	Percent	1.32	15.19	12.60	02/15/20	jessica		
Sample	AD15751-004	86	86.15385	Percent	1.33	13.68	11.97	02/15/20	jessica		
Sample	AD15751-005	80	79.59479	Percent	1.32	15.14	12.32	02/15/20	jessica		
Sample	AD15751-006	85	84.89828	Percent	1.32	14.10	12.16	02/15/20	jessica		
Sample	AD15752-001	78	78.01120	Percent	1.32	15.60	12.46	02/15/20	jessica		
Sample	AD15752-002	84	84.40095	Percent	1.32	18.18	15.54	02/15/20	jessica		
Sample	AD15752-003	83	83.29337	Percent	1.31	13.82	11.73	02/15/20	jessica		
Sample	AD15752-004	85	84.55414	Percent	1.32	13.88	11.94	02/15/20	jessica		
Sample	AD15752-005	81	80.98747	Percent	1.33	14.90	12.32	02/15/20	jessica		
Sample	AD15752-006	85	84.96530	Percent	1.32	14.29	12.34	02/15/20	jessica		
Sample	AD15753-001	83	82.71484	Percent	1.32	11.56	9.79	02/15/20	jessica		
Sample	AD15753-002	84	83.79447	Percent	1.31	13.96	11.91	02/15/20	jessica		
Sample	AD15753-003	78	78.36611	Percent	1.32	14.54	11.68	02/15/20	jessica		
Sample	AD15753-004	84	84.11145	Percent	1.33	14.61	12.49	02/15/20	jessica		
Sample	AD15753-005	77	77.05966	Percent	1.32	15.40	12.17	02/15/20	jessica		
Sample	AD15753-006	82	81.87588	Percent	1.33	15.51	12.94	02/15/20	jessica		
Sample	AD15754-001	81	80.71303	Percent	1.32	18.43	15.13	02/15/20	jessica		

* - Indicates Failed Rpd Criteria

Miscellaneous Data

LEACHATE EXTRACTION LOG
(TCLP, SPLP)

Start Date: 02/24/20 TIME: 16:02 Finish Date: 02/25/20

**TCLP Ext. Fluid #1 pH: 4.94 (criteria: 4.93 ± 0.05)
**TCLP Ext. Fluid #2 pH: 2.90 (criteria: 2.88 ± 0.05)
**SPLP Ext. Fluid #3 pH: 4.19 (criteria: 4.20 ± 0.05)

Sample #	pH (units)	pH in HCL (units)	Final pH (units)	Ext. Fluid (number)	Wt./Vol of Sample (g or mL)	Start Time	Finish Time	Filter Time	Analyst (s)	Ext. Type*	Comments
15861 – 002	9.37	1.72	5.18	EF-1-321882	1509 3L	20:10	12:25	14:55	AB	T	Balance ID: B-037 met & org
15765 - 007	8.72	1.75	5.45	"	1009 2L	"	"	13:53	"	"	pH Meter ID: B38168 met
" – 010	8.72	1.69	5.22		1009 2L		"	13:32			Pipette ID: 152 met
15869 – 001	7.65	1.66	5.05		1509 3L			15:56			met & org
" – 003	7.92	1.71	5.30		1509 3L			15:50			"
" – 005	7.28	1.63	5.09	"	1509 3L			14:40			"
" – 007	8.57	1.51	5.45	EF-1-321882	1509 3L			15:20			met & org
15856 - 001	11.41	6.40	6.67	EF-2-320649	1009 2L			14:15			60% liquid, (met) 40% solid
" – 004	11.76	7.82	6.71		1009 2L			14:10			70% liquid, (met) 30% solid.
15833 - 001	8.37	1.75	5.06	EF-1-321882	1509 3L			15:21			met & org
15855 – 001	8.42	1.64	5.09		1009 2L			14:38			met
" – 003	8.55	1.63	5.05	"	1009 2L			13:52			met
15867 - 001	12.11	8.83	10.33	EF-2-320649	1509 3L			14:59			met & org
15842 - 001	8.66	1.91	6.84	EF-1-321882			12:25	13:15			met & org
EF-1-321882	4.94	—	4.87			20:10	12:25	13:10		T	met & org
15882 - 001	—	—	9.65	SPLP-321256		19:30	11:30	16:33		P	met & org
" – 002	—	—	9.49					16:54		P	
" – 003	—	—	9.92					17:10		P	
" – 004	—	—	9.33		1509 3L			17:20		P	met & org
15743 – 011	—	—	9.48		1009 2L			16:07		P	met
" – 014	—	—	9.92		1009 2L			16:07		P	met
" – 019	—	—	9.55		1009 2L			16:20		P	met
SPLP-321256	4.19	—	4.19	SPLP-321256	1009 2L	19:30	11:30	15:58		P	met & org
EF-2-320649	2.90	—	2.90	EF-2-320649	2L	20:10	12:25	13:31	AB	T	

*Ext. Type: TCLP = T (Method 1311) LAMP=L (Methods 1311 / ANSI/NEMA C78.LL 1266-2003)
SPLP = P (Method 1312) MEP=M (Method 1320)
ZHE = Z (Method 1311/1312)

** The pH of the extraction fluid must be checked prior to use and must be within limits specified above

Hampton-Clarke
Analytical & Field Services

Last Page of Report