Revised Site Characterization Completion Report and Remedial Action Plan

VRP Site Code 513374-00

HVF WEST, LLC

June 01, 2022

→ The Power of Commitment

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1. Introduction

1.1 Purpose of this report

GHD Services Inc. (GHD), on behalf of HVF West, LLC. (HVF), is submitting this Site Characterization Completion Report (SCCR) and Remedial Action Plan (RAP) for the facility located at 6581 East Drexel Road, Tucson, Arizona 85756 (Site). **Figure 1** shows the Site location. The purpose of this SCCR is to provide documentation to the Arizona Department of Environmental Quality (ADEQ) that Site characterization activities were performed and completed in accordance with procedures set forth in environmental work plan documents previously approved by ADEQ. The RAP summarizes activities proposed by HVF to address contaminants of concern to facilitate receipt of a conditional No Further Action (NFA) determination pursuant to Arizona Revised Statutes (A.R.S.) §49-181(D). This report will be submitted to ADEQ for review and approval.

A completed copy of ADEQ's Voluntary Remediation Program (VRP) Work Plan Checklist is provided in **Appendix A**.

1.2 Scope and limitations

This report has been prepared by GHD for HVF and may only be used and relied on by HVF for the purpose agreed between GHD and HVF as set out in Section 1.1 of this report.

GHD otherwise disclaims responsibility to any person other than HVF arising in connection with this report. GHD also excludes implied warranties and conditions, to the extent legally permissible.

The services undertaken by GHD in connection with preparing this report were limited to those specifically detailed in the report and are subject to the scope limitations set out in the report.

The opinions, conclusions and any recommendations in this report are based on conditions encountered and information reviewed at the date of preparation of the report. GHD has no responsibility or obligation to update this report to account for events or changes occurring subsequent to the date that the report was prepared.

The opinions, conclusions and any recommendations in this report are based on assumptions made by GHD described in this report. GHD disclaims liability arising from any of the assumptions being incorrect.

1.3 Site Description and History

The HVF property consists of several neighboring parcels located in an industrial area south of Davis-Monthan Air Force Base (DMAFB), Tucson, Pima County, Arizona. The Site was formerly owned by Gallaher Revocable Trust and began operating as an aircraft salvage and recycling facility in 1964. HVF specializes in demilitarization of military material to United States Department of Defense specifications. Scrap material from industrial and government contracts is shredded and sold to smelters and steel mills.

In January 2020, ADEQ conducted a hazardous waste field inspection and collected samples from two locations at the Site: a layer of powdered material on concrete surfaces and the top 3 inches of soil in an area adjacent to a concrete slab. ADEQ submitted the samples for analysis of total chromium and cadmium by Toxicity Characteristic Leaching Procedure (TCLP). HVF submitted split samples for analysis of total chromium and TCLP cadmium and had the samples analyzed additionally for total cadmium and hexavalent chromium. **Table 1**, below, summarizes the analytical results in comparison to ADEQ non-residential Soil Remediation Levels (nrSRLs), when applicable.

Table 1 ADEQ and HVF January 2020 Sample Results

Sample ID	Sample Date	Total (or TCLP) Metals				
		Cadmium	Chromium	Chromium VI	Chromium III	Cadmium, TCLP
ADEQ-HVFC-1	01/15/20	-	1,100	-	-	4.2
HVF-HVFC-1	01/15/20	47	110	9.33	101	3.9
ADEQ-HVFS-1	01/15/20	-	480	-	-	4.9
HVF-HVFS-1	01/15/20	110	230	7.60	222	3.9
nrSRLs		**510**	**NE**	**65**	**1,000,000**	**NA**

Notes:
NE = No established SRL
NA = Not Applicable

HVF enrolled the Site in the State of Arizona VRP and was accepted into the program on April 7, 2020, with ADEQ assigned VRP Site Code 513374-00. The VRP application (Brown and Caldwell [BC], 2020a) had an expanded list of contaminants of concern, including cadmium, chromium, lead, and mercury.

1.3.1 Initial Site Characterization and Remediation Activities

Initial investigative efforts were performed in accordance with a Site Characterization Work Plan authored by BC dated April 24, 2020 (BC, 2020b). This Work Plan, approved by ADEQ on May 4, 2020, contained plans to investigate the area in the immediate vicinity of the soil samples collected in January 2020. The investigation findings were documented in an SCCR/RAP dated June 26, 2020 (BC, 2020c), and based on ADEQ guidance included a Site-specific Groundwater Protection Level (GPL) for lead in soil of 3,733,230 milligrams per kilogram (mg/kg). Therefore, remediation of lead at the Site to below the nrSRL also satisfies the Site-specific GPL. ADEQ approved the SCCR/RAP in a letter dated June 30, 2020.

Based on the Site characterization results, lead was the only contaminant of concern detected above nrSRLs in the area investigated. HVF completed excavation of the lead-impacted material above the nrSRL in accordance with the approved RAP in July 2020. Post-excavation samples were collected to verify that the nrSRL for lead was not exceeded. **Table 2**, below, summarizes the post-excavation sample results for lead.

Table 2 July 2020 Post-Remediation Sample Results

Sample ID	Sample Date	Total Lead (mg/kg)
SS-02 (0-6”)	07/07/20	659
SS-03 (0-6”)	07/07/20	671
SS-04 (0-6”)	07/07/20	552
SS-05 (0-6”)	07/07/20	603
SS-08 (0-6”)	07/21/20	490
SS-09 (0-6”)	07/21/20	4.68
SS-10 (6-12”)	07/21/20	2.77
SS-10 (6-12”)(Duplicate)	07/21/20	15.1
SS-11 (6-12”)	07/21/20	7.40
nrSRL		**800**

Figure 2 depicts the soil remediation area and soil sample locations from the base and perimeter of the final excavation. As summarized in **Table 2**, soil sample results demonstrate that remaining lead concentrations in the area are below the nrSRL.

1.3.2 Expanded Site Characterization Work Plan

On June 22, 2020, ADEQ's Hazardous Waste Division conducted a field inspection of the Site and collected five surface samples of solids adjacent to five different stockpiles containing visibly different materials. **Figure 3** identifies each sample location. The results of the sample analyses for various metals are summarized in **Table 3** below.

Table 3 ADEQ June 22, 2020 Sample Results

Sample ID	Date	Metal Compounds by Method 6010C/7471 (mg/kg)								
		Arsenic (Total)	Barium (Total)	Cadmium (Total)	Chromium III	Chromium VI[1]	Lead (Total)	Mercury (Total)	Selenium (Total)	Silver (Total)
HVF-1	06/22/20	<1.0	140	32	83	<1.0	120	0.28	<0.50	2.6
HVF-2	06/22/20	<0.99	660	210	840	<1.0	720	1.6	<0.50	37
HVF-3	06/22/20	<0.99	200	120	190	<1.0	300	0.66	<0.50	14
HVF-4	06/22/20	<0.97	350	200	250	<1.0	680	2.6	<0.49	36
HVF-5	06/22/20	<0.98	390	170	830	<1.0	550	1.1	<0.49	390
nrSRLs		**10**	**170,000**	**510**	**1,000,000[1]**	**65**	**800**	**310**	**5,100**	**5,100**

Note:
[1]Chromium VI not detected; therefore, all chromium assumed to be in the trivalent form.

As shown in **Table 3**, none of the soil samples collected by ADEQ during the inspection exhibited select metals concentrations above an applicable nrSRL.

ADEQ recommended that HVF remain in the VRP to address the new findings, and HVF submitted an Expanded Site Characterization Work Plan on September 22, 2020 (BC, 2020d) proposing additional sampling. ADEQ approved the Expanded Site Characterization Work Plan in a letter dated October 7, 2020.

In the Work Plan, the Site was divided into nine operational areas and associated 1-acre Decision Units (DUs) as reported by HVF and depicted in **Figure 3**. One 2-acre portion of the Site containing administrative/security offices was excluded from the investigation. **Table 4**, below, provides a description of each operational area.

Table 4 Site Operational Areas

Area Name	Site Assessment Area Designation(s)	# of DUs	Designated DU(s)	Description of Activities
Aircraft and Military Parts Storage Area	1	12	DU01 through DU12	Large aircraft and military equipment from DMAFB received through north gate; aircraft landing gears, helicopter transmissions, and unpackaged military parts storage; mobile/obsolete equipment used to harvest parts stored along north and west fence lines.
Demolition Pad Area	2	1	DU13	Demolition of aircraft and military equipment on a 75-foot by 125-foot concrete pad with concrete walls on three sides.
HMS Area	3	2	DU14 and DU15	Heavy Metal Steel (HMS) scrap storage and processing. HMS is processed through a portable shear and the material is shipped off-Site to a steel mill.
Shredder Area	4	2	DU16 and DU17	Scrap is shredded and sorted by the equipment in this area.
Product Bin Storage Area	5	1	DU18	Storage of heavy aircraft aluminum turnings, titanium turnings, and shredder light fraction materials.

Area Name	Site Assessment Area Designation(s)	# of DUs	Designated DU(s)	Description of Activities
Metal Fines Storage Areas	6a	6	DU19 through DU24	Storage of processed scrap metal fines.
	6b	1	DU25	
	6c	2	DU26 and DU27	
Oil Storage Area	7	2	DU28 and DU19	Oil storage shed. Miscellaneous mobile/obsolete equipment stored in eastern corner of this area.
Shear Shredder Area	8	1	DU30	A shear shredder for processing lighter materials is in this area.
Shop Area	9	1	DU31	Equipment maintenance, fabrication and welding activities occur in this area.
Total DUs		**31**		

2. Site Characterization Data

2.1 Site-Wide Characterization Sampling and Analysis

BC completed the Expanded Site Characterization Work Plan activities in October/November 2020. One surface composite sample was collected from each DU by collecting an aliquot from 0 to 6 inches within each accessible sample grid area using a shovel or trowel. The aliquots for each DU were placed in a new Ziploc® bag, then broken up and homogenized prior to transfer of the composite sample into a laboratory-supplied, 8-ounce, wide-mouth glass jar.

Subsurface grab samples were collected at 12 inches and 24 inches below ground surface (bgs) from a borehole completed by direct-push drill rig in an accessible location near the center of each DU. Each grab sample was placed in a new Ziploc® bag, then broken up and homogenized within the bag. Using gloved hands or a trowel, the grab sample was transferred into a laboratory-supplied, 8-ounce, wide-mouth glass jar.

Duplicate grab and composite samples were collected at a rate of one duplicate per 10 samples by repeating the process described above using a separate jar. Each glass jar was then sealed with a screw-on Teflon-lined cap, wiped clean of dirt and moisture, and labeled with a unique sample identification number.

All samples were submitted under chain-of-custody to Pace Analytical National Laboratory (Pace), an Arizona Department of Health Services licensed laboratory located in Mount Juliet, Tennessee for analyses of total cadmium, chromium, and lead via United Stated Environmental Protection Agency (USEPA) Method 6010C, hexavalent chromium via USEPA Methods 3060A/7196A, and total mercury via USEPA Method 7471.

A copy of each laboratory report associated with the above investigation is provided in **Appendix B**. Data verification was performed by a senior GHD chemist and documented in a memorandum dated August 9, 2021, included in **Appendix C**.

2.2 Additional Lead Sampling and Analysis

GHD collected additional grab samples for lead analysis in May 2021 in accordance with an Addendum to the Expanded Site Characterization Work Plan (GHD, 2021). ADEQ approved the Addendum on April 5, 2021. The

additional grab samples were collected from 0 to 6 inches within each accessible sample grid area in DU20, DU22, DU15, and DU29. Each grab sample was placed in a Ziploc® bag, then broken up and homogenized prior to transfer into a laboratory-supplied, 8-ounce, wide-mouth glass jar.

Duplicate grab samples were collected at a rate of one duplicate per 10 samples by repeating the process described above using a separate jar. Each glass jar was then sealed with a screw-on Teflon-lined cap, wiped clean of dirt and moisture, and labeled with a unique sample identification number.

All samples were submitted under chain-of-custody to Pace for analyses of total lead via USEPA Method 6010C.

A copy of each laboratory report associated with the above investigation is provided in **Appendix D**. Data verification was performed by a senior GHD chemist and documented in a memorandum dated June 28, 2021, included in **Appendix E.**

3. Site Characterization Findings

3.1 Site-Wide Sampling

Table 5, below, summarizes the Site-wide composite sample results from each of the DUs.

Table 5 Summary of Metals in DU Composite Samples

Area Name	Composite Sample ID	Date	Sample Depth (in inches)	Metal Compounds by Method 6010D/7471				Hexavalent Chromium by Method 3060A/7196A (mg/kg)	Trivalent Chromium (calculated) (mg/kg)
				Cadmium (Total) (mg/kg)	Chromium (Total) (mg/kg)	Lead (Total) (mg/kg)	Mercury (Total) (mg/kg)		
Aircraft & Military Parts Storage Area	DU01	10/28/20	0 to 6	15.5	28.7 J	50.3	0.847 J	2.01	26.7
	DUP01	10/28/20	0 to 6	15.7	25.1 J	41.7	0.0597 J	<2.0	25.1
	DU02	10/28/20	0 to 6	23.3	34.2 J	54.8	0.0921 J	1.00 J	33.2
	DU03	10/28/20	0 to 6	26	33 J	65.3	0.133 J	3.2	29.8
	DU04	10/29/20	0 to 6	26.9	34.5 J	96.6	0.105 J	3.35	31.3
	DU05	10/30/20	0 to 6	199	379 J	487	1.47 J	17.9	361
	DUP02	10/30/20	0 to 6	203	204 J	427	1.35 J	12.3	192
	DU06	10/30/20	0 to 6	52.5	146 J	222	0.288 J	4.64	141
	DU07	10/28/20	0 to 6	35.2	29.2 J	62.5	0.214 J	<2.0	29.2
	DU08	10/29/20	0 to 6	40.1	52.5 J	92.3	0.181 J	2.5	50
	DU09	10/30/20	0 to 6	114	259 J	348	1.1 J	10	249
	DU10	10/30/20	0 to 6	88.6	150 J	260	0.497 J	5.71	144
	DU11	10/29/20	0 to 6	20.3	31 J	53.2	0.101 J	1.99 J	29
	DU12	10/29/20	0 to 6	32.2	43 J	117	0.221 J	2.99	40
Demolition Pad Area	DU13	10/30/20	0 to 6	38.9	50.7 J	101	0.211 J	2.92	47.8
HMS Area	DU14	10/28/20	0 to 6	129	524 J	417	0.95 J	10.6	513
	DU15	10/28/20	0 to 6	149	251 J	**862**	1.22 J	10.8	240

Area Name	Composite Sample ID	Date	Sample Depth (inches)	Metal Compounds by Method 6010D/7471				Hexavalent Chromium by Method 3060A/7196A (mg/kg)	Trivalent Chromium (calculated) (mg/kg)
				Cadmium (Total) (mg/kg)	Chromium (Total) (mg/kg)	Lead (Total) (mg/kg)	Mercury (Total) (mg/kg)		
Shredder Area	DU16	**No sample/Entire area concrete pavement with no exposed soil.**							
	DU17	11/17/20	0 to 6	103	182	335	0.671	11.2	170.8
Product Bin Storage Area	DU18	11/17/20	0 to 6	133	353	307	0.613	6.36	346.6
Metal Fines 6a	DU19	11/17/20	0 to 6	230	357	690	1.44	13.3	343.7
	DU20	11/18/20	0 to 6	157	578	**1,040**	0.796	13.6	564.4
	DUP-3	11/18/20	0 to 6	105	653	588	0.758	12.7	640.3
	DU21	11/18/20	0 to 6	166	315	571	1.2	15.8	299.2
	DUP-4	11/18/20	0 to 6	188	286	532	1.33	18.7	267.3
	DU22	11/18/20	0 to 6	268	552	**1,070**	2.99	8.44	543.6
	DU23	11/18/20	0 to 6	69.2	129	285	0.578	11.3	117.7
	DU24	11/18/20	0 to 6	81.4	98.5	185	0.381	11.7	86.8
Metal Fines 6b	DU25	10/30/20	0 to 6	104	147 J	393	0.704 J	6.6	140
Metal Fines 6c	DU26	10/29/20	0 to 6	62.2	107 J	160	0.335 J	<2.0	107
	DU27	10/29/20	0 to 6	135	298 J	373	0.869 J	14.9	283
Oil Storage Area	DU28	10/27/20	0 to 6	143	219 J	399	1.19 J	6.52	212
	DU29	10/27/20	0 to 6	124	148 J	**2,350**	0.586 J	8.21	140
Shear Shredder Area	DU30	10/27/20	0 to 6	88.9	132 J	394	0.906 J	8.78	123
Shop Area	DU31	10/27/20	0 to 6	86.9	126 J	269	1.25 J	9.96	116
nrSRLs				**510**	**NE**	**800**	**310**	**65**	**1,000,000**

Note:
J = Concentration estimated. Analyte was detected below laboratory minimum reporting level, but above minimum detection level.

As summarized in **Table 5**, there were no detections of cadmium, hexavalent chromium, trivalent chromium, or mercury above an applicable nrSRL in any of the composite samples. However, lead was detected above the nrSRL in composite samples collected from DU20, DU22, DU15, and DU29. The lead concentrations in composite samples from DU15, DU22, and DU29 were 862 mg/kg, 1,070 mg/kg, and 2,350 mg/kg, respectively. The DU20 composite sample result of 1,040 mg/kg exceeds the nrSRL; however, the duplicate composite sample (DUP-3) result of 588 mg/kg is below the nrSRL.

Table 6, below, summarizes the results of grab samples collected from 12 and 24 inches bgs from each DU.

Table 6 Summary of Metals in Decision Unit Grab Samples

Area Name	Grab Sample ID	Date	Sample Depth (in inches)	Metal Compounds by Method 6010D/7471				Hexavalent Chromium by Method 3060A/ 7196A (mg/kg)	Trivalent Chromium (calculated) (mg/kg)
				Cadmium (Total) (mg/kg)	Chromium (Total) (mg/kg)	Lead (Total) (mg/kg)	Mercury (Total) (mg/kg)		
Aircraft and Military Parts Storage Area	DU01	11/16/20	12	0.489 J	21	13.2	0.0356 J	<0.640	21
	DU01	11/16/20	24	0.376 J	19.3	11.7	0.0230 J	<0.640	19.3
	DU02	11/16/20	12	0.979	10.9	7.86	<0.0180	<0.640	10.9
	DU02	11/16/20	24	0.210 J	16.2	8.36	<0.0180	<0.640	16.2
	DU03	11/16/20	12	0.367 J	13.9	9.18	<0.0180	<0.640	13.9
	DU03	11/16/20	24	0.191 J	16.7	9.45	<0.0180	<0.640	16.7
	DU04	11/16/20	12	0.146 J	14.3	8.68	<0.0180	<0.640	14.3
	DU04	11/16/20	24	0.83	21.9	12.7	0.0240 J	<0.640	21.9
	DUP-1	11/16/20	24	0.638	20	12.3	0.0267 J	<0.640	20
	DU05	11/16/20	12	2.85	15.7	14	0.0260 J	<0.640	15.7
	DU05	11/16/20	24	0.0930 J	10.2	6.24	0.0197 J	<0.640	10.2
	DU06	11/16/20	12	0.211 J	13.3	8.91	<0.0180	<0.640	13.3
	DU06	11/16/20	24	0.113 J	12.3	7.76	<0.0180	<0.640	12.3
	DU07	11/16/20	12	0.789	9.45	8.25	<0.0180	<0.640	9.45
	DU07	11/16/20	24	0.163 J	14.2	9.58	<0.0180	<0.640	14.2
	DU08	11/16/20	12	0.205	17	10.3	<0.0180	<0.640	17
	DU08	11/16/20	24	<0.0471	17.3	10.6	0.0337 J	<0.640	17.3
	DU09	11/16/20	12	0.958	14.1	10.7	0.0193 J	<0.640	14.1
	DU09	11/16/20	24	26	32.3	41.7	0.0919	0.996 J	31.3
	DUP02	11/16/20	24	45.6	77.8	49	0.128	1.40 J	76.4
	DU10	11/16/20	12	2.11	13.5	13.2	0.0213 J	<0.640	13.5
	DU10	11/16/20	24	2.43	15.1	13.4	0.0221 J	0.800 J	14.3
	DU11	11/16/20	12	0.255 J	11.1	7.6	0.0222 J	<0.640	11.1
	DU11	11/16/20	24	0.125 J	8.11	5.62	<0.0180	<0.640	8.11
	DU12	11/16/20	12	0.157 J	11	7.97	<0.0180	<0.640	11
	DU12	11/16/20	24	0.133 J	5.93	5.53	<0.0180	<0.640	5.93

Area Name	Grab Sample ID	Date	Sample Depth (in inches)	Metal Compounds by Method 6010D/7471				Hexavalent Chromium by Method 3060A/ 7196A (mg/kg)	Trivalent Chromium (calculated) (mg/kg)
				Cadmium (Total) (mg/kg)	Chromium (Total) (mg/kg)	Lead (Total) (mg/kg)	Mercury (Total) (mg/kg)		
Demolition Pad	DU13	11/16/20	12	59.1	77.7	207	0.397	1.73 J	76
	DU13	11/16/20	24	0.229 J	11.9	8.2	<0.0180	<0.640	11.9
HMS Area	DU14	11/17/20	12	1.49	11	21.4	<0.0180	<0.640	11
	DU14	11/17/20	24	0.0935 J	8.81	5.99	<0.0180	<0.640	8.81
	DUP-6	11/17/20	24	0.109 J	10.6	7.15	<0.0180	<0.640	10.6
	DU15	11/17/20	12	13.9	33.4	51.2	0.0825	2.72	30.7
	DU15	11/17/20	24	1.79	11.3	12.3	0.0263 J	<0.640	11.3
	DUP-5	11/17/20	24	2.04	17.1	14.9	<0.0180	<0.640	17.1
Shredder Area	DU16	11/16/20	12	0.191 J	12	7.77	0.0367 J	<0.640	12
	DU16	11/16/20	24	0.125 J	4.86	3.76	<0.0180	<0.640	4.86
	DUP-3	11/16/20	24	0.113 J	5.14	3.83	<0.0180	<0.640	5.14
	DU17	11/16/20	12	97.8	422	515	0.74	5.16	417
	DU17	11/16/20	24	0.177 J	6.91	5.06	<0.0180	<0.640	6.91
Product Bin Storage Area	DU18	11/16/20	12	59.3	71.7	167	0.5	2.96	68.7
	DU18	11/16/20	24	0.273 J	10	6.91	<0.0180	<0.640	10
Metal Fines 6a	DU19	11/16/20	12	85.9	258	340	0.449	11.8	246
	DU19	11/16/20	24	1.43	14	12	0.0204 J	<0.640	14
	DU20	11/16/20	12	42.7	71.5	130	0.279	0.720 J	70.8
	DU20	11/16/20	24	0.197 J	10.6	7.46	<0.0180	<0.640	10.6
	DU21	11/17/20	12	5.62	20.2	25.2	0.0519	0.906 J	19.3
	DU21	11/17/20	24	0.236 J	17	10.3	0.0197 J	<0.640	17
	DUP-7	11/17/20	24	0.238 J	17.3	10.3	0.0258 J	<0.640	17.3
	DU22	11/16/20	12	0.264 J	15.8	10.6	0.0188 J	<0.640	15.8
	DU22	11/16/20	24	0.163	15.6	8.8	0.0215 J	<0.640	15.6
	DU23	11/17/20	12	33.1	55.6	102	0.233	<0.640	55.6
	DU23	11/17/20	24	123	227	505	0.697	<0.640	227
	DU24	11/17/20	12	38.3	126	251	0.182	7.61	118
	DU24	11/17/20	24	3.25	15.5	17.7	0.0431	<0.640	15.5
Metal Fines 6b	DU25	11/16/20	12	10.1	25.3	27.8	0.0417	<0.640	25.3

Area Name	Grab Sample ID	Date	Sample Depth (in inches)	Metal Compounds by Method 6010D/7471				Hexavalent Chromium by Method 3060A/ 7196A (mg/kg)	Trivalent Chromium (calculated) (mg/kg)
				Cadmium (Total) (mg/kg)	Chromium (Total) (mg/kg)	Lead (Total) (mg/kg)	Mercury (Total) (mg/kg)		
	DU25	11/16/20	24	0.156 J	12.8	8.79	0.0200 J	<0.640	12.8
Metal Fines 6c	DU26	11/16/20	12	0.886	12.6	10.7	0.0241 J	<0.640	12.6
	DU26	11/16/20	24	0.210 J	12.7	8.63	<0.0180	<0.640	12.7
	DU27	11/16/20	12	1.39	14.7	12.4	0.0279 J	<0.640	14.7
	DU27	11/16/20	24	0.736	10.9	6.91	0.0263 J	<0.640	10.9
Oil Storage Area	DU28	11/17/20	12	0.178 J	12	7.89	<0.0180	<0.640	12
	DU28	11/17/20	24	0.163	14.4	8.6	0.0192 J	<0.640	14.4
	DU29	11/17/20	12	4.88	25.1	29.5	0.0455	1.88 J	23.2
	DU29	11/17/20	24	0.142 J	12.7	6.44	<0.0180	<0.640	12.7
Shear Shredder Area	DU30	11/17/20	12	8.31	19.6	31.7	0.0745	0.675 J	18.9
	DU30	11/17/20	24	0.0823 J	6.13	3.48	<0.0180	<0.640	6.13
	DUP-4	11/17/20	24	0.0972 J	6.85	4.37	<0.0180	<0.640	6.85
Shop Area	DU31	11/17/20	12	7.8	25.2	26.1	0.0638	<0.640	25.2
	DU31	11/17/20	24	0.124 J	11.4	6.35	0.0205 J	<0.640	11.4
nrSRLs				**510**	**NE**	**800**	**310**	**65**	**1,000,000**

No grab samples collected from the 12- and 24-inch bgs depth intervals exhibited metals concentrations above an applicable nrSRL.

3.2 Additional Soil Lead Sampling

A review of the composite sample results in **Table 5** (Section 3.1) indicates that lead was the only parameter detected above an applicable nrSRL. Four composite samples exceeded the lead nrSRL as summarized in **Table 7** below.

Table 7 Summary of Composite Sample Lead Exceedances

Area Name	Composite Sample ID	Sample Date	Total Lead (mg/kg)
Metal Fines Storage Area	DU20	11/18/20	**1,040 (588)**
	DU22	11/18/20	**1,070**
HMS Area	DU15	10/28/20	**862**
Oil Storage Area	DU29	10/27/20	**2,350**
nrSRL			**800**

In accordance with the Addendum, additional grab sampling for lead was completed in DU20, DU22, DU15, and DU29.

Each DU was divided into 18 to 24 grid cells. GHD collected a grab sample of surface material from grid locations within each DU that were not covered by scrap, processed scrap, or pavement. All soil samples including field duplicates were submitted to an Arizona Department of Health Services licensed laboratory for analysis of total lead via USEPA Method 6010C.

The following sections summarize the lead results by DU.

3.2.1 DU20

DU20 was divided into 24 grid areas with 16 grid locations determined to be accessible for sample collection. **Table 8**, below, summarizes the lead results for the 16 samples. **Figure 4** depicts the grid sample locations.

Table 8 DU20 Lead Results

Area Name	Grab Sample ID	Grid Number	Date	Sample Depth (in inches)	Lead (mg/kg)
Metal Fines Storage Area 6a	DU20	1	05/20/21	0 to 6	105
	DU20	2	05/20/21	0 to 6	11.3
	DU20	3	05/20/21	0 to 6	383 (259)
	DU20	4	05/20/21	0 to 6	569
	DU20	5	05/20/21	0 to 6	81.5
	DU20	6	05/20/21	0 to 6	104
	DU20	7	05/20/21	0 to 6	37.9
	DU20	8	05/20/21	0 to 6	44.8
	DU20	9	05/20/21	0 to 6	387
	DU20	11	05/20/21	0 to 6	**1,310**
	DU20	13	05/20/21	0 to 6	**1,660**
	DU20	17	05/20/21	0 to 6	**914**
	DU20	21	05/20/21	0 to 6	**994**
	DU20	22	05/20/21	0 to 6	**955**
	DU20	23	05/20/21	0 to 6	71.8
	DU20	24	05/20/21	0 to 6	49.9
nrSRL					**800**

As shown in **Table 8**, the lead concentrations in grab samples from Grids 11, 13, 17, 21, and 22 exceed the nrSRL with concentrations above the nrSRL ranging from 914 mg/kg to 1,660 mg/kg.

3.2.2 DU22

DU22 was divided into 24 grid areas with 15 grid locations determined to be accessible for sample collection. **Table 9**, below, summarizes the lead results for the 15 grab samples. **Figure 4** depicts the grid sample locations.

Table 9 DU22 Lead Results

Area Name	Grab Sample ID	Grid Number	Date	Sample Depth (in inches)	Lead (mg/kg)
	DU22	1	05/18/21	0 to 6	**1,230**

Area Name	Grab Sample ID	Grid Number	Date	Sample Depth (in inches)	Lead (mg/kg)
Metal Fines Storage Area 6a	DU22	3	05/18/21	0 to 6	**1,180**
	DU22	4	05/18/21	0 to 6	189
	DU22	7	05/18/21	0 to 6	102
	DU22	8	05/18/21	0 to 6	**970** (**925**)
	DU22	11	05/18/21	0 to 6	197
	DU22	14	05/18/21	0 to 6	151
	DU22	17	05/18/21	0 to 6	203
	DU22	18	05/18/21	0 to 6	25.5
	DU22	19	05/18/21	0 to 6	**3,330**
	DU22	20	05/18/21	0 to 6	**1,240**
	DU22	21	05/18/21	0 to 6	82.9
	DU22	22	05/18/21	0 to 6	169
	DU22	23	05/18/21	0 to 6	471
	DU22	24	05/18/21	0 to 6	378
nrSRL					**800**

As shown in **Table 9**, the lead concentrations in grab samples from Grids 1, 3, 8, 19, and 20 exceed the nrSRL with concentrations above the nrSRL ranging from 925 mg/kg to 3,330 mg/kg.

3.2.3 DU15

DU15 was divided into 20 grid areas with 11 grid locations determined to be accessible for sample collection. **Table 10**, below, summarizes the lead results for the 11 grab samples. **Figure 5** depicts the grid sample locations.

Table 10 DU15 Lead Results

Area Name	Grab Sample ID	Grid Number	Date	Sample Depth (in inches)	Lead (mg/kg)
HMS Area	DU15	1	05/20/21	0 to 6	**6,310**
	DU15	3	05/20/21	0 to 6	671
	DU15	5	05/20/21	0 to 6	581
	DU15	6	05/20/21	0 to 6	128 (130)
	DU15	8	05/20/21	0 to 6	541
	DU15	12	05/20/21	0 to 6	697
	DU15	15	05/20/21	0 to 6	247
	DU15	16	05/20/21	0 to 6	310
	DU15	18	05/20/21	0 to 6	79.8
	DU15	19	05/20/21	0 to 6	**999**
	DU15	20	05/20/21	0 to 6	316
nrSRL					**800**

As shown in **Table 10**, the lead concentrations in grab samples from Grids 1 and 19 exceed the nrSRL at concentrations of 6,310 mg/kg and 999 mg/kg, respectively.

3.2.4 DU29

DU29 was divided into 18 grid areas with 12 grid locations determined to be accessible for sample collection. **Table 11**, below, summarizes the lead results for the 12 grab samples. **Figure 5** depicts the grid sample locations.

Table 11 DU29 Lead Results

Area Name	Grab Sample ID	Grid Number	Date	Sample Depth (in inches)	Lead (mg/kg)
Oil Storage Area	DU29	1	05/20/21	0 to 6	378
	DU29	3	05/20/21	0 to 6	302
	DU29	4	05/20/21	0 to 6	388
	DU29	5	05/20/21	0 to 6	308 (**1990**)
	DU29	7	05/20/21	0 to 6	164
	DU29	9	05/20/21	0 to 6	84.3
	DU29	10	05/20/21	0 to 6	182
	DU29	11	05/20/21	0 to 6	335
	DU29	13	05/20/21	0 to 6	13.6
	DU29	15	05/20/21	0 to 6	49.8
	DU29	17	05/20/21	0 to 6	36.9
	DU29	18	05/20/21	0 to 6	124
nrSRL					**800**

As shown in **Table 11**, the lead concentration in the grab sample from Grid 5 was detected below the nrSRL at a concentration of 308 mg/kg; however, the duplicate sample exceeds the nrSRL with a concentration of 1,990 mg/kg.

3.3 Site Characterization Data Summary

Based on the analytical results, cadmium, chromium, and mercury concentrations are below applicable nrSRLs. Lead is the only contaminant of concern above an nrSRL, with the extent of lead-impacted soil limited to 13 accessible grid locations within four DUs.

4. Remedial Action Plan

HVF will seek a Conditional NFA determination for cadmium, chromium, lead, and mercury pursuant to A.R.S. §49-181(D). Lead is the only constituent that will require remediation in order to satisfy an nrSRL.

4.1 Groundwater Protection

In order to demonstrate that remaining soil will be protective of aquifer water quality pursuant to Arizona Administrative Code R18-7-203(B), GHD completed an analysis utilizing methods provided in ADEQ's guidance document entitled "A Screening Method to Determine Soil Concentrations Protective of Groundwater Quality" (ADEQ, September 1996).

Lead, cadmium, and chromium were detected at concentrations greater than minimum GPLs specified in Table 4, Section IV of the guidance document. Mercury has not been detected above the minimum GPL of 12 mg/kg in soil samples collected to date. Therefore, GHD calculated alternative GPLs for lead, cadmium, and chromium as described in the following paragraphs.

GHD utilized Site-specific information to establish a relationship between the total metals concentrations of impacted soil and the leachable fraction of each contaminant of concern using the Synthetic Precipitation Leaching Procedure (SPLP) via USEPA Method 1312. The calculation of alternative GPLs is determined using the following formula:

$$Alternative\ GPL = 292.9 * R * Cw$$

Where: R = ratio between the total metals content and the SPLP leachate result

C_w = Aquifer Water Quality Standard (AWQS)/Maximum Contaminant Level (MCL)

Ten grab soil samples were randomly selected for analyses for total and SPLP lead, cadmium, and chromium as part of the 2020 Site-wide soil sampling effort. **Table 12** through **Table 14** summarizes the laboratory results and alternative GPL calculations for each contaminant of concern. Non-qualified, estimated values below the laboratory minimum reporting level were excluded from each dataset.

Table 12 Alternative GPL Calculation Summary for Lead

Sample ID	Date	Total Pb (mg/kg)	SPLP Pb (mg/liter [mg/L])	R-value	Aquifer Water Quality Standard (mg/L)	Alternative Pb GPL (mg/kg)
DU-03-12	11/16/20	9.18	0.00702	1,308	0.05	7,950
DU-05-12	11/16/20	14.0	0.00982	1,426		
DU-13-12	11/16/20	207	0.00619	33,441		
DU-14-12	11/17/20	21.4	0.0394	543		
DU-15-12	11/17/20	51.2	ND	∞		
DU-16-12	11/16/20	7.77	0.00992	783		
DU-21-12	11/17/20	25.2	0.00923	2,730		
DU-24-24	11/17/20	17.7	0.0131	1,351		
DU-30-12	11/17/20	31.7	ND	∞		
DU-31-12	11/17/20	26.1	ND	∞		
Note: ND = non-detect						

The sample with the lowest R-value corresponds to the sample with the most leaching potential. Thus, the sample with the lowest R-value was used to calculate the alternative GPL in the last column. As shown in **Table 12**, DU-14-12 is the sample with the most leaching potential with an R-value of 543. Using the results of this sample, the calculated alternative GPL for lead is 7,950 mg/kg, which is considerably higher than the minimum GPL for lead (290 mg/kg) and an order of magnitude higher than the lead nrSRL of 800 mg/kg.

Table 13 Alternative GPL Calculation Summary for Cadmium

Sample ID	Date	Total Cd (mg/kg)	SPLP Cd (mg/L)	R-value	Aquifer Water Quality Standard (mg/L)	Alternative Cd GPL (mg/kg)
DU-03-12	11/16/20	ND	ND	∞	0.005	970
DU-05-12	11/16/20	2.85	0.00248	1,149		
DU-13-12	11/16/20	59.1	ND	∞		
DU-14-12	11/17/20	1.49	0.00225	662		
DU-15-12	11/17/20	13.9	ND	∞		
DU-16-12	11/16/20	ND	ND	∞		

Sample ID	Date	Total Cd (mg/kg)	SPLP Cd (mg/L)	R-value	Aquifer Water Quality Standard (mg/L)	Alternative Cd GPL (mg/kg)
DU-21-12	11/17/20	5.62	ND	∞		
DU-24-24	11/17/20	3.25	0.00271	1,199		
DU-30-12	11/17/20	8.31	ND	∞		
DU-31-12	11/17/20	7.80	0.00220	3,545		

As shown in **Table 13**, DU-14-12 is the sample with the most leaching potential with an R-value of 662. Using the results of this sample, the calculated alternative GPL for cadmium is 970 mg/kg, which is considerably higher than the minimum GPL for cadmium of 29 mg/kg and higher than the cadmium nrSRL of 510 mg/kg.

Table 14 Alternative GPL Calculation Summary for Chromium

Sample ID	Date	Total Cr (mg/kg)	SPLP Cr (mg/L)	R-value	Aquifer Water Quality Standard (mg/L)	Alternative Cr GPL (mg/kg)
DU-03-12	11/16/20	13.9	0.0137	1,015	0.1	20,790
DU-05-12	11/16/20	15.7	ND	∞		
DU-13-12	11/16/20	77.7	ND	∞		
DU-14-12	11/17/20	11.0	0.0155	710		
DU-15-12	11/17/20	33.4	0.0102	3,275		
DU-16-12	11/16/20	12.0	0.0163	736		
DU-21-12	11/17/20	20.2	0.0158	1,278		
DU-24-24	11/17/20	15.5	0.0133	1,165		
DU-30-12	11/17/20	19.6	ND	∞		
DU-31-12	11/17/20	25.2	ND	∞		

As shown in **Table 14**, DU-14-12 is the sample with the most leaching potential with an R-value of 710. Using the results of this sample, the calculated alternative GPL for chromium is 20,790 mg/kg, which is significantly higher than the minimum GPL for chromium of 590 mg/kg.

Based on the above analyses, the alternative GPLs for lead, cadmium and chromium are 7,950 mg/kg, 970 mg/kg, and 20,790 mg/kg, respectively.

All soil samples collected to-date indicate that lead, cadmium, and chromium concentrations are below these alternative GPLs. Furthermore, all mercury detections in soil samples collected to date are below the minimum GPL for mercury of 12 mg/kg.

4.2 Excavation

HVF will complete excavations in the 13 locations where lead was detected above the nrSRL. The 13 locations are summarized in **Table 15**, below.

Table 15 Remediation Areas

Area Name	Grab Sample ID	Grid Number	Latitude (X)	Longitude (Y)	Lead (Total) (mg/kg)
Metal Fines Storage Area 6a	DU20	11	32.1503221386	-110.852610632	**1,310**
	DU20	13	32.1502239931	-110.852935467	**1,660**
	DU20	17	32.1502323739	-110.852444943	**914**
	DU20	21	32.1500355709	-110.852929280	**994**
	DU20	22	32.1500321716	-110.852765919	**955**
	DU22	1	32.1504105237	-110.852303564	**1,230**
	DU22	3	32.1504148812	-110.852048466	**1,180**
	DU22	8	32.1502834902	-110.852172967	**970** (**925**)
	DU22	19	32.1500228806	-110.852294417	**3,330**
	DU22	20	32.1500250593	-110.852166869	**1,240**
HMS Area	DU15	1	32.1495607726	-110.849648856	**6,310**
	DU15	19	32.1488922084	-110.849215774	**999**
Oil Storage	DU29	5	32.1487976396	-110.849631552	308 (**1990**)

4.3 Confirmation Sampling and Analysis Plan

4.3.1 Post-Excavation Sampling Locations

An initial 5-foot by 5-foot by 6-inch deep excavation will be completed at each grid location. The excavation will then be expanded vertically and laterally in each direction until soil above the nrSRLs and alternative GPLs has been removed. A field x-ray fluorescence (XRF) analyzer will be used to determine when concentrations at the base of the excavation and along each excavation sidewall are below the lead, cadmium, chromium and mercury nrSRLs and alternative GPLs.

A minimum of five soil samples will be collected from each excavation. If any of the excavation walls span greater than 20 feet in length, an additional wall and base sample will be collected (i.e., one extra sample will be collected from the excavation wall and base for every 20 feet of additional excavation wall length). For example, if an excavation extends to 30 feet by 10 feet, a total of 8 soil samples will be collected (i.e., 2 additional wall samples and 1 additional base sample).

4.3.2 Initial Field XRF Data Quality Evaluation

Field XRF readings for lead, cadmium, chromium, and mercury will be recorded for the first 10 to 20 post-excavation soil samples plus at least one duplicate. The samples utilized for the field XRF reading will then be collected and submitted to an off-Site laboratory for lead, cadmium, chromium, and mercury analyses using the procedure described in Section 4.3.3. The XRF and confirmation laboratory results will be summarized in a table for comparison purposes. If the XRF readings sufficiently correlate with the confirmation laboratory results, HVF will provide the data to ADEQ and request approval to utilize the field XRF for the remainder of the post-excavation soil sampling effort in lieu of submitting samples for laboratory analyses.

4.3.3 Confirmation Sampling Procedure

The following procedure will be used for collection of the initial confirmation soil samples described in Section 4.3.2 above. If the use of field XRF is not approved based on the initial data quality evaluation, then the following procedure will be used for the entire confirmation sampling program.

Soil sampling will be completed using a gloved hand and/or trowel. For each sample interval, the soil will first be placed into a new Ziploc® bag. The sample will then be broken up and homogenized with a plastic trowel or by hand while wearing nitrile gloves. If duplicate samples will be collected for quality control, the sample volume will be divided in half. Using gloved hands or the trowel, the sample will be transferred into a laboratory-supplied 8-ounce, wide-mouth glass jar. For duplicate samples, the process will be repeated using a separate jar. Immediately following sample collection, each glass jar will be capped with a screw-on Teflon-lined cap, wiped clean of dirt and moisture, and labeled with a unique sample identification number.

Each label will include the following information:

- Project name
- Sample identification
- Date and time of sample collection
- Sampler's initials
- Requested analysis (e.g., lead)

The sample identification will include the following information:

- Sample type description (e.g., soil sample = SO)
- Sample location designation (e.g., DU20, GR11, West Wall)
- Sample depth for excavation bottom samples (e.g., 6")

Examples:

- SO-DU20-GR11-WestWall: a soil sample collected from the west wall of DU20, Grid 11 excavation
- SO-DU20-GR11-SouthBase: a soil sample collected from the south base of DU20, Grid 11 excavation

The sample jar will then be logged on the chain-of-custody form, sealed in a Ziploc® bag (or equivalent), and placed in an insulated cooler containing wet ice.

Post-excavation confirmation soil samples, including field duplicates, will be submitted to an Arizona Department of Health Services licensed laboratory for analysis of total lead, cadmium, and chromium via USEPA Method 6010C. Mercury analysis will be performed via USEPA Method 7471.

4.3.4 Post-Excavation Sampling Program

If laboratory results (or XRF readings upon ADEQ approval) indicate that one or more post-excavation samples exceed the lead, cadmium, chromium, or mercury nrSRLs and/or alternative GPLs, then excavation will continue and a "step-out" and/or deeper confirmation sample will be collected for off-Site laboratory analysis (or field XRF analysis upon ADEQ approval). This process will continue until sample results confirm that impacted material above nrSRLs and/or alternative GPLs has been removed.

4.3.5 Decontamination Procedures

Sample collection is anticipated to occur using disposable materials (i.e., disposal gloves and plastic bags). However, if trowels, scoops, mixing bowls, and other sampling equipment used during sampling come in direct contact with soil samples, they will be decontaminated between each usage. If needed, decontamination efforts will consist of a three-stage bucket system using an Alconox®-based detergent solution and double rinsing in distilled water.

4.3.6 Quality Assurance Project Plan

The Quality Assurance Project Plan (QAPP) is intended to ensure that the evaluation and remediation activities described in the Work Plan generate complete and accurate data sets that have little bias and high precision that are usable for decision-making required to satisfy project objectives. Implementation of the procedures in this QAPP will facilitate the likelihood that data collected in the field and in the analytical laboratory are precise, accurate, representative, complete, and comparable to actual Site conditions.

All samples collected during field activities for off-Site laboratory analyses will be placed in unused sample containers provided by the laboratory, submitted to the laboratory, and analyzed within the holding time designated for each analytical method. Sample container, preservation, and holding time for each analytical method are presented in **Table 16**, below.

Table 16 Sample Containers, Preservation, and Holding Times

Parameter	USEPA Method	Container	Preservative	Holding Time
Lead	6010B/6010C	Glass Jar	None	180 days
Cadmium	6010B/6010C	Glass Jar	None	180 days
Chromium	6010B/6010C	Glass Jar	None	180 days
Mercury	7471	Glass Jar	<4º C	28 days

Following collection, sample containers will be placed in Ziploc® bags (or equivalent) and then placed in an insulated cooler to be chilled using wet ice. The wet ice will be replenished as necessary to maintain the preservation temperature specified for the requested analytical method. The samples will be transported directly to the analytical laboratory via ground delivery or courier under chain-of-custody protocols within holding time. Chain-of-custody protocols will be used to facilitate proper handling during sampling and analysis and to provide sample tracking. Samples and sample documentation will be maintained in the physical possession of authorized personnel or under control in a secure area. The purpose of sample custody procedures is to document the history of samples (and sample extracts or digestates) from the time of sample collection through shipment and analysis.

Field quality control (QC) samples to be collected and analyzed in association with the remedial activities will include blind field duplicate samples and temperature blanks. The purpose and frequency of collection for these field QC samples are summarized below.

Internal laboratory QC samples typically include method blanks, matrix spike/matrix spike duplicate (MS/MSD) samples, and laboratory control/laboratory control duplicate samples.

Field duplicate samples are used to check for sampling and analytical error, reproducibility, and homogeneity. One duplicate sample will be collected on a nominal basis of 1 per 10 confirmation samples. Duplicates will be analyzed for the same parameters specified for the associated confirmation samples. Additionally, a single MS/MSD pair may be collected and submitted for QC evaluation.

The QC goal for field duplicate follows: if the sample result for each sample is equal to or greater than five times the reporting limit, the relative percent difference (RPD) between sample results should be less than or equal to 50 percent. If at least one of the sample results is less than five times the reporting limit, the absolute difference between the results should be less than or equal to the higher of the reporting limits.

Data verification is primarily concerned with obtaining complete, accurate, and consistent information to characterize the physical conditions of a site and support a determination of usability of data to satisfy the project objectives. The verification of field data may also overlap portions of laboratory verification with respect to sample management. Field data verification will be performed by personnel familiar with the types of activities conducted and with respect to protocols stipulated in applicable regulatory guidance.

Laboratory data verification is confirmation by examination and provision of objective evidence that specified requirements have been fulfilled. Laboratory data verification is the process of evaluating the completeness,

correctness, and conformance/compliance of a specific data set against the method, procedural, and regulatory requirements, or specifically by individual contract and separate assurance plans.

Data validation is an analyte- and sample-specific process that extends the evaluation of data beyond the method and the criteria identified in the verification process. Specifically, data validation is confirmation by examination and provision of objective evidence that requirements for a specific intended use are fulfilled. The types of information that will be reviewed for validation of laboratory data are listed below:

- Laboratory report/documentation including case narrative
- Chain-of-custody
- Timeliness and errors
- Blanks and contamination (field and laboratory)
- Duplicate evaluation (field and laboratory)
- Accuracy (by evaluating MS/MSD and laboratory control samples recovery)
- Precision (by evaluating field and laboratory duplicate results)
- Laboratory qualifiers
- Quantitation and reported detection limits
- RPD (laboratory and field duplicate comparisons)
- Data use and overall quality assessment

Data validation will be in general accordance with USEPA's Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review (USEPA, 540-R-2017-001).

4.4 Material Management

The excavated material does not meet the definition of a solid waste; therefore, it is exempt from being defined as a hazardous waste. The material will not be discarded, but will instead be processed on-Site to separate out distinct metal fragments with economic value.

Samples of the post-processed material will be collected at a rate of one sample per 250 cubic yards of stockpiled material to confirm that lead, cadmium, chromium, and mercury concentrations are below nrSRLs and alternative GPLs (minimum GPL in the case of mercury). If the results confirm that concentrations meet nrSRLs and alternative GPLs, then it will be deemed suitable for use as backfill in the remedial excavations.

At least one sample of processed material will be submitted to an Arizona Department of Health Services licensed laboratory for analyses of total lead, cadmium, and chromium via USEPA Method 6010C plus mercury via USEPA Method 7471. If ADEQ approves the use of a field XRF as described in Section 4.3.2 above, then no additional processed material samples will be analyzed at an off-Site laboratory. Instead, remaining clean fill determinations may be based on field XRF readings.

4.5 Operational Controls

HVF has installed new shredding downstream processing systems. The Company is in the process of installing a system at the discharge from this system, which will result in the deposit of designated material directly into super sacks for delivery and sale to customers. This will result in eliminating both the deposit of these materials for later pickup and packaging, and substantially reducing handling and the movement of these materials across plant property by front end loaders and like equipment. Additionally, the Company has installed and will continue to install covers over the various conveyor systems at the plant which will reduce the unintended spillage of materials being so conveyed.

4.6 Permits

A Pima County Fugitive Dust Activity Permit will not be required since earthmoving activities are anticipated to be less than 1 acre.

4.7 Remedial Action Completion Report

A Remedial Action Completion Report will be prepared and submitted to ADEQ upon completion of the above activities. The report will include a summary of the laboratory results and figures depicting the remediation areas.

4.8 Institutional Control

An institutional control will be established restricting the Site to non-residential use. HVF will coordinate this task with ADEQ's VRP Project Manager and Declaration of Environmental Use Restriction (DEUR) Coordinator.

5. Community Involvement

The primary objective of the Community Relations Plan is to document community involvement activities. These planned activities include public notices as described below.

5.1 Community Profile

For the purposes of this Community Relations Plan, the community involvement area will be considered to include properties that adjoin/border the Site to the north, south, east, and west. Adjoining properties to the east and west are vacant. DMAFB borders the Site to the north and Drexel Road borders the Site to the south. The Site is fenced with security measures in place allowing only authorized personnel on the premises.

5.2 Community Involvement Plan

The planned remediation activities will not result in excessive noise, light, odor, dust, or other adverse impacts off-Site.

As required by A.R.S. § 49-176.B, HVF will notify the public of anticipated efforts by placing a sign at the Site's main facility entrance gate prior to commencing remediation activities. Signage will remain in place throughout the duration of field work. **Appendix F** includes a copy of example signage that will be placed at the Site.

As required by A.R.S. § 49-176(A)(3), HVF will coordinate with ADEQ to have a public notice posted on the ADEQ website and allow for public comments to be submitted for a period of 45 days after the notice has been published.

6. Schedule

HVF anticipates commencing implementation of the aforementioned remediation activities within 30 days of receiving approval from ADEQ and following the 45-day public comment period.

6.1 Progress Reports

HVF will notify ADEQ when each of the following actions are completed:

– Signage has been posted at the Site entrance

– Soil excavation and disposal activities have been completed

A Remedial Action Completion Report will be submitted following implementation of the work plan.

7. Conclusions

The proposed remedial action will achieve the remediation levels and controls established pursuant to A.R.S. Title 49, Article 5, Section 175, Subsection B. [§ 49-175(B)] as follows:

– The concentrations of cadmium, chromium, and mercury in soil are below predetermined risk-based remedial standards for these metals specified in Title 18, Chapter 7, Section 205 for non-residential exposure scenarios.
– Following removal of lead-impacted material in the 13 identified locations, concentrations of lead in soil will be below the predetermined risk-based remedial standard for lead specified in Title 18, Chapter 7, Section 205 for non-residential exposure scenarios.
– Based on ADEQ's GPL guidance, the concentrations of cadmium, chromium, lead, and mercury in soil will not cause or threaten to cause a violation of numeric Aquifer Water Quality Standards prescribed in Title 18, Chapter 11, Section 406.
– Pursuant to A.R.S. Title 49, Article 5, Section 152 B. [§ 49-152)(B)], HVF will record a DEUR limiting the remediation Site to non-residential use.

8. References

BC, 2020a. VRP Application, Prepared for HVF West, LLC. March 16, 2020.

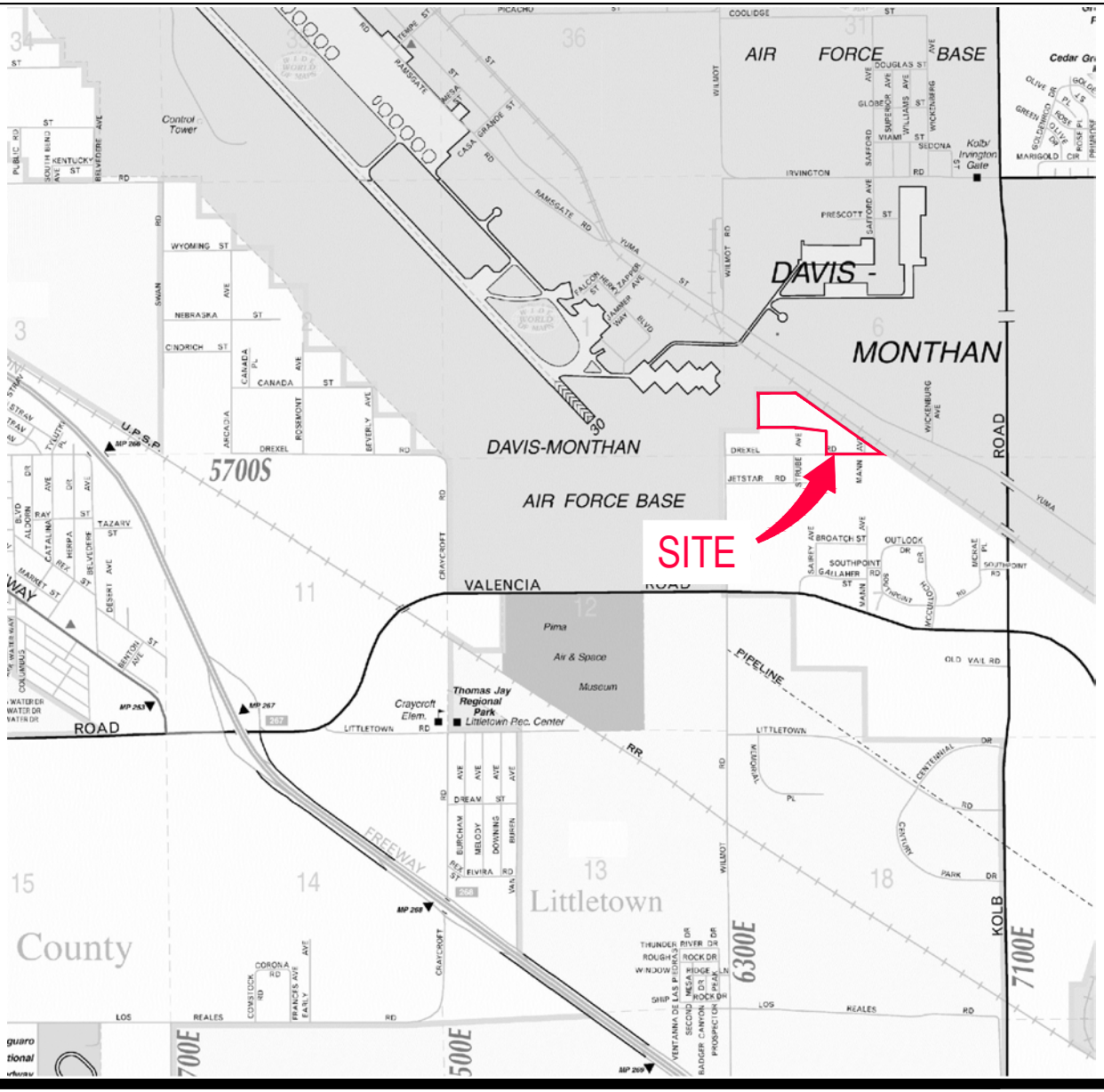
BC, 2020b. Site Characterization Work Plan, Prepared for HVF West, LLC. VRP Site Code 513374-00, 6581 East Drexel Road, Tucson, Arizona 85756. April 24, 2020.

BC, 2020c. Site Characterization Completion Report/Remedial Action Plan, Prepared for HVF West, LLC. VRP Site Code 513374-00, 6581 East Drexel Road, Tucson, Arizona 85756. June 26, 2020.

BC, 2020d Expanded Site Characterization Work Plan, Prepared for HVF West, LLC. VRP Site Code 513374-00 6581 East Drexel Road, Tucson, Arizona 85756. September 22, 2020.

GHD, 2021. Addendum to Expanded Site Characterization Work Plan HVF West, LLC. VRP Site Code 513374-00 6581 East Drexel Road, Tucson, Arizona 85756. March 18, 2021.

Figures



0 3291 6582 ft

1" = 6582 ft

N

GHD

HVF WEST LLC
6581 EAST DREXEL ROAD
TUCSON, ARIZONA 85756

Project No. **11224790**
Date **August 21**

SITE LOCATION MAP

FIGURE 1

Filename: \\ghdnet\ghd\US\Phoenix\Projects\561\11224790\Digital_Design\ACAD 2020\Figures\11224790(01)GN-PX001.dwg
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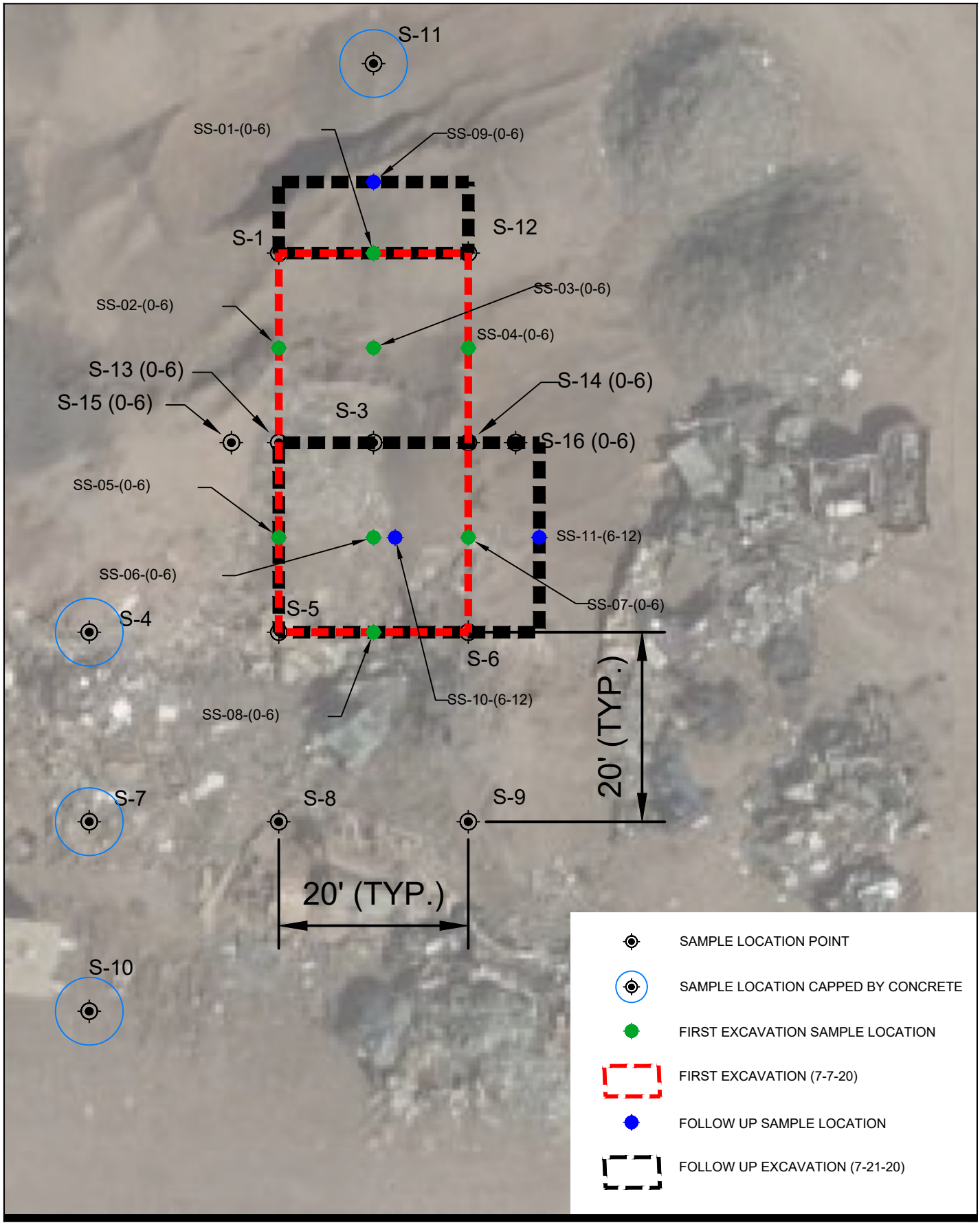


0 7 14 ft
1" = 14 ft

N

GHD

HVF WEST LLC
6581 EAST DREXEL ROAD
TUCSON, ARIZONA 85756

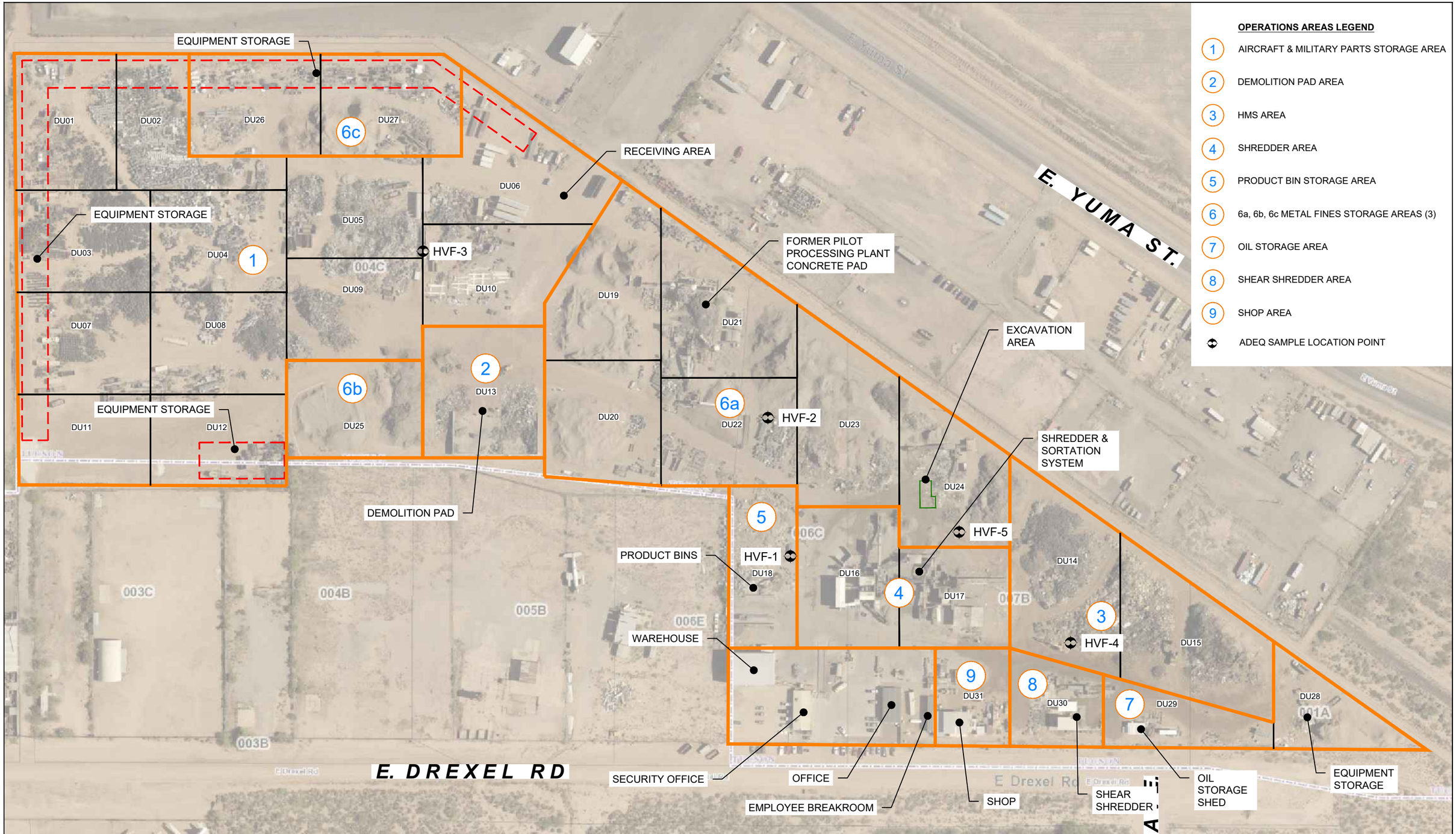
BC SAMPLE AND EXCAVATION MAP 2020

Project No. **11224790**
Date **August 2021**

FIGURE 2

Filename: \\ghdnet\ghd\US\Phoenix\Projects\561\11224790\Digital_Design\ACAD 2020\Figures\11224790(01)GN-PX003.dwg
Plot Date: 20 August 2021 10:47 AM

Data Source: BC, 2020c



HVF WEST LLC
6581 EAST DREXEL ROAD
TUCSON, ARIZONA 85756

Project No. 11224790
Date August 2021

SITE OPERATIONAL AREAS

FIGURE 3

Filename: \\ghdnet\ghd\US\Phoenix\Projects\561\11224790\Digital_Design\ACAD 2020\Figures\11224790(01)GN-PX002.dwg
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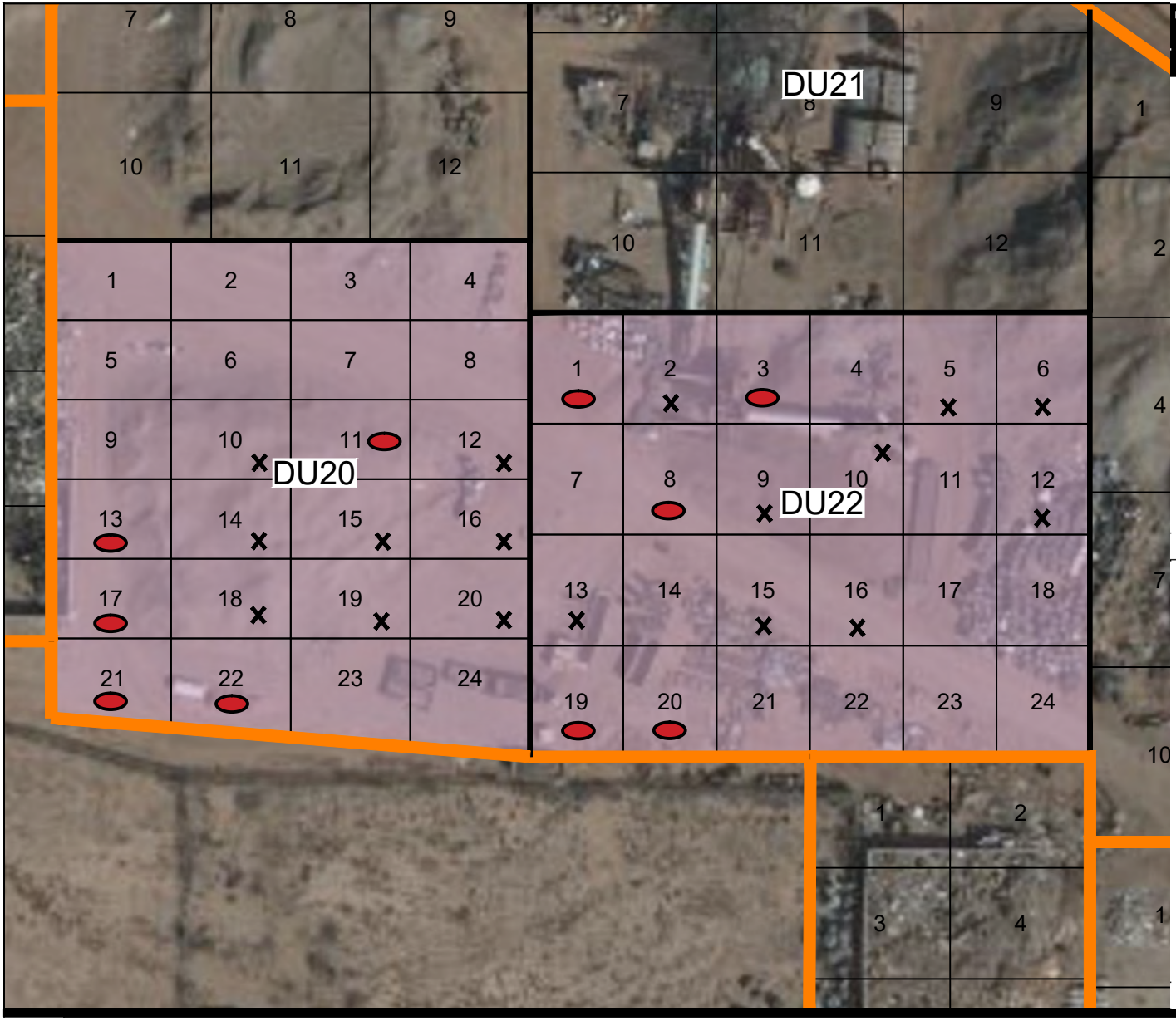
Data Source: BC, 2020c



Composite Sample ID	Grid Number	Date	Sample Depth	Lead (mg/kg)
	Soil Remediation Level			**800**
DU20	1	5/20/2021	0–6"	105
	2	5/20/2021	0–6"	11.3
	3	5/20/2021	0–6"	383(259)
	4	5/20/2021	0–6"	569
	5	5/20/2021	0–6"	81.5
	6	5/20/2021	0–6"	104
	7	5/20/2021	0–6"	37.9
	8	5/20/2021	0–6"	44.8
	9	5/20/2021	0–6"	387
	11	5/20/2021	0–6"	**1310**
	13	5/20/2021	0–6"	**1660**
	17	5/20/2021	0–6"	**914**
	21	5/20/2021	0–6"	**994**
	22	5/20/2021	0–6"	**955**
	23	5/20/2021	0–6"	71.8
	24	5/20/2021	0–6"	49.9
Nov. 2020 Composite Sample Result				**1040(588)**
DU22	1	5/18/2021	0–6"	**1230**
	3	5/18/2021	0–6"	**1180**
	4	5/18/2021	0–6"	189
	7	5/18/2021	0–6"	102
	8	5/18/2021	0–6"	**970(925)**
	11	5/18/2021	0–6"	197
	14	5/18/2021	0–6"	151
	17	5/18/2021	0–6"	203
	18	5/18/2021	0–6"	25.5
	19	5/18/2021	0–6"	**3330**
	20	5/18/2021	0–6"	**1240**
	21	5/18/2021	0–6"	82.9
	22	5/18/2021	0–6"	169
	23	5/18/2021	0–6"	471
	24	5/18/2021	0–6"	378
Nov. 2020 Composite Sample Result				**1070**

LEGEND

✕ GRID NOT ACCESSIBLE

⬭ LOCATIONS WITH EXCEEDANCES

0 33 66 ft

1" = 66 ft

N

GHD

HVF WEST LLC
6581 EAST DREXEL ROAD
TUCSON, ARIZONA 85756

Project No. **11224790**
Date **August 2021**

DU20 AND DU22 SAMPLE GRIDS

FIGURE 4

Filename: \\ghdnet\ghd\US\Phoenix\Projects\561\11224790\Digital_Design\ACAD 2020\Figures\11224790(01)GN-PX004.dwg
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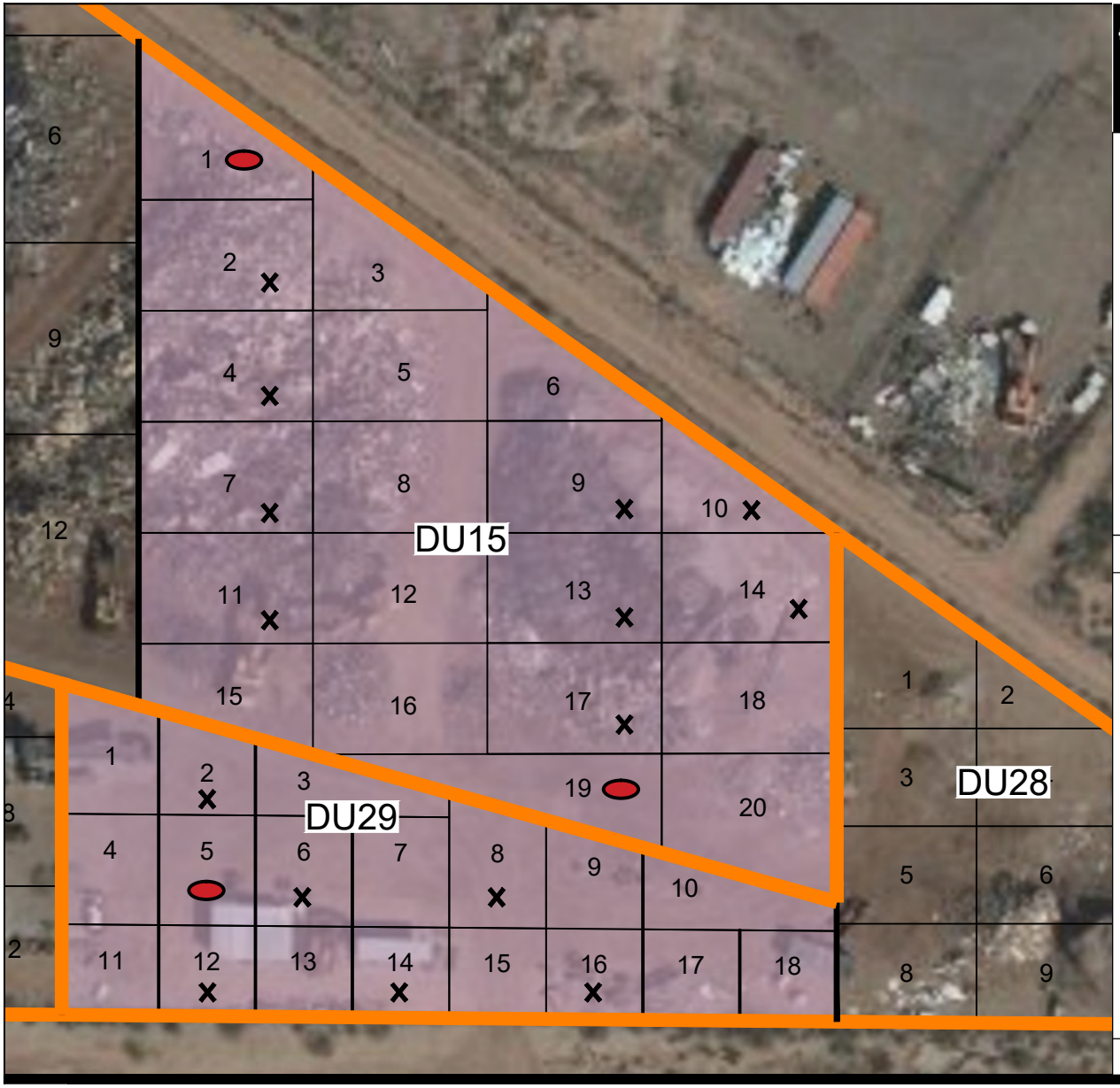
Data Source



Composite Sample ID	Grid Number	Date	Sample Depth	Lead (mg/kg)
Soil Remediation Level				**800**
DU15	1	5/20/2021	0–6"	**6310**
	3	5/20/2021	0–6"	671
	5	5/20/2021	0–6"	581
	6	5/20/2021	0–6"	128(130)
	8	5/20/2021	0–6"	541
	12	5/20/2021	0–6"	697
	15	5/20/2021	0–6"	247
	16	5/20/2021	0–6"	310
	18	5/20/2021	0–6"	79.8
	19	5/20/2021	0–6"	**999**
	20	5/20/2021	0–6"	316
Oct. 2020 Composite Sample Result				**862**
DU29	1	5/20/2021	0–6"	378
	3	5/20/2021	0–6"	302
	4	5/20/2021	0–6"	388
	5	5/20/2021	0–6"	308(**1990**)
	7	5/20/2021	0–6"	164
	9	5/20/2021	0–6"	84.3
	10	5/20/2021	0–6"	182
	11	5/20/2021	0–6"	335
	13	5/20/2021	0–6"	13.6
	15	5/20/2021	0–6"	49.8
	17	5/20/2021	0–6"	36.9
	18	5/20/2021	0–6"	124
Oct. 2020 Composite Sample Result				**2350**

LEGEND

✕ GRID NOT ACCESSIBLE

⬭ LOCATIONS WITH EXCEEDANCES

0 33 66 ft

1" = 66 ft

N

GHD

HVF WEST LLC
6581 EAST DREXEL ROAD
TUCSON, ARIZONA 85756

Project No. **11224790**
Date **August 2021**

DU15 AND DU29 SAMPLE GRIDS

FIGURE 5

Filename: \\ghdnet\ghd\US\Phoenix\Projects\561\11224790\Digital_Design\ACAD 2020\Figures\11224790(01)GN-PX004.dwg
Plot Date: 19 August 2021 3:50 PM

Data Source

Appendices

Appendix A

Voluntary Remediation Program Work Plan Checklist

Voluntary Remediation Program Work Plan Checklist

Complete Shaded Areas and Submit with Work Plan

Site Name:	HVF West LLC	VRP Site Code:	513374-00
Volunteer/Applicant Name:	HVF West, LLC / Sam Amer		
Volunteer/Applicant Email Address and Phone:	amers@fritzinc.com / (734) 362-3228		
Authorized Agent (AA)/Consulting Company:	GHD Services Inc.		
AA/Consultant Email Address and Phone:	larry.williams@ghd.com / (602) 216-7238		

Reference	Summary of Statutory Requirement (please review all statutes in their entirety to ensure compliance)	Page(s) Where Addressed in Work Plan (write N/A if not applicable)	VRP Use Only
§49-175A.1	Summary of existing site characterization and assessment information; information regarding any remediation previously conducted; copies of referenced reports not previously submitted;	Section 1 of the Work Plan Addendum	☐
§49-175A.2	If the site has not been characterized, a plan to conduct site characterization and a schedule for completion.	Section 2 of the Work Plan Addendum	☐
§49-175A.3.a	If site characterization is completed, a description of how the remediation will comply with §49-175B ("Work Plans") and how the completion of remediation will be verified. A schedule for completion must be included.	N/A	☐
§49-175A.3.b	If site characterization is completed, the work plan may provide for the remediation to be conducted in phases or tasks. A schedule for completion must be included.	N/A	☐
§49-175A.4	Schedule for submission of progress reports.	Section 3 of the Work Plan Addendum	☐
§49-175A.5	A proposal for community involvement as prescribed by §49-176 ("Community Involvement Requirements")	Refer to original Work Plan (BC, September 2020)	☐
§49-175A.6	If known, a list of institutional or engineering controls necessary during remediation and after completion of the proposed remediation to control exposure to contaminants.	N/A	☐
§49-175A.7	A proposal for monitoring during remediation and after the remediation if necessary to verify whether the approved remediation levels or controls have been attained and will be maintained.	N/A	☐
§49-175A.8	A list of any permits or legal requirements known to apply to the work or already performed by the applicant.	N/A	☐
§49-175A.9	If requested by the department, information regarding the financial capability of the applicant to conduct the work identified in the application. *(IF APPLICABLE)*	N/A	☐

Voluntary Remediation Program Work Plan Checklist

Complete Shaded Areas and Submit with Work Plan

Site Name: HVF West LLC VRP Site Code: 513374-00

Reference	Summary of Statutory Requirement (please review all statutes in their entirety to ensure compliance)	Page(s) Where Addressed in Work Plan (write N/A if not applicable)	VRP Use Only
§49-175B	Remediation levels or controls for remediation conducted pursuant to this article shall be established in accordance with rules adopted pursuant to §49-282.06 unless one or more of the following applies: see §49-175B.1 through §49-175B.4, below.	N/A	☐
§49-175B.1	The applicant demonstrates that remediation levels, institutional controls, or engineering controls for remediation of contaminated soil comply with §49-152 and the rules adopted.	N/A	☐
§49-175B.2	The applicant demonstrates that remediation levels, institutional controls, or engineering controls for remediation of landfills or other facilities that contain materials that are not subject to §49-152 (i.e.: asbestos) do not exceed a cumulative excess lifetime cancer risk between $1X10^{-4}$ to $1X10^{-6}$, and a hazard index of no greater than 1.	N/A	☐
§49-175B.3	The applicant demonstrates that on achieving remediation levels or controls for a source or potential source of contamination to a navigable water, the source of contamination will not cause or contribute to an exceedance of surface water quality standards, or if a permit is required pursuant to 33 United States Code §1342 for any discharge from the source, that any discharges from the source will comply with the permit.	N/A	☐
§49-175B.4	The applicant demonstrates that, on achieving remediation levels or controls for a source of contamination to an aquifer, the source will not cause or contribute to an exceedance of aquifer water quality standards (AWQS) beyond the boundary of the facility where the source is located.	N/A	☐
§49-175C	The VRP may waive any work plan requirement under this section that it determines to be unnecessary to make any of the determinations required under §49-177. *If any waivers are requested in the Work Plan or have been previously requested and approved by the VRP, cite them in the Work Plan, including a citation of the statute for which the waiver applies.*	N/A	☐

Voluntary Remediation Program Work Plan Checklist

Complete Shaded Areas and Submit with Work Plan

Site Name: HVF West LLC VRP Site Code: 513374-00

To support the prerequisites established by A.R.S. §49-177 and §49-180, the VRP expects certain documentation to accompany a Work Plan. The following provides a list of attachments/exhibits which are recommended for submittal with a Work Plan to provide the information required by the statutes.

Work Plan Information	Title of Figure/Table/Attachment/Exhibit Where Requested Information is Cited (write N/A if not applicable)	Figure/Table/ Attachment or Report Page Number (write N/A if not applicable)	VRP Use Only
Site Location Map *(topographic or aerial)*		N/A	☐
Site Map *(to scale)*	Additional DU Investigations Map	Figure 1	☐
Historical Sampling Data Table		N/A	☐
Historical Sample Location Map (to scale)		N/A	☐
Proposed Sample Location Map (to scale)	Sample Grid Maps	Figures 2 and 3	☐
Sampling and Analysis Plan (includes Field Sampling Plan & Quality Assurance Plan)	Incorporated into Work Plan	Refer to original Work Plan (BC, September 2020)	☐
Proposed Remediation System Location Map	Not Applicable	N/A	☐
Proposed Remediation System Layout (Design Drawings)	Not Applicable	N/A	☐
Schedule for Implementation of Project Activities* (Gantt Style Chart)		Section 3 of Work Plan Addendum	☐
*Project Activities are defined in A.R.S. §§49-175A.2 through 49-175A.4, and 49-176A.2 (Community Involvement).			
Proposed Language for Public Notification of Remediation (i.e.: example signage)	Not Applicable	N/A	☐
Plan for Investigative Derived Waste (IDW)	Incorporated into Work Plan	Refer to original Work Plan (BC, September 2020)	☐
Evaluation of Remedial Alternatives (i.e: for Feasibility Study Work Plan)	Not Applicable	N/A	☐

DOES THE WORK PLAN PROPOSE IMPLEMENTING SITE-SPECIFIC REMEDIATION LEVELS?

Yes ☐ No ☑

DOES THE WORK PLAN PROPOSE EVALUATION OF BACKGROUND LEVELS?

Yes ☐ No ☑

NOTE: When reports are submitted which document any type of sampling activity, the submittal of Electronic Data per ADEQ's *Groundwater Data Submittal Guidance (V3.4)* is strongly recommended.

Appendix B

Analytical Laboratory Reports
November 2020

ANALYTICAL REPORT

November 11, 2020

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Brown & Caldwell - Phoenix, AZ

Sample Delivery Group:	L1280984
Samples Received:	11/03/2020
Project Number:	154686
Description:	HVF West
Report To:	Matthew Frailey 2 North Central Ave Suite 1600 Phoenix, AZ 85004

Entire Report Reviewed By: Daphne R Richards

Daphne Richards
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

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DU29 L1280984-05	17
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DU28 L1280984-07	19
DU28 L1280984-08	20
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DUP1 L1280984-16	28
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DU27 L1280984-34	46
DU06 L1280984-35	47

DU06 L1280984-36 48
DU05 L1280984-37 49
DU05 L1280984-38 50
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Sc: Sample Chain of Custody 74

DU31 L1280984-01 Solid

Collected by: Michael O. | Collected date/time: 10/27/20 11:45 | Received date/time: 11/03/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 3060A/7196A	WG1572261	1	11/07/20 01:11	11/09/20 13:37	KPS	Mt. Juliet, TN
Mercury by Method 7471B	WG1571026	1	11/05/20 06:41	11/06/20 09:50	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1571025	1.470588	11/04/20 16:32	11/05/20 12:03	TRB	Mt. Juliet, TN

DU31 L1280984-02 GW

Collected by: Michael O. | Collected date/time: 10/27/20 11:45 | Received date/time: 11/03/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Preparation by Method 1312	WG1570660	1	11/04/20 11:09	11/04/20 11:09	JGB	Mt. Juliet, TN
Mercury by Method 7470A	WG1571495	1	11/05/20 11:43	11/06/20 12:25	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1571652	1	11/07/20 10:31	11/07/20 14:44	EL	Mt. Juliet, TN

DU30 L1280984-03 Solid

Collected by: Michael O. | Collected date/time: 10/27/20 13:15 | Received date/time: 11/03/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 3060A/7196A	WG1572261	1	11/07/20 01:11	11/09/20 13:37	KPS	Mt. Juliet, TN
Mercury by Method 7471B	WG1571026	1	11/05/20 06:41	11/06/20 10:02	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1571025	1	11/04/20 16:32	11/05/20 12:06	TRB	Mt. Juliet, TN

DU30 L1280984-04 GW

Collected by: Michael O. | Collected date/time: 10/27/20 13:15 | Received date/time: 11/03/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Preparation by Method 1312	WG1570660	1	11/04/20 11:09	11/04/20 11:09	JGB	Mt. Juliet, TN
Mercury by Method 7470A	WG1571495	1	11/05/20 11:43	11/06/20 12:31	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1571652	1	11/07/20 10:31	11/07/20 14:47	EL	Mt. Juliet, TN

DU29 L1280984-05 Solid

Collected by: Michael O. | Collected date/time: 10/27/20 14:30 | Received date/time: 11/03/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 3060A/7196A	WG1572261	1	11/07/20 01:11	11/09/20 13:38	KPS	Mt. Juliet, TN
Mercury by Method 7471B	WG1571026	1	11/05/20 06:41	11/06/20 10:05	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1571025	1	11/04/20 16:32	11/05/20 12:09	TRB	Mt. Juliet, TN

DU29 L1280984-06 GW

Collected by: Michael O. | Collected date/time: 10/27/20 14:30 | Received date/time: 11/03/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Preparation by Method 1312	WG1570660	1	11/04/20 11:09	11/04/20 11:09	JGB	Mt. Juliet, TN
Mercury by Method 7470A	WG1571495	1	11/05/20 11:43	11/06/20 15:16	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1571652	1	11/07/20 10:31	11/07/20 14:55	EL	Mt. Juliet, TN

DU28 L1280984-07 Solid

Collected by: Michael O. | Collected date/time: 10/27/20 16:00 | Received date/time: 11/03/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 3060A/7196A	WG1572261	1	11/07/20 01:11	11/09/20 13:38	KPS	Mt. Juliet, TN
Mercury by Method 7471B	WG1571026	1	11/05/20 06:41	11/06/20 10:07	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1571025	1	11/04/20 16:32	11/05/20 12:12	TRB	Mt. Juliet, TN

DU28 L1280984-08 GW

Collected by: Michael O. | Collected date/time: 10/27/20 16:00 | Received date/time: 11/03/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Preparation by Method 1312	WG1570660	1	11/04/20 11:09	11/04/20 11:09	JGB	Mt. Juliet, TN
Mercury by Method 7470A	WG1571495	1	11/05/20 11:43	11/06/20 15:18	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1571652	1	11/07/20 10:31	11/07/20 14:29	EL	Mt. Juliet, TN

DU15 L1280984-09 Solid

Collected by: Michael O. | Collected date/time: 10/28/20 08:30 | Received date/time: 11/03/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 3060A/7196A	WG1572261	1	11/07/20 01:11	11/09/20 13:39	KPS	Mt. Juliet, TN
Mercury by Method 7471B	WG1571026	1	11/05/20 06:41	11/06/20 10:10	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1571030	1	11/04/20 17:17	11/05/20 12:40	TRB	Mt. Juliet, TN

DU15 L1280984-10 GW

Collected by: Michael O. | Collected date/time: 10/28/20 08:30 | Received date/time: 11/03/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Preparation by Method 1312	WG1570660	1	11/04/20 11:09	11/04/20 11:09	JGB	Mt. Juliet, TN
Mercury by Method 7470A	WG1571495	1	11/05/20 11:43	11/06/20 15:24	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1571652	1	11/07/20 10:31	11/07/20 14:58	EL	Mt. Juliet, TN

DU14 L1280984-11 Solid

Collected by: Michael O. | Collected date/time: 10/28/20 15:30 | Received date/time: 11/03/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 3060A/7196A	WG1572261	1	11/07/20 01:11	11/09/20 13:39	KPS	Mt. Juliet, TN
Mercury by Method 7471B	WG1571026	1	11/05/20 06:41	11/06/20 10:12	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1571030	5	11/04/20 17:17	11/05/20 16:29	EL	Mt. Juliet, TN

DU14 L1280984-12 GW

Collected by: Michael O. | Collected date/time: 10/28/20 15:30 | Received date/time: 11/03/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Preparation by Method 1312	WG1570660	1	11/04/20 11:09	11/04/20 11:09	JGB	Mt. Juliet, TN
Mercury by Method 7470A	WG1571495	1	11/05/20 11:43	11/06/20 15:34	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1571652	1	11/07/20 10:31	11/07/20 15:00	EL	Mt. Juliet, TN

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

DU01 L1280984-13 Solid

Collected by: Michael O. | Collected date/time: 10/28/20 11:30 | Received date/time: 11/03/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 3060A/7196A	WG1572261	1	11/07/20 01:11	11/09/20 13:49	KPS	Mt. Juliet, TN
Mercury by Method 7471B	WG1571026	1	11/05/20 06:41	11/06/20 10:15	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1571030	1	11/04/20 17:17	11/05/20 12:46	TRB	Mt. Juliet, TN

DU01 L1280984-14 GW

Collected by: Michael O. | Collected date/time: 10/28/20 11:30 | Received date/time: 11/03/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Preparation by Method 1312	WG1570660	1	11/04/20 11:09	11/04/20 11:09	JGB	Mt. Juliet, TN
Mercury by Method 7470A	WG1571495	1	11/05/20 11:43	11/06/20 15:36	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1571652	1	11/07/20 10:31	11/07/20 15:03	EL	Mt. Juliet, TN

DUP1 L1280984-15 Solid

Collected by: Michael O. | Collected date/time: 10/28/20 00:00 | Received date/time: 11/03/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 3060A/7196A	WG1572261	1	11/07/20 01:11	11/09/20 13:50	KPS	Mt. Juliet, TN
Mercury by Method 7471B	WG1571026	1	11/05/20 06:41	11/06/20 10:18	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1571030	1	11/04/20 17:17	11/05/20 12:55	TRB	Mt. Juliet, TN

DUP1 L1280984-16 GW

Collected by: Michael O. | Collected date/time: 10/28/20 00:00 | Received date/time: 11/03/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Preparation by Method 1312	WG1570660	1	11/04/20 11:09	11/04/20 11:09	JGB	Mt. Juliet, TN
Mercury by Method 7470A	WG1571495	1	11/05/20 11:43	11/06/20 15:38	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1571652	1	11/07/20 10:31	11/07/20 15:06	EL	Mt. Juliet, TN

DU02 L1280984-17 Solid

Collected by: Michael O. | Collected date/time: 10/28/20 13:00 | Received date/time: 11/03/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 3060A/7196A	WG1572261	1	11/07/20 01:11	11/09/20 13:50	KPS	Mt. Juliet, TN
Mercury by Method 7471B	WG1571026	1	11/05/20 06:41	11/06/20 10:20	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1571030	1	11/04/20 17:17	11/05/20 12:58	TRB	Mt. Juliet, TN

DU02 L1280984-18 GW

Collected by: Michael O. | Collected date/time: 10/28/20 13:00 | Received date/time: 11/03/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Preparation by Method 1312	WG1570660	1	11/04/20 11:09	11/04/20 11:09	JGB	Mt. Juliet, TN
Mercury by Method 7470A	WG1571495	1	11/05/20 11:43	11/06/20 15:40	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1571652	1	11/07/20 10:31	11/07/20 15:09	EL	Mt. Juliet, TN

DU03 L1280984-19 Solid

Collected by: Michael O. | Collected date/time: 10/28/20 14:30 | Received date/time: 11/03/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 3060A/7196A	WG1572261	1	11/07/20 01:11	11/09/20 13:50	KPS	Mt. Juliet, TN
Mercury by Method 7471B	WG1571026	1	11/05/20 06:41	11/06/20 10:28	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1571030	1	11/04/20 17:17	11/05/20 13:00	TRB	Mt. Juliet, TN

DU03 L1280984-20 GW

Collected by: Michael O. | Collected date/time: 10/28/20 14:30 | Received date/time: 11/03/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Preparation by Method 1312	WG1570660	1	11/04/20 11:09	11/04/20 11:09	JGB	Mt. Juliet, TN
Mercury by Method 7470A	WG1571495	1	11/05/20 11:43	11/06/20 15:42	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1571652	1	11/07/20 10:31	11/07/20 15:11	EL	Mt. Juliet, TN

DU07 L1280984-21 Solid

Collected by: Michael O. | Collected date/time: 10/28/20 16:00 | Received date/time: 11/03/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 3060A/7196A	WG1572261	1	11/07/20 01:11	11/09/20 13:51	KPS	Mt. Juliet, TN
Mercury by Method 7471B	WG1571026	1	11/05/20 06:41	11/06/20 10:30	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1571030	1	11/04/20 17:17	11/05/20 13:07	TRB	Mt. Juliet, TN

DU07 L1280984-22 GW

Collected by: Michael O. | Collected date/time: 10/28/20 16:00 | Received date/time: 11/03/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Preparation by Method 1312	WG1570660	1	11/04/20 11:09	11/04/20 11:09	JGB	Mt. Juliet, TN
Mercury by Method 7470A	WG1571495	1	11/05/20 11:43	11/06/20 15:44	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1571652	1	11/07/20 10:31	11/07/20 15:14	EL	Mt. Juliet, TN

DU11 L1280984-23 Solid

Collected by: Michael O. | Collected date/time: 10/29/20 08:15 | Received date/time: 11/03/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 3060A/7196A	WG1572841	1	11/07/20 15:07	11/10/20 14:40	KPS	Mt. Juliet, TN
Mercury by Method 7471B	WG1571026	1	11/05/20 06:41	11/06/20 10:33	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1571030	1	11/04/20 17:17	11/05/20 13:09	TRB	Mt. Juliet, TN

DU11 L1280984-24 GW

Collected by: Michael O. | Collected date/time: 10/29/20 08:15 | Received date/time: 11/03/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Preparation by Method 1312	WG1570660	1	11/04/20 11:09	11/04/20 11:09	JGB	Mt. Juliet, TN
Mercury by Method 7470A	WG1571495	1	11/05/20 11:43	11/06/20 15:46	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1571652	1	11/07/20 10:31	11/07/20 15:17	EL	Mt. Juliet, TN

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

DU12 L1280984-25 Solid

Collected by	Collected date/time	Received date/time
Michael O.	10/29/20 09:20	11/03/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 3060A/7196A	WG1572841	1	11/07/20 15:07	11/10/20 14:42	KPS	Mt. Juliet, TN
Mercury by Method 7471B	WG1571026	1	11/05/20 06:41	11/06/20 10:35	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1571030	1	11/04/20 17:17	11/05/20 13:12	TRB	Mt. Juliet, TN

DU12 L1280984-26 GW

Collected by	Collected date/time	Received date/time
Michael O.	10/29/20 09:20	11/03/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Preparation by Method 1312	WG1570660	1	11/04/20 11:09	11/04/20 11:09	JGB	Mt. Juliet, TN
Mercury by Method 7470A	WG1571495	1	11/05/20 11:43	11/06/20 15:48	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1571652	1	11/07/20 10:31	11/07/20 15:19	EL	Mt. Juliet, TN

DU08 L1280984-27 Solid

Collected by	Collected date/time	Received date/time
Michael O.	10/29/20 10:45	11/03/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 3060A/7196A	WG1572841	1	11/07/20 15:07	11/10/20 14:44	KPS	Mt. Juliet, TN
Mercury by Method 7471B	WG1571026	1	11/05/20 06:41	11/06/20 10:38	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1571030	1	11/04/20 17:17	11/05/20 13:15	TRB	Mt. Juliet, TN

DU08 L1280984-28 GW

Collected by	Collected date/time	Received date/time
Michael O.	10/29/20 10:45	11/03/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Preparation by Method 1312	WG1570660	1	11/04/20 11:09	11/04/20 11:09	JGB	Mt. Juliet, TN
Mercury by Method 7470A	WG1571495	1	11/05/20 11:43	11/06/20 15:50	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1571652	1	11/07/20 10:31	11/07/20 15:27	EL	Mt. Juliet, TN

DU04 L1280984-29 Solid

Collected by	Collected date/time	Received date/time
Michael O.	10/29/20 12:00	11/03/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 3060A/7196A	WG1572841	1	11/07/20 15:07	11/10/20 14:44	KPS	Mt. Juliet, TN
Mercury by Method 7471B	WG1571026	1	11/05/20 06:41	11/06/20 10:41	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1571030	1	11/04/20 17:17	11/05/20 13:18	TRB	Mt. Juliet, TN

DU04 L1280984-30 GW

Collected by	Collected date/time	Received date/time
Michael O.	10/29/20 12:00	11/03/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Preparation by Method 1312	WG1570660	1	11/04/20 11:09	11/04/20 11:09	JGB	Mt. Juliet, TN
Mercury by Method 7470A	WG1571495	1	11/05/20 11:43	11/06/20 15:52	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1571652	1	11/07/20 10:31	11/07/20 15:30	EL	Mt. Juliet, TN

DU26 L1280984-31 Solid

Collected by: Michael O. | Collected date/time: 10/29/20 13:15 | Received date/time: 11/03/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 3060A/7196A	WG1572841	1	11/07/20 15:07	11/10/20 14:44	KPS	Mt. Juliet, TN
Mercury by Method 7471B	WG1571026	1	11/05/20 06:41	11/06/20 10:43	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1571030	1	11/04/20 17:17	11/05/20 13:20	TRB	Mt. Juliet, TN

DU26 L1280984-32 GW

Collected by: Michael O. | Collected date/time: 10/29/20 13:15 | Received date/time: 11/03/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Preparation by Method 1312	WG1570660	1	11/04/20 11:09	11/04/20 11:09	JGB	Mt. Juliet, TN
Mercury by Method 7470A	WG1571495	1	11/05/20 11:43	11/06/20 15:58	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1571652	1	11/07/20 10:31	11/07/20 15:32	EL	Mt. Juliet, TN

DU27 L1280984-33 Solid

Collected by: Michael O. | Collected date/time: 10/29/20 13:50 | Received date/time: 11/03/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 3060A/7196A	WG1572841	1	11/07/20 15:07	11/10/20 14:46	KPS	Mt. Juliet, TN
Mercury by Method 7471B	WG1571017	1	11/04/20 21:45	11/05/20 15:44	RDS	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1571030	1	11/04/20 17:17	11/05/20 13:23	TRB	Mt. Juliet, TN

DU27 L1280984-34 GW

Collected by: Michael O. | Collected date/time: 10/29/20 13:50 | Received date/time: 11/03/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Preparation by Method 1312	WG1570660	1	11/04/20 11:09	11/04/20 11:09	JGB	Mt. Juliet, TN
Mercury by Method 7470A	WG1571495	1	11/05/20 11:43	11/06/20 16:00	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1571652	1	11/07/20 10:31	11/07/20 15:35	EL	Mt. Juliet, TN

DU06 L1280984-35 Solid

Collected by: Michael O. | Collected date/time: 10/30/20 08:45 | Received date/time: 11/03/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 3060A/7196A	WG1572841	1	11/07/20 15:07	11/10/20 14:46	KPS	Mt. Juliet, TN
Mercury by Method 7471B	WG1571017	1	11/04/20 21:45	11/05/20 15:47	RDS	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1571030	1	11/04/20 17:17	11/05/20 12:26	TRB	Mt. Juliet, TN

DU06 L1280984-36 GW

Collected by: Michael O. | Collected date/time: 10/30/20 08:45 | Received date/time: 11/03/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Preparation by Method 1312	WG1572138	1	11/06/20 15:12	11/06/20 15:12	JGB	Mt. Juliet, TN
Mercury by Method 7470A	WG1571500	1	11/09/20 08:34	11/10/20 01:12	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1573188	1	11/08/20 23:13	11/09/20 08:37	EL	Mt. Juliet, TN

DU05 L1280984-37 Solid

Collected by	Collected date/time	Received date/time
Michael O.	10/30/20 10:00	11/03/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 3060A/7196A	WG1572841	1	11/07/20 15:07	11/10/20 14:47	KPS	Mt. Juliet, TN
Mercury by Method 7471B	WG1571017	2	11/04/20 21:45	11/06/20 12:53	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1571030	1	11/04/20 17:17	11/05/20 15:57	EL	Mt. Juliet, TN

DU05 L1280984-38 GW

Collected by	Collected date/time	Received date/time
Michael O.	10/30/20 10:00	11/03/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Preparation by Method 1312	WG1572138	1	11/06/20 15:12	11/06/20 15:12	JGB	Mt. Juliet, TN
Mercury by Method 7470A	WG1571500	1	11/09/20 08:34	11/10/20 01:18	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1573188	1	11/08/20 23:13	11/09/20 08:39	EL	Mt. Juliet, TN

DUP2 L1280984-39 Solid

Collected by	Collected date/time	Received date/time
Michael O.	10/30/20 00:00	11/03/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 3060A/7196A	WG1572841	1	11/07/20 15:07	11/10/20 14:48	KPS	Mt. Juliet, TN
Mercury by Method 7471B	WG1571017	2	11/04/20 21:45	11/06/20 12:56	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1571030	1	11/04/20 17:17	11/05/20 16:00	EL	Mt. Juliet, TN

DUP2 L1280984-40 GW

Collected by	Collected date/time	Received date/time
Michael O.	10/30/20 00:00	11/03/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Preparation by Method 1312	WG1572138	1	11/06/20 15:12	11/06/20 15:12	JGB	Mt. Juliet, TN
Mercury by Method 7470A	WG1571500	1	11/09/20 08:34	11/10/20 01:20	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1573188	1	11/08/20 23:13	11/09/20 08:42	EL	Mt. Juliet, TN

DU09 L1280984-41 Solid

Collected by	Collected date/time	Received date/time
Michael O.	10/30/20 11:10	11/03/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 3060A/7196A	WG1572841	1	11/07/20 15:07	11/10/20 14:48	KPS	Mt. Juliet, TN
Mercury by Method 7471B	WG1571017	1	11/04/20 21:45	11/05/20 15:54	RDS	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1571030	1	11/04/20 17:17	11/05/20 16:02	EL	Mt. Juliet, TN

DU09 L1280984-42 GW

Collected by	Collected date/time	Received date/time
Michael O.	10/30/20 11:10	11/03/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Preparation by Method 1312	WG1572138	1	11/06/20 15:12	11/06/20 15:12	JGB	Mt. Juliet, TN
Mercury by Method 7470A	WG1571500	1	11/09/20 08:34	11/10/20 01:22	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1573188	1	11/08/20 23:13	11/09/20 08:45	EL	Mt. Juliet, TN

DU25 L1280984-43 Solid

Collected by	Collected date/time	Received date/time
Michael O.	10/30/20 12:30	11/03/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 3060A/7196A	WG1572841	1	11/07/20 15:07	11/10/20 14:48	KPS	Mt. Juliet, TN
Mercury by Method 7471B	WG1571017	1	11/04/20 21:45	11/05/20 15:57	RDS	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1571030	1	11/04/20 17:17	11/05/20 16:05	EL	Mt. Juliet, TN

DU25 L1280984-44 GW

Collected by	Collected date/time	Received date/time
Michael O.	10/30/20 12:30	11/03/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Preparation by Method 1312	WG1572138	1	11/06/20 15:12	11/06/20 15:12	JGB	Mt. Juliet, TN
Mercury by Method 7470A	WG1571500	1	11/09/20 08:34	11/10/20 01:28	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1573188	1	11/08/20 23:13	11/09/20 08:52	EL	Mt. Juliet, TN

DU13 L1280984-45 Solid

Collected by	Collected date/time	Received date/time
Michael O.	10/30/20 13:15	11/03/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 3060A/7196A	WG1572841	1	11/07/20 15:07	11/10/20 14:49	KPS	Mt. Juliet, TN
Mercury by Method 7471B	WG1571017	1	11/04/20 21:45	11/05/20 16:00	RDS	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1571030	1	11/04/20 17:17	11/05/20 16:08	EL	Mt. Juliet, TN

DU13 L1280984-46 GW

Collected by	Collected date/time	Received date/time
Michael O.	10/30/20 13:15	11/03/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Preparation by Method 1312	WG1572138	1	11/06/20 15:12	11/06/20 15:12	JGB	Mt. Juliet, TN
Mercury by Method 7470A	WG1571500	1	11/09/20 08:34	11/10/20 01:30	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1573188	1	11/08/20 23:13	11/09/20 08:55	EL	Mt. Juliet, TN

DU10 L1280984-47 Solid

Collected by	Collected date/time	Received date/time
Michael O.	10/30/20 15:20	11/03/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 3060A/7196A	WG1572841	1	11/07/20 15:07	11/10/20 14:49	KPS	Mt. Juliet, TN
Mercury by Method 7471B	WG1571017	1	11/04/20 21:45	11/05/20 16:02	RDS	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1571030	1	11/04/20 17:17	11/05/20 16:10	EL	Mt. Juliet, TN

DU10 L1280984-48 GW

Collected by	Collected date/time	Received date/time
Michael O.	10/30/20 15:20	11/03/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Preparation by Method 1312	WG1572138	1	11/06/20 15:12	11/06/20 15:12	JGB	Mt. Juliet, TN
Mercury by Method 7470A	WG1571500	1	11/09/20 08:34	11/10/20 01:32	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1573188	1	11/08/20 23:13	11/09/20 08:58	EL	Mt. Juliet, TN

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Daphne R Richards

Daphne Richards
Project Manager

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	9.96		0.640	2.00	1	11/09/2020 13:37	WG1572261

Mercury by Method 7471B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	1.25	M2	0.0180	0.0400	1	11/06/2020 09:50	WG1571026

Metals (ICP) by Method 6010D

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Cadmium	86.9		0.0693	0.735	1.470588	11/05/2020 12:03	WG1571025
Chromium	126		0.196	1.47	1.470588	11/05/2020 12:03	WG1571025
Lead	269		0.306	0.735	1.470588	11/05/2020 12:03	WG1571025

Preparation by Method 1312

Analyte	Result	Qualifier	Prep date / time	Batch
SPLP Extraction	-		11/4/2020 11:09:08 AM	WG1570660
Fluid	2		11/4/2020 11:09:08 AM	WG1570660
Final pH	7.62		11/4/2020 11:09:08 AM	WG1570660

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury	U		0.100	0.200	1	11/06/2020 12:25	WG1571495

Metals (ICP) by Method 6010D

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Cadmium	1.13	E4	0.479	2.00	1	11/07/2020 14:44	WG1571652
Chromium	19.7		1.40	10.0	1	11/07/2020 14:44	WG1571652
Lead	U		2.99	6.00	1	11/07/2020 14:44	WG1571652

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	8.78		0.640	2.00	1	11/09/2020 13:37	WG1572261

Mercury by Method 7471B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	0.906		0.0180	0.0400	1	11/06/2020 10:02	WG1571026

Metals (ICP) by Method 6010D

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Cadmium	88.9		0.0471	0.500	1	11/05/2020 12:06	WG1571025
Chromium	132		0.133	1.00	1	11/05/2020 12:06	WG1571025
Lead	394		0.208	0.500	1	11/05/2020 12:06	WG1571025

Preparation by Method 1312

Analyte	Result	Qualifier	Prep date / time	Batch
SPLP Extraction	-		11/4/2020 11:09:08 AM	WG1570660
Fluid	2		11/4/2020 11:09:08 AM	WG1570660
Final pH	7.58		11/4/2020 11:09:08 AM	WG1570660

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury	U		0.100	0.200	1	11/06/2020 12:31	WG1571495

Metals (ICP) by Method 6010D

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Cadmium	1.06	E4	0.479	2.00	1	11/07/2020 14:47	WG1571652
Chromium	15.9		1.40	10.0	1	11/07/2020 14:47	WG1571652
Lead	U		2.99	6.00	1	11/07/2020 14:47	WG1571652

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	8.21		0.640	2.00	1	11/09/2020 13:38	WG1572261

Mercury by Method 7471B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	0.586		0.0180	0.0400	1	11/06/2020 10:05	WG1571026

Metals (ICP) by Method 6010D

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Cadmium	124		0.0471	0.500	1	11/05/2020 12:09	WG1571025
Chromium	148		0.133	1.00	1	11/05/2020 12:09	WG1571025
Lead	2350		0.208	0.500	1	11/05/2020 12:09	WG1571025

Preparation by Method 1312

Analyte	Result	Qualifier	Prep date / time	Batch
SPLP Extraction	-		11/4/2020 11:09:08 AM	WG1570660
Fluid	2		11/4/2020 11:09:08 AM	WG1570660
Final pH	7.63		11/4/2020 11:09:08 AM	WG1570660

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury	U		0.100	0.200	1	11/06/2020 15:16	WG1571495

Metals (ICP) by Method 6010D

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Cadmium	1.39	E4	0.479	2.00	1	11/07/2020 14:55	WG1571652
Chromium	11.9		1.40	10.0	1	11/07/2020 14:55	WG1571652
Lead	U		2.99	6.00	1	11/07/2020 14:55	WG1571652

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	6.52		0.640	2.00	1	11/09/2020 13:38	WG1572261

Mercury by Method 7471B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	1.19		0.0180	0.0400	1	11/06/2020 10:07	WG1571026

Metals (ICP) by Method 6010D

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Cadmium	143		0.0471	0.500	1	11/05/2020 12:12	WG1571025
Chromium	219		0.133	1.00	1	11/05/2020 12:12	WG1571025
Lead	399		0.208	0.500	1	11/05/2020 12:12	WG1571025

Preparation by Method 1312

Analyte	Result	Qualifier	Prep date / time	Batch
SPLP Extraction	-		11/4/2020 11:09:08 AM	WG1570660
Fluid	2		11/4/2020 11:09:08 AM	WG1570660
Final pH	7.59		11/4/2020 11:09:08 AM	WG1570660

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury	0.170	E4	0.100	0.200	1	11/06/2020 15:18	WG1571495

Metals (ICP) by Method 6010D

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Cadmium	1.86	E4	0.479	2.00	1	11/07/2020 14:29	WG1571652
Chromium	9.23	E4	1.40	10.0	1	11/07/2020 14:29	WG1571652
Lead	U		2.99	6.00	1	11/07/2020 14:29	WG1571652

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	10.8		0.640	2.00	1	11/09/2020 13:39	WG1572261

Mercury by Method 7471B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	1.22		0.0180	0.0400	1	11/06/2020 10:10	WG1571026

Metals (ICP) by Method 6010D

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Cadmium	149		0.0471	0.500	1	11/05/2020 12:40	WG1571030
Chromium	251		0.133	1.00	1	11/05/2020 12:40	WG1571030
Lead	862		0.208	0.500	1	11/05/2020 12:40	WG1571030

Preparation by Method 1312

Analyte	Result	Qualifier	Prep date / time	Batch
SPLP Extraction	-		11/4/2020 11:09:08 AM	WG1570660
Fluid	2		11/4/2020 11:09:08 AM	WG1570660
Final pH	7.71		11/4/2020 11:09:08 AM	WG1570660

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury	0.140	E4	0.100	0.200	1	11/06/2020 15:24	WG1571495

Metals (ICP) by Method 6010D

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Cadmium	1.81	E4	0.479	2.00	1	11/07/2020 14:58	WG1571652
Chromium	17.5		1.40	10.0	1	11/07/2020 14:58	WG1571652
Lead	U		2.99	6.00	1	11/07/2020 14:58	WG1571652

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	10.6		0.640	2.00	1	11/09/2020 13:39	WG1572261

Mercury by Method 7471B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	0.950		0.0180	0.0400	1	11/06/2020 10:12	WG1571026

Metals (ICP) by Method 6010D

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Cadmium	129		0.236	2.50	5	11/05/2020 16:29	WG1571030
Chromium	524		0.665	5.00	5	11/05/2020 16:29	WG1571030
Lead	417		1.04	2.50	5	11/05/2020 16:29	WG1571030

Preparation by Method 1312

Analyte	Result	Qualifier	Prep date / time	Batch
SPLP Extraction	-		11/4/2020 11:09:08 AM	WG1570660
Fluid	2		11/4/2020 11:09:08 AM	WG1570660
Final pH	7.53		11/4/2020 11:09:08 AM	WG1570660

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury	0.160	E4	0.100	0.200	1	11/06/2020 15:34	WG1571495

Metals (ICP) by Method 6010D

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Cadmium	4.17		0.479	2.00	1	11/07/2020 15:00	WG1571652
Chromium	8.03	E4	1.40	10.0	1	11/07/2020 15:00	WG1571652
Lead	U		2.99	6.00	1	11/07/2020 15:00	WG1571652

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	2.01		0.640	2.00	1	11/09/2020 13:49	WG1572261

Mercury by Method 7471B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	0.847		0.0180	0.0400	1	11/06/2020 10:15	WG1571026

Metals (ICP) by Method 6010D

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Cadmium	15.5		0.0471	0.500	1	11/05/2020 12:46	WG1571030
Chromium	28.7		0.133	1.00	1	11/05/2020 12:46	WG1571030
Lead	50.3		0.208	0.500	1	11/05/2020 12:46	WG1571030

Preparation by Method 1312

Analyte	Result	Qualifier	Prep date / time	Batch
SPLP Extraction	-		11/4/2020 11:09:08 AM	WG1570660
Fluid	2		11/4/2020 11:09:08 AM	WG1570660
Final pH	7.78		11/4/2020 11:09:08 AM	WG1570660

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury	0.132	E4	0.100	0.200	1	11/06/2020 15:36	WG1571495

Metals (ICP) by Method 6010D

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Cadmium	8.29		0.479	2.00	1	11/07/2020 15:03	WG1571652
Chromium	10.0		1.40	10.0	1	11/07/2020 15:03	WG1571652
Lead	25.6		2.99	6.00	1	11/07/2020 15:03	WG1571652

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	U		0.640	2.00	1	11/09/2020 13:50	WG1572261

Mercury by Method 7471B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	0.0597		0.0180	0.0400	1	11/06/2020 10:18	WG1571026

Metals (ICP) by Method 6010D

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Cadmium	15.7		0.0471	0.500	1	11/05/2020 12:55	WG1571030
Chromium	25.1		0.133	1.00	1	11/05/2020 12:55	WG1571030
Lead	41.7		0.208	0.500	1	11/05/2020 12:55	WG1571030

Preparation by Method 1312

Analyte	Result	Qualifier	Prep date / time	Batch
SPLP Extraction	-		11/4/2020 11:09:08 AM	WG1570660
Fluid	2		11/4/2020 11:09:08 AM	WG1570660
Final pH	7.73		11/4/2020 11:09:08 AM	WG1570660

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury	0.106	E4	0.100	0.200	1	11/06/2020 15:38	WG1571495

Metals (ICP) by Method 6010D

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Cadmium	6.16		0.479	2.00	1	11/07/2020 15:06	WG1571652
Chromium	11.3		1.40	10.0	1	11/07/2020 15:06	WG1571652
Lead	22.4		2.99	6.00	1	11/07/2020 15:06	WG1571652

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	1.00	E4	0.640	2.00	1	11/09/2020 13:50	WG1572261

Mercury by Method 7471B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	0.0921		0.0180	0.0400	1	11/06/2020 10:20	WG1571026

Metals (ICP) by Method 6010D

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Cadmium	23.3		0.0471	0.500	1	11/05/2020 12:58	WG1571030
Chromium	34.2		0.133	1.00	1	11/05/2020 12:58	WG1571030
Lead	54.8		0.208	0.500	1	11/05/2020 12:58	WG1571030

Preparation by Method 1312

Analyte	Result	Qualifier	Prep date / time	Batch
SPLP Extraction	-		11/4/2020 11:09:08 AM	WG1570660
Fluid	2		11/4/2020 11:09:08 AM	WG1570660
Final pH	7.19		11/4/2020 11:09:08 AM	WG1570660

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury	0.150	E4	0.100	0.200	1	11/06/2020 15:40	WG1571495

Metals (ICP) by Method 6010D

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Cadmium	16.2		0.479	2.00	1	11/07/2020 15:09	WG1571652
Chromium	51.0		1.40	10.0	1	11/07/2020 15:09	WG1571652
Lead	258		2.99	6.00	1	11/07/2020 15:09	WG1571652

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	3.20		0.640	2.00	1	11/09/2020 13:50	WG1572261

Mercury by Method 7471B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	0.133		0.0180	0.0400	1	11/06/2020 10:28	WG1571026

Metals (ICP) by Method 6010D

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Cadmium	26.0		0.0471	0.500	1	11/05/2020 13:00	WG1571030
Chromium	33.0		0.133	1.00	1	11/05/2020 13:00	WG1571030
Lead	65.3		0.208	0.500	1	11/05/2020 13:00	WG1571030

Preparation by Method 1312

Analyte	Result	Qualifier	Prep date / time	Batch
SPLP Extraction	-		11/4/2020 11:09:08 AM	WG1570660
Fluid	2		11/4/2020 11:09:08 AM	WG1570660
Final pH	7.44		11/4/2020 11:09:08 AM	WG1570660

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury	0.139	E4	0.100	0.200	1	11/06/2020 15:42	WG1571495

Metals (ICP) by Method 6010D

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Cadmium	9.72		0.479	2.00	1	11/07/2020 15:11	WG1571652
Chromium	30.5		1.40	10.0	1	11/07/2020 15:11	WG1571652
Lead	1000		2.99	6.00	1	11/07/2020 15:11	WG1571652

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	U		0.640	2.00	1	11/09/2020 13:51	WG1572261

Mercury by Method 7471B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	0.214		0.0180	0.0400	1	11/06/2020 10:30	WG1571026

Metals (ICP) by Method 6010D

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Cadmium	35.2		0.0471	0.500	1	11/05/2020 13:07	WG1571030
Chromium	29.2		0.133	1.00	1	11/05/2020 13:07	WG1571030
Lead	62.5		0.208	0.500	1	11/05/2020 13:07	WG1571030

Preparation by Method 1312

Analyte	Result	Qualifier	Prep date / time	Batch
SPLP Extraction	-		11/4/2020 11:09:08 AM	WG1570660
Fluid	2		11/4/2020 11:09:08 AM	WG1570660
Final pH	7.70		11/4/2020 11:09:08 AM	WG1570660

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury	0.115	E4	0.100	0.200	1	11/06/2020 15:44	WG1571495

Metals (ICP) by Method 6010D

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Cadmium	8.34		0.479	2.00	1	11/07/2020 15:14	WG1571652
Chromium	12.5		1.40	10.0	1	11/07/2020 15:14	WG1571652
Lead	41.4		2.99	6.00	1	11/07/2020 15:14	WG1571652

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	1.99	E4	0.640	2.00	1	11/10/2020 14:40	WG1572841

Mercury by Method 7471B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	0.101		0.0180	0.0400	1	11/06/2020 10:33	WG1571026

Metals (ICP) by Method 6010D

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Cadmium	20.3		0.0471	0.500	1	11/05/2020 13:09	WG1571030
Chromium	31.0		0.133	1.00	1	11/05/2020 13:09	WG1571030
Lead	53.2		0.208	0.500	1	11/05/2020 13:09	WG1571030

Preparation by Method 1312

Analyte	Result	Qualifier	Prep date / time	Batch
SPLP Extraction	-		11/4/2020 11:09:08 AM	WG1570660
Fluid	2		11/4/2020 11:09:08 AM	WG1570660
Final pH	7.73		11/4/2020 11:09:08 AM	WG1570660

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury	0.187	E4	0.100	0.200	1	11/06/2020 15:46	WG1571495

Metals (ICP) by Method 6010D

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Cadmium	11.0		0.479	2.00	1	11/07/2020 15:17	WG1571652
Chromium	12.9		1.40	10.0	1	11/07/2020 15:17	WG1571652
Lead	27.4		2.99	6.00	1	11/07/2020 15:17	WG1571652

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	2.99		0.640	2.00	1	11/10/2020 14:42	WG1572841

Mercury by Method 7471B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	0.221		0.0180	0.0400	1	11/06/2020 10:35	WG1571026

Metals (ICP) by Method 6010D

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Cadmium	32.2		0.0471	0.500	1	11/05/2020 13:12	WG1571030
Chromium	43.0		0.133	1.00	1	11/05/2020 13:12	WG1571030
Lead	117		0.208	0.500	1	11/05/2020 13:12	WG1571030

Preparation by Method 1312

Analyte	Result	Qualifier	Prep date / time	Batch
SPLP Extraction	-		11/4/2020 11:09:08 AM	WG1570660
Fluid	2		11/4/2020 11:09:08 AM	WG1570660
Final pH	7.55		11/4/2020 11:09:08 AM	WG1570660

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury	0.116	E4	0.100	0.200	1	11/06/2020 15:48	WG1571495

Metals (ICP) by Method 6010D

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Cadmium	5.25		0.479	2.00	1	11/07/2020 15:19	WG1571652
Chromium	9.55	E4	1.40	10.0	1	11/07/2020 15:19	WG1571652
Lead	6.96		2.99	6.00	1	11/07/2020 15:19	WG1571652

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	2.50		0.640	2.00	1	11/10/2020 14:44	WG1572841

Mercury by Method 7471B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	0.181		0.0180	0.0400	1	11/06/2020 10:38	WG1571026

Metals (ICP) by Method 6010D

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Cadmium	40.1		0.0471	0.500	1	11/05/2020 13:15	WG1571030
Chromium	52.5		0.133	1.00	1	11/05/2020 13:15	WG1571030
Lead	92.3		0.208	0.500	1	11/05/2020 13:15	WG1571030

Preparation by Method 1312

Analyte	Result	Qualifier	Prep date / time	Batch
SPLP Extraction	-		11/4/2020 11:09:08 AM	WG1570660
Fluid	2		11/4/2020 11:09:08 AM	WG1570660
Final pH	7.58		11/4/2020 11:09:08 AM	WG1570660

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury	0.121	E4	0.100	0.200	1	11/06/2020 15:50	WG1571495

Metals (ICP) by Method 6010D

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Cadmium	15.2		0.479	2.00	1	11/07/2020 15:27	WG1571652
Chromium	18.0		1.40	10.0	1	11/07/2020 15:27	WG1571652
Lead	39.7		2.99	6.00	1	11/07/2020 15:27	WG1571652

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	3.35		0.640	2.00	1	11/10/2020 14:44	WG1572841

Mercury by Method 7471B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	0.105		0.0180	0.0400	1	11/06/2020 10:41	WG1571026

Metals (ICP) by Method 6010D

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Cadmium	26.9		0.0471	0.500	1	11/05/2020 13:18	WG1571030
Chromium	34.5		0.133	1.00	1	11/05/2020 13:18	WG1571030
Lead	96.6		0.208	0.500	1	11/05/2020 13:18	WG1571030

Preparation by Method 1312

Analyte	Result	Qualifier	Prep date / time	Batch
SPLP Extraction	-		11/4/2020 11:09:08 AM	WG1570660
Fluid	2		11/4/2020 11:09:08 AM	WG1570660
Final pH	7.80		11/4/2020 11:09:08 AM	WG1570660

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury	0.160	E4	0.100	0.200	1	11/06/2020 15:52	WG1571495

Metals (ICP) by Method 6010D

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Cadmium	13.8		0.479	2.00	1	11/07/2020 15:30	WG1571652
Chromium	20.6		1.40	10.0	1	11/07/2020 15:30	WG1571652
Lead	107		2.99	6.00	1	11/07/2020 15:30	WG1571652

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	U		0.640	2.00	1	11/10/2020 14:44	WG1572841

Mercury by Method 7471B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	0.335		0.0180	0.0400	1	11/06/2020 10:43	WG1571026

Metals (ICP) by Method 6010D

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Cadmium	62.2		0.0471	0.500	1	11/05/2020 13:20	WG1571030
Chromium	107		0.133	1.00	1	11/05/2020 13:20	WG1571030
Lead	160		0.208	0.500	1	11/05/2020 13:20	WG1571030

Preparation by Method 1312

Analyte	Result	Qualifier	Prep date / time	Batch
SPLP Extraction	-		11/4/2020 11:09:08 AM	WG1570660
Fluid	2		11/4/2020 11:09:08 AM	WG1570660
Final pH	7.69		11/4/2020 11:09:08 AM	WG1570660

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury	0.183	E4	0.100	0.200	1	11/06/2020 15:58	WG1571495

Metals (ICP) by Method 6010D

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Cadmium	12.7		0.479	2.00	1	11/07/2020 15:32	WG1571652
Chromium	19.8		1.40	10.0	1	11/07/2020 15:32	WG1571652
Lead	47.3		2.99	6.00	1	11/07/2020 15:32	WG1571652

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	14.9		0.640	2.00	1	11/10/2020 14:46	WG1572841

Mercury by Method 7471B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	0.869		0.0180	0.0400	1	11/05/2020 15:44	WG1571017

Metals (ICP) by Method 6010D

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Cadmium	135		0.0471	0.500	1	11/05/2020 13:23	WG1571030
Chromium	298		0.133	1.00	1	11/05/2020 13:23	WG1571030
Lead	373		0.208	0.500	1	11/05/2020 13:23	WG1571030

Preparation by Method 1312

Analyte	Result	Qualifier	Prep date / time	Batch
SPLP Extraction	-		11/4/2020 11:09:08 AM	WG1570660
Fluid	2		11/4/2020 11:09:08 AM	WG1570660
Final pH	7.65		11/4/2020 11:09:08 AM	WG1570660

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury	0.111	E4	0.100	0.200	1	11/06/2020 16:00	WG1571495

Metals (ICP) by Method 6010D

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Cadmium	2.62		0.479	2.00	1	11/07/2020 15:35	WG1571652
Chromium	12.9		1.40	10.0	1	11/07/2020 15:35	WG1571652
Lead	9.66		2.99	6.00	1	11/07/2020 15:35	WG1571652

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	4.64		0.640	2.00	1	11/10/2020 14:46	WG1572841

Mercury by Method 7471B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	0.288		0.0180	0.0400	1	11/05/2020 15:47	WG1571017

Metals (ICP) by Method 6010D

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Cadmium	52.5		0.0471	0.500	1	11/05/2020 12:26	WG1571030
Chromium	146	M2	0.133	1.00	1	11/05/2020 12:26	WG1571030
Lead	222	M2 R5	0.208	0.500	1	11/05/2020 12:26	WG1571030

Preparation by Method 1312

Analyte	Result	Qualifier	Prep date / time	Batch
SPLP Extraction	-		11/6/2020 3:12:24 PM	WG1572138
Fluid	2		11/6/2020 3:12:24 PM	WG1572138
Final pH	8.85		11/6/2020 3:12:24 PM	WG1572138

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury	0.159	E4	0.100	0.200	1	11/10/2020 01:12	WG1571500

Metals (ICP) by Method 6010D

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Cadmium	17.8		0.479	2.00	1	11/09/2020 08:37	WG1573188
Chromium	25.8		1.40	10.0	1	11/09/2020 08:37	WG1573188
Lead	46.4		2.99	6.00	1	11/09/2020 08:37	WG1573188

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	17.9		0.640	2.00	1	11/10/2020 14:47	WG1572841

Mercury by Method 7471B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	1.47		0.0360	0.0800	2	11/06/2020 12:53	WG1571017

Metals (ICP) by Method 6010D

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Cadmium	199		0.0471	0.500	1	11/05/2020 15:57	WG1571030
Chromium	379		0.133	1.00	1	11/05/2020 15:57	WG1571030
Lead	487		0.208	0.500	1	11/05/2020 15:57	WG1571030

Preparation by Method 1312

Analyte	Result	Qualifier	Prep date / time	Batch
SPLP Extraction	-		11/6/2020 3:12:24 PM	WG1572138
Fluid	2		11/6/2020 3:12:24 PM	WG1572138
Final pH	8.69		11/6/2020 3:12:24 PM	WG1572138

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury	0.159	E4	0.100	0.200	1	11/10/2020 01:18	WG1571500

Metals (ICP) by Method 6010D

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Cadmium	11.2		0.479	2.00	1	11/09/2020 08:39	WG1573188
Chromium	22.7		1.40	10.0	1	11/09/2020 08:39	WG1573188
Lead	24.5		2.99	6.00	1	11/09/2020 08:39	WG1573188

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	12.3		0.640	2.00	1	11/10/2020 14:48	WG1572841

Mercury by Method 7471B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	1.35		0.0360	0.0800	2	11/06/2020 12:56	WG1571017

Metals (ICP) by Method 6010D

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Cadmium	203		0.0471	0.500	1	11/05/2020 16:00	WG1571030
Chromium	204		0.133	1.00	1	11/05/2020 16:00	WG1571030
Lead	427		0.208	0.500	1	11/05/2020 16:00	WG1571030

Preparation by Method 1312

Analyte	Result	Qualifier	Prep date / time	Batch
SPLP Extraction	-		11/6/2020 3:12:24 PM	WG1572138
Fluid	2		11/6/2020 3:12:24 PM	WG1572138
Final pH	8.60		11/6/2020 3:12:24 PM	WG1572138

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury	0.196	E4	0.100	0.200	1	11/10/2020 01:20	WG1571500

Metals (ICP) by Method 6010D

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Cadmium	13.3		0.479	2.00	1	11/09/2020 08:42	WG1573188
Chromium	27.6		1.40	10.0	1	11/09/2020 08:42	WG1573188
Lead	30.1		2.99	6.00	1	11/09/2020 08:42	WG1573188

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	10.0		0.640	2.00	1	11/10/2020 14:48	WG1572841

Mercury by Method 7471B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	1.10		0.0180	0.0400	1	11/05/2020 15:54	WG1571017

Metals (ICP) by Method 6010D

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Cadmium	114		0.0471	0.500	1	11/05/2020 16:02	WG1571030
Chromium	259		0.133	1.00	1	11/05/2020 16:02	WG1571030
Lead	348		0.208	0.500	1	11/05/2020 16:02	WG1571030

Preparation by Method 1312

Analyte	Result	Qualifier	Prep date / time	Batch
SPLP Extraction	-		11/6/2020 3:12:24 PM	WG1572138
Fluid	2		11/6/2020 3:12:24 PM	WG1572138
Final pH	8.60		11/6/2020 3:12:24 PM	WG1572138

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury	0.165	E4	0.100	0.200	1	11/10/2020 01:22	WG1571500

Metals (ICP) by Method 6010D

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Cadmium	8.17		0.479	2.00	1	11/09/2020 08:45	WG1573188
Chromium	19.2		1.40	10.0	1	11/09/2020 08:45	WG1573188
Lead	24.3		2.99	6.00	1	11/09/2020 08:45	WG1573188

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	6.60		0.640	2.00	1	11/10/2020 14:48	WG1572841

Mercury by Method 7471B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	0.704		0.0180	0.0400	1	11/05/2020 15:57	WG1571017

Metals (ICP) by Method 6010D

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Cadmium	104		0.0471	0.500	1	11/05/2020 16:05	WG1571030
Chromium	147		0.133	1.00	1	11/05/2020 16:05	WG1571030
Lead	393		0.208	0.500	1	11/05/2020 16:05	WG1571030

Preparation by Method 1312

Analyte	Result	Qualifier	Prep date / time	Batch
SPLP Extraction	-		11/6/2020 3:12:24 PM	WG1572138
Fluid	2		11/6/2020 3:12:24 PM	WG1572138
Final pH	8.48		11/6/2020 3:12:24 PM	WG1572138

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury	0.184	E4	0.100	0.200	1	11/10/2020 01:28	WG1571500

Metals (ICP) by Method 6010D

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Cadmium	9.81		0.479	2.00	1	11/09/2020 08:52	WG1573188
Chromium	19.6		1.40	10.0	1	11/09/2020 08:52	WG1573188
Lead	34.2		2.99	6.00	1	11/09/2020 08:52	WG1573188

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	2.92		0.640	2.00	1	11/10/2020 14:49	WG1572841

Mercury by Method 7471B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	0.211		0.0180	0.0400	1	11/05/2020 16:00	WG1571017

Metals (ICP) by Method 6010D

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Cadmium	38.9		0.0471	0.500	1	11/05/2020 16:08	WG1571030
Chromium	50.7		0.133	1.00	1	11/05/2020 16:08	WG1571030
Lead	101		0.208	0.500	1	11/05/2020 16:08	WG1571030

Preparation by Method 1312

Analyte	Result	Qualifier	Prep date / time	Batch
SPLP Extraction	-		11/6/2020 3:12:24 PM	WG1572138
Fluid	2		11/6/2020 3:12:24 PM	WG1572138
Final pH	9.34		11/6/2020 3:12:24 PM	WG1572138

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury	U		0.100	0.200	1	11/10/2020 01:30	WG1571500

Metals (ICP) by Method 6010D

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Cadmium	6.04		0.479	2.00	1	11/09/2020 08:55	WG1573188
Chromium	24.2		1.40	10.0	1	11/09/2020 08:55	WG1573188
Lead	16.4		2.99	6.00	1	11/09/2020 08:55	WG1573188

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	5.71		0.640	2.00	1	11/10/2020 14:49	WG1572841

Mercury by Method 7471B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	0.497		0.0180	0.0400	1	11/05/2020 16:02	WG1571017

Metals (ICP) by Method 6010D

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Cadmium	88.6		0.0471	0.500	1	11/05/2020 16:10	WG1571030
Chromium	150		0.133	1.00	1	11/05/2020 16:10	WG1571030
Lead	260		0.208	0.500	1	11/05/2020 16:10	WG1571030

Preparation by Method 1312

Analyte	Result	Qualifier	Prep date / time	Batch
SPLP Extraction	-		11/6/2020 3:12:24 PM	WG1572138
Fluid	2		11/6/2020 3:12:24 PM	WG1572138
Final pH	8.85		11/6/2020 3:12:24 PM	WG1572138

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury	0.200		0.100	0.200	1	11/10/2020 01:32	WG1571500

Metals (ICP) by Method 6010D

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Cadmium	19.2		0.479	2.00	1	11/09/2020 08:58	WG1573188
Chromium	25.9		1.40	10.0	1	11/09/2020 08:58	WG1573188
Lead	92.9		2.99	6.00	1	11/09/2020 08:58	WG1573188

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Method Blank (MB)

(MB) R3591154-1 11/09/20 13:27

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Chromium,Hexavalent	U		0.640	2.00

L1280984-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1280984-03 11/09/20 13:37 • (DUP) R3591154-7 11/09/20 13:37

Analyte	Original Result mg/kg	DUP Result mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chromium,Hexavalent	8.78	8.48	1	3.46		20

L1281191-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1281191-01 11/09/20 13:51 • (DUP) R3591154-8 11/09/20 13:51

Analyte	Original Result mg/kg	DUP Result mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chromium,Hexavalent	0.723	1.05	1	0.000		20

Laboratory Control Sample (LCS)

(LCS) R3591154-2 11/09/20 13:30

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chromium,Hexavalent	24.0	24.5	102	80.0-120	

L1275694-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1275694-04 11/09/20 13:33 • (MS) R3591154-3 11/09/20 13:33 • (MSD) R3591154-4 11/09/20 13:34

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chromium,Hexavalent	20.0	U	U	U	0.000	0.000	1	75.0-125	M2	M2	0.000	20

L1275694-04 Original Sample (OS) • Matrix Spike (MS)

(OS) L1275694-04 11/09/20 13:33 • (MS) R3591154-5 11/09/20 13:34

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chromium,Hexavalent	685	U	556	81.2	50	75.0-125	

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Method Blank (MB)

(MB) R3591496-1 11/10/20 14:38

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Chromium,Hexavalent	U		0.640	2.00

L1280984-23 Original Sample (OS) • Duplicate (DUP)

(OS) L1280984-23 11/10/20 14:40 • (DUP) R3591496-3 11/10/20 14:41

Analyte	Original Result mg/kg	DUP Result mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chromium,Hexavalent	1.99	2.32	1	15.2		20

L1282036-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1282036-02 11/10/20 14:54 • (DUP) R3591496-8 11/10/20 14:54

Analyte	Original Result mg/kg	DUP Result mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chromium,Hexavalent	U	U	1	0.000		20

Laboratory Control Sample (LCS)

(LCS) R3591496-2 11/10/20 14:39

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chromium,Hexavalent	24.0	26.0	109	80.0-120	

L1281435-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1281435-01 11/10/20 14:50 • (MS) R3591496-4 11/10/20 14:51 • (MSD) R3591496-5 11/10/20 14:52

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chromium,Hexavalent	20.0	U	10.1	10.6	50.6	52.8	1	75.0-125	M2	M2	4.26	20

Sample Narrative:

OS: sample is a reducer

L1281435-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1281435-01 11/10/20 14:50 • (MS) R3591496-6 11/10/20 14:52

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chromium,Hexavalent	662	U	650	98.1	50	75.0-125	

Sample Narrative:

OS: sample is a reducer

Method Blank (MB)

(MB) R3590343-1 11/06/20 12:21

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Mercury	U		0.100	0.200

Laboratory Control Sample (LCS)

(LCS) R3590343-2 11/06/20 12:23

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Mercury	3.00	2.65	88.3	80.0-120	

L1280984-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1280984-02 11/06/20 12:25 • (MS) R3590343-3 11/06/20 12:27 • (MSD) R3590343-4 11/06/20 12:29

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Mercury	3.00	U	3.23	3.10	108	103	1	75.0-125			4.13	20

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Method Blank (MB)

(MB) R3591215-1 11/10/20 01:09

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Mercury	U		0.100	0.200

Laboratory Control Sample (LCS)

(LCS) R3591215-2 11/10/20 01:10

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Mercury	3.00	2.80	93.3	80.0-120	

L1280984-36 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1280984-36 11/10/20 01:12 • (MS) R3591215-3 11/10/20 01:14 • (MSD) R3591215-4 11/10/20 01:16

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Mercury	3.00	0.159	2.71	3.09	84.9	97.8	1	75.0-125			13.4	20

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Method Blank (MB)

(MB) R3589824-1 11/05/20 14:45

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Mercury	U		0.0180	0.0400

Laboratory Control Sample (LCS)

(LCS) R3589824-2 11/05/20 14:48

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Mercury	0.500	0.493	98.6	80.0-120	

L1280283-22 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1280283-22 11/05/20 14:50 • (MS) R3589824-3 11/05/20 14:53 • (MSD) R3589824-4 11/05/20 14:56

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Mercury	0.500	U	0.460	0.467	92.0	93.3	1	75.0-125			1.39	20

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Method Blank (MB)

(MB) R3590233-1 11/06/20 09:44

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Mercury	U		0.0180	0.0400

Laboratory Control Sample (LCS)

(LCS) R3590233-2 11/06/20 09:47

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Mercury	0.500	0.478	95.7	80.0-120	

L1280984-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1280984-01 11/06/20 09:50 • (MS) R3590233-3 11/06/20 09:57 • (MSD) R3590233-4 11/06/20 10:00

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Mercury	0.500	1.25	0.833	0.945	0.000	0.000	1	75.0-125	M2	M2	12.6	20

Method Blank (MB)

(MB) R3589765-1 11/05/20 10:49

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Cadmium	U		0.0471	0.500
Chromium	U		0.133	1.00
Lead	U		0.208	0.500

Laboratory Control Sample (LCS)

(LCS) R3589765-2 11/05/20 10:52

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Cadmium	100	90.5	90.5	80.0-120	
Chromium	100	92.9	92.9	80.0-120	
Lead	100	91.2	91.2	80.0-120	

L1280791-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1280791-01 11/05/20 10:54 • (MS) R3589765-5 11/05/20 11:03 • (MSD) R3589765-6 11/05/20 11:05

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Cadmium	99.8	0.150	91.4	88.9	91.3	88.7	1	75.0-125			2.84	20
Chromium	99.8	51.2	150	139	98.6	88.0	1	75.0-125			7.34	20
Lead	99.8	4.49	97.8	94.8	93.3	90.3	1	75.0-125			3.08	20

Method Blank (MB)

(MB) R3589766-1 11/05/20 12:21

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Cadmium	U		0.0471	0.500
Chromium	U		0.133	1.00
Lead	U		0.208	0.500

Laboratory Control Sample (LCS)

(LCS) R3589766-2 11/05/20 12:23

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Cadmium	100	96.6	96.6	80.0-120	
Chromium	100	99.2	99.2	80.0-120	
Lead	100	96.7	96.7	80.0-120	

L1280984-35 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1280984-35 11/05/20 12:26 • (MS) R3589766-5 11/05/20 12:34 • (MSD) R3589766-6 11/05/20 12:37

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Cadmium	100	52.5	147	158	94.7	106	1	75.0-125			7.19	20
Chromium	100	146	174	175	28.6	29.5	1	75.0-125	M2	M2	0.520	20
Lead	100	222	223	315	1.12	93.6	1	75.0-125	M2	R5	34.3	20

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Method Blank (MB)

(MB) R3590666-1 11/07/20 14:24

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Cadmium	U		0.479	2.00
Chromium	U		1.40	10.0
Lead	U		2.99	6.00

Laboratory Control Sample (LCS)

(LCS) R3590666-2 11/07/20 14:26

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Cadmium	1000	958	95.8	80.0-120	
Chromium	1000	956	95.6	80.0-120	
Lead	1000	956	95.6	80.0-120	

L1280984-08 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1280984-08 11/07/20 14:29 • (MS) R3590666-4 11/07/20 14:34 • (MSD) R3590666-5 11/07/20 14:36

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Cadmium	1000	1.86	986	977	98.4	97.6	1	75.0-125			0.876	20
Chromium	1000	9.23	975	962	96.6	95.3	1	75.0-125			1.37	20
Lead	1000	U	974	961	97.4	96.1	1	75.0-125			1.35	20

Method Blank (MB)

(MB) R3591183-1 11/09/20 08:21

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Cadmium	U		0.479	2.00
Chromium	U		1.40	10.0
Lead	U		2.99	6.00

Laboratory Control Sample (LCS)

(LCS) R3591183-2 11/09/20 08:23

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Cadmium	1000	967	96.7	80.0-120	
Chromium	1000	986	98.6	80.0-120	
Lead	1000	965	96.5	80.0-120	

L1281542-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1281542-01 11/09/20 08:26 • (MS) R3591183-4 11/09/20 08:31 • (MSD) R3591183-5 11/09/20 08:34

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Cadmium	1000	U	975	970	97.5	97.0	1	75.0-125			0.549	20
Chromium	1000	6.31	981	979	97.5	97.3	1	75.0-125			0.194	20
Lead	1000	U	981	982	98.1	98.2	1	75.0-125			0.0609	20

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDL	Method Detection Limit.
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
E4	Concentration estimated. Analyte was detected below laboratory minimum reporting level (MRL) but above MDL.
M2	Matrix spike recovery was low, the method control sample recovery was acceptable.
R5	MS/MSD RPD exceeded the laboratory acceptance limit. Recovery met acceptance criteria.

ACCREDITATIONS & LOCATIONS

Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.
* Not all certifications held by the laboratory are applicable to the results reported in the attached report.
* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO00356
Kentucky [1 6]	90010	South Carolina	84004
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana [1]	LA180010	Texas	T104704245-18-15
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

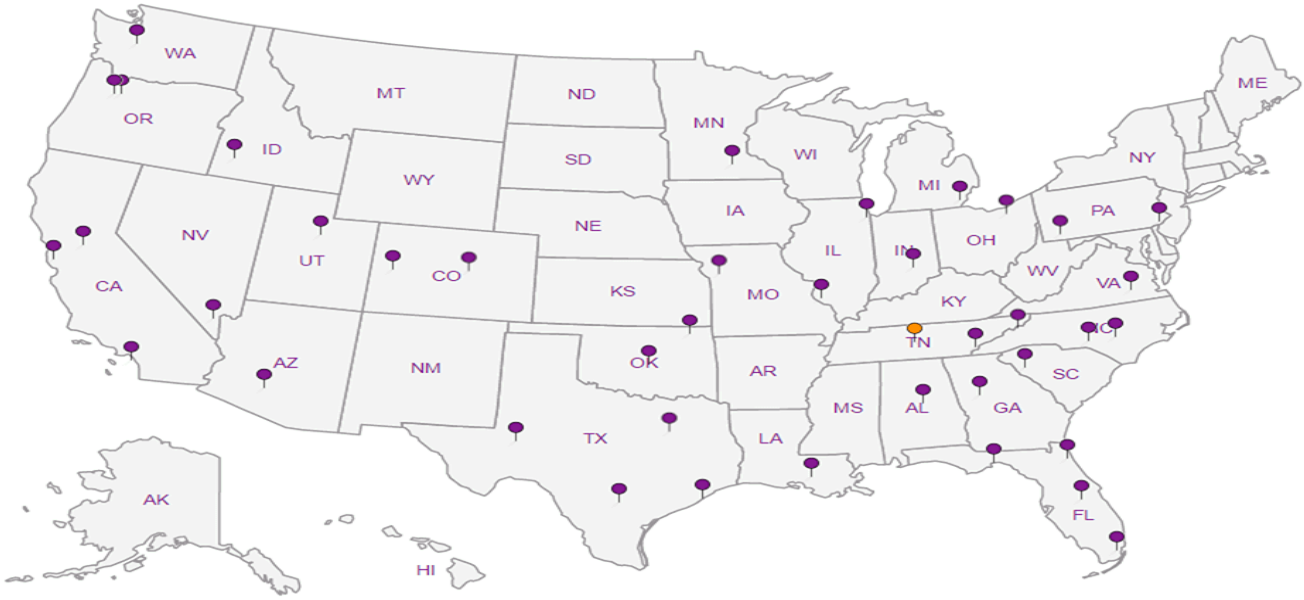
Third Party Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

Our Locations

Pace National has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. Pace National performs all testing at our central laboratory.



Brown & Caldwell
2 North Central Avenue
Suite 1600
Phoenix, Arizona 85004

Billing Information:

Pres Chk

Analysis / Container / Preservative

Chain of Custody Page 1 of 3

Pace Analytical®
National Center for Testing & Innovation

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# L1280984
C084

Report to: **Matthew Frailey**

Email To: **mfrailey@BrwnCald.com**

Project Description: **HVF West**

City/State Collected: Tucson, AZ

Phone: **602-567-3844**
Fax:

Client Project # 154686

Lab Project #

Collected by (print): Michael Orcutt

Site/Facility ID #

P.O. # 154686

Collected by (signature):

Immediately Packed on Ice N ____ Y X

Rush? (Lab MUST Be Notified)
____ Same Day ____ Five Day
____ Next Day ____ 5 Day (Rad Only)
____ Two Day ____ 10 Day (Rad Only)
____ Three Day

Quote #

Date Results Needed: Normal TAT

Acctnum: **BROCAPAZ**
Template:
Prelogin:
TSR:
PB:
Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Hexavalent Chromium 3060A/7196A	Total Metals 6010C/7471	SPLP Metals 1312/6010C; 1312/7470A	Remarks	Sample # (lab only)
DU-31	Comp	SS	0-6'	10-27-20	1145	3	X	X	X		-01/02
DU30				10-27-20	1315	3	X	X	X		-03/04
DU29				10-27-20	1430	3	X	X	X		-05/06
DU28				10-27-20	1600	3	X	X	X		-07/08
DU15				10-28-20	0830	3	X	X	X		-09/10
DU14				10-28-20	1530	3	X	X	X		-11/12
DU01				10-28-20	1130	3	X	X	X		-13/14
Dup-1				10-28-20	—	3	X	X	X		-15/16
DU02				10-28-20	1300	3	X	X	X		-17/18
DU03				10-28-20	1430	3	X	X	X		-19/20

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:
Total & SPLP Metals = (Cd, Cr, Pb, Hg)

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier __ _____

Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: __NP __Y __N
COC Signed/Accurate: __Y __N
Bottles arrive intact: __Y __N
Correct bottles used: __Y __N
Sufficient volume sent: __Y __N
If Applicable
VOA Zero Headspace: __Y __N
Preservation Correct/Checked: __Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR
	11-2-20	0955		
Relinquished by : (Signature)	**Date:**	**Time:**	**Received by: (Signature)**	**Temp: °C Bottles Received:**
	11/2/20	1400	SWA	1.6+1=1.7 72
Relinquished by : (Signature)	**Date:**	**Time:**	**Received for lab by: (Signature)**	**Date: Time:**
				11/3/20 8:00

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

YNPA2

Brown & Caldwell
2 North Central Avenue
Suite 1600
Phoenix, Arizona 85004

Billing Information:

Pres Chk

Report to: **Matthew Frailey**

Email To: **mfrailey@BrwnCald.com**

Project Description: **HVF West**

City/State Collected: Tucson, Az

Phone: **602-567-3844**
Fax:

Client Project # 154686

Lab Project #

Collected by (print): Michael O'neill

Site/Facility ID #

P.O. # 154686

Collected by (signature):

Immediately Packed on Ice N ____ Y X

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed: Normal TAT

Analysis / Container / Preservative

Chain of Custody Page 2 of 3

Pace Analytical®
National Center for Testing & Innovation

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L # L1280984

Table #

Acctnum: **BROCAPAZ**

Template:

Prelogin:

TSR:

PB:

Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Hexavalent Chromium 3060A/7196A	Total Metals 6010C/7471	SPLP Metals 1312/6010C; 1312/7470A	Remarks	Sample # (lab only)
DU07	Comp	SS	0-6"	102820	1600	3	X	X	X		-21/-22
DU11				10-29-20	0815	3	X	X	X		-23/-24
DU12				102920	0920	3	X	X	X		-25/-26
DU08				10-29-20	1045	3	X	X	X		-27/-28
DU04				10-29-20	1200	3	X	X	X		-29/-30
DU26				10-29-20	1315	3	X	X	X		-31/-32
DU27				10-29-20	1350	3	X	X	X		-33/-34
DU06				10-30-20	0845	3	X	X	X		-35/-36
DU05				10-30-20	1000	3	X	X	X		-37/-38
DUP2				103020	—	3	X	X	X		-39/-40

* Matrix:
SS - Soil **AIR** - Air **F** - Filter
GW - Groundwater **B** - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:
Total & SPLP Metals = (Cd, Cr, Pb, Hg)

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier __ _____

Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: __NP ✓Y __N
COC Signed/Accurate: ✓Y __N
Bottles arrive intact: ✓Y __N
Correct bottles used: ✓Y __N
Sufficient volume sent: ✓Y __N
If Applicable
VOA Zero Headspace: __Y __N
Preservation Correct/Checked: __Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR
	11-2-20	0955		
Relinquished by : (Signature)	**Date:**	**Time:**	**Received by: (Signature)**	**Temp:** 4.2°C **Bottles Received:** 72
	11/2/20	1800		Wet. Ice
Relinquished by : (Signature)	**Date:**	**Time:**	**Received for lab by: (Signature)**	**Date:** 11/3/20 **Time:** 8:00

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

PNPA2

Brown & Caldwell
2 North Central Avenue
Suite 1600
Phoenix, Arizona 85004

Billing Information:

Pres Chk

Analysis / Container / Preservative

Chain of Custody Page 3 of 3

Pace Analytical®
National Center for Testing & Innovation

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

Report to: **Matthew Frailey**

Email To: **mfrailey@BrwnCald.com**

Project Description: **HVF West**

City/State Collected: Tucson, Az

Phone: **602-567-3844**
Fax:

Client Project # 154686

Lab Project #

L# L1280984

Table #

Collected by (print): Michael Ovatt

Site/Facility ID #

P.O. # 154686.003

Acctnum: **BROCAPAZ**

Template:

Prelogin:

TSR:

PB:

Collected by (signature):

Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed: Normal TAT

Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Hexavalent Chromium 3060A/7196A	Total Metals 6010C/7471	SPLP Metals 1312/6010C; 1312/7470A	Remarks	Sample # (lab only)
DU09	Comp	SS	0-6"	10-30-20	11:10	3	X	X	X		-41/-42
DU25		SS		10-30-20	1230	3	X	X	X		-43/-44
DU13				10-30-20	1315	3	X	X	X		-45/-46
DU10				10-30-20	1520	3	X	X	X		-47/-48

* Matrix:
SS - Soil **AIR** - Air **F** - Filter
GW - Groundwater **B** - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:
Total & SPLP Metals = (Cd, Cr, Pb, Hg)

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier __ _____

Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: __NP X Y __N
COC Signed/Accurate: X Y __N
Bottles arrive intact: X Y __N
Correct bottles used: X Y __N
Sufficient volume sent: X Y __N
If Applicable
VOA Zero Headspace: __Y __N
Preservation Correct/Checked: __Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No (No) HCL / MeoH TBR
	11-2-20	0955		
Relinquished by : (Signature)	**Date:**	**Time:**	**Received by: (Signature)**	**Temp: 1.6+.1=1.7 °C Bottles Received: 72**
	11/2/20	1800	swt	
Relinquished by : (Signature)	**Date:**	**Time:**	**Received for lab by: (Signature)**	**Date: 11/3/20 Time: 8:00**

If preservation required by Login: Date/Time

Hold:

Condition: NCF / (OK)

PNPAZ

ANALYTICAL REPORT

November 30, 2020

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Brown & Caldwell - Phoenix, AZ

Sample Delivery Group:	L1287803
Samples Received:	11/19/2020
Project Number:	154686
Description:	HVF West
Report To:	Matthew Frailey 2 North Central Ave Suite 1600 Phoenix, AZ 85004

Entire Report Reviewed By: Daphne R Richards

Daphne Richards
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

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DU-19-COMP L1287803-01 Solid

Collected by: Harrison Schultz | Collected date/time: 11/17/20 15:22 | Received date/time: 11/19/20 09:50

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 3060A/7196A	WG1580123	1	11/21/20 12:38	11/26/20 23:39	BJD	Mt. Juliet, TN
Mercury by Method 7471B	WG1582991	1	11/27/20 09:22	11/30/20 09:37	BMF	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1582662	1	11/25/20 16:22	11/27/20 08:09	CCE	Mt. Juliet, TN

DU-18-COMP L1287803-02 Solid

Collected by: Harrison Schultz | Collected date/time: 11/17/20 15:58 | Received date/time: 11/19/20 09:50

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 3060A/7196A	WG1580123	1	11/21/20 12:38	11/26/20 23:40	BJD	Mt. Juliet, TN
Mercury by Method 7471B	WG1582991	1	11/27/20 09:22	11/30/20 09:39	BMF	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1582662	1	11/25/20 16:22	11/27/20 08:12	CCE	Mt. Juliet, TN

DU-17-COMP L1287803-03 Solid

Collected by: Harrison Schultz | Collected date/time: 11/17/20 16:45 | Received date/time: 11/19/20 09:50

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 3060A/7196A	WG1580123	1	11/21/20 12:38	11/26/20 23:40	BJD	Mt. Juliet, TN
Mercury by Method 7471B	WG1582991	1	11/27/20 09:22	11/30/20 09:42	BMF	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1582662	1	11/25/20 16:22	11/27/20 08:21	CCE	Mt. Juliet, TN

DU-20-COMP L1287803-04 Solid

Collected by: Harrison Schultz | Collected date/time: 11/18/20 10:08 | Received date/time: 11/19/20 09:50

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 3060A/7196A	WG1580123	1	11/21/20 12:38	11/26/20 23:40	BJD	Mt. Juliet, TN
Mercury by Method 7471B	WG1582991	1	11/27/20 09:22	11/30/20 09:45	BMF	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1582662	1	11/25/20 16:22	11/27/20 08:24	CCE	Mt. Juliet, TN

DUP-3 L1287803-05 Solid

Collected by: Harrison Schultz | Collected date/time: 11/18/20 12:00 | Received date/time: 11/19/20 09:50

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 3060A/7196A	WG1580123	1	11/21/20 12:38	11/26/20 23:41	BJD	Mt. Juliet, TN
Mercury by Method 7471B	WG1582991	1	11/27/20 09:22	11/30/20 09:47	BMF	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1582650	1	11/25/20 16:14	11/27/20 08:58	KMG	Mt. Juliet, TN

DU-22-COMP L1287803-06 Solid

Collected by: Harrison Schultz | Collected date/time: 11/18/20 11:01 | Received date/time: 11/19/20 09:50

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 3060A/7196A	WG1580123	1	11/21/20 12:38	11/26/20 23:42	BJD	Mt. Juliet, TN
Mercury by Method 7471B	WG1582991	5	11/27/20 09:22	11/30/20 13:41	BMF	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1582650	1	11/25/20 16:14	11/27/20 09:01	KMG	Mt. Juliet, TN

DU-21-COMP L1287803-07 Solid

Collected by: Harrison Schultz | Collected date/time: 11/18/20 11:30 | Received date/time: 11/19/20 09:50

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 3060A/7196A	WG1580123	1	11/21/20 12:38	11/26/20 23:42	BJD	Mt. Juliet, TN
Mercury by Method 7471B	WG1582991	1	11/27/20 09:22	11/30/20 09:52	BMF	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1582650	1	11/25/20 16:14	11/27/20 09:04	KMG	Mt. Juliet, TN

DUP-4 L1287803-08 Solid

Collected by: Harrison Schultz | Collected date/time: 11/18/20 13:00 | Received date/time: 11/19/20 09:50

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 3060A/7196A	WG1580123	1	11/21/20 12:38	11/26/20 23:43	BJD	Mt. Juliet, TN
Mercury by Method 7471B	WG1582991	1	11/27/20 09:22	11/30/20 09:55	BMF	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1582650	1	11/25/20 16:14	11/27/20 09:13	KMG	Mt. Juliet, TN

DU-23-COMP L1287803-09 Solid

Collected by: Harrison Schultz | Collected date/time: 11/18/20 12:01 | Received date/time: 11/19/20 09:50

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 3060A/7196A	WG1580123	1	11/21/20 12:38	11/26/20 23:43	BJD	Mt. Juliet, TN
Mercury by Method 7471B	WG1582991	1	11/27/20 09:22	11/30/20 09:57	BMF	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1582650	1	11/25/20 16:14	11/27/20 09:15	KMG	Mt. Juliet, TN

DU-24-COMP L1287803-10 Solid

Collected by: Harrison Schultz | Collected date/time: 11/18/20 12:31 | Received date/time: 11/19/20 09:50

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 3060A/7196A	WG1580123	1	11/21/20 12:38	11/26/20 23:43	BJD	Mt. Juliet, TN
Mercury by Method 7471B	WG1582991	1	11/27/20 09:22	11/30/20 10:00	BMF	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1582650	1	11/25/20 16:14	11/27/20 09:18	KMG	Mt. Juliet, TN

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Daphne R Richards

Daphne Richards
Project Manager

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	13.3		0.640	2.00	1	11/26/2020 23:39	WG1580123

Mercury by Method 7471B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	1.44		0.0180	0.0400	1	11/30/2020 09:37	WG1582991

Metals (ICP) by Method 6010D

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Cadmium	230		0.0471	0.500	1	11/27/2020 08:09	WG1582662
Chromium	357		0.133	1.00	1	11/27/2020 08:09	WG1582662
Lead	690		0.208	0.500	1	11/27/2020 08:09	WG1582662

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	6.36		0.640	2.00	1	11/26/2020 23:40	WG1580123

Mercury by Method 7471B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	0.613		0.0180	0.0400	1	11/30/2020 09:39	WG1582991

Metals (ICP) by Method 6010D

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Cadmium	133		0.0471	0.500	1	11/27/2020 08:12	WG1582662
Chromium	353		0.133	1.00	1	11/27/2020 08:12	WG1582662
Lead	307		0.208	0.500	1	11/27/2020 08:12	WG1582662

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	11.2		0.640	2.00	1	11/26/2020 23:40	WG1580123

Mercury by Method 7471B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	0.671		0.0180	0.0400	1	11/30/2020 09:42	WG1582991

Metals (ICP) by Method 6010D

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Cadmium	103		0.0471	0.500	1	11/27/2020 08:21	WG1582662
Chromium	182		0.133	1.00	1	11/27/2020 08:21	WG1582662
Lead	335		0.208	0.500	1	11/27/2020 08:21	WG1582662

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	13.6		0.640	2.00	1	11/26/2020 23:40	WG1580123

Mercury by Method 7471B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	0.796		0.0180	0.0400	1	11/30/2020 09:45	WG1582991

Metals (ICP) by Method 6010D

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Cadmium	157		0.0471	0.500	1	11/27/2020 08:24	WG1582662
Chromium	578		0.133	1.00	1	11/27/2020 08:24	WG1582662
Lead	1040		0.208	0.500	1	11/27/2020 08:24	WG1582662

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	12.7		0.640	2.00	1	11/26/2020 23:41	WG1580123

Mercury by Method 7471B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	0.758		0.0180	0.0400	1	11/30/2020 09:47	WG1582991

Metals (ICP) by Method 6010D

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Cadmium	105		0.0471	0.500	1	11/27/2020 08:58	WG1582650
Chromium	653		0.133	1.00	1	11/27/2020 08:58	WG1582650
Lead	588		0.208	0.500	1	11/27/2020 08:58	WG1582650

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	8.44		0.640	2.00	1	11/26/2020 23:42	WG1580123

Mercury by Method 7471B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	2.99		0.0900	0.200	5	11/30/2020 13:41	WG1582991

Metals (ICP) by Method 6010D

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Cadmium	268		0.0471	0.500	1	11/27/2020 09:01	WG1582650
Chromium	552		0.133	1.00	1	11/27/2020 09:01	WG1582650
Lead	1070		0.208	0.500	1	11/27/2020 09:01	WG1582650

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	15.8		0.640	2.00	1	11/26/2020 23:42	WG1580123

Mercury by Method 7471B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	1.20		0.0180	0.0400	1	11/30/2020 09:52	WG1582991

Metals (ICP) by Method 6010D

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Cadmium	166		0.0471	0.500	1	11/27/2020 09:04	WG1582650
Chromium	315		0.133	1.00	1	11/27/2020 09:04	WG1582650
Lead	571		0.208	0.500	1	11/27/2020 09:04	WG1582650

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	18.7		0.640	2.00	1	11/26/2020 23:43	WG1580123

Mercury by Method 7471B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	1.33		0.0180	0.0400	1	11/30/2020 09:55	WG1582991

Metals (ICP) by Method 6010D

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Cadmium	188		0.0471	0.500	1	11/27/2020 09:13	WG1582650
Chromium	286		0.133	1.00	1	11/27/2020 09:13	WG1582650
Lead	532		0.208	0.500	1	11/27/2020 09:13	WG1582650

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	11.3		0.640	2.00	1	11/26/2020 23:43	WG1580123

Mercury by Method 7471B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	0.578		0.0180	0.0400	1	11/30/2020 09:57	WG1582991

Metals (ICP) by Method 6010D

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Cadmium	69.2		0.0471	0.500	1	11/27/2020 09:15	WG1582650
Chromium	129		0.133	1.00	1	11/27/2020 09:15	WG1582650
Lead	285		0.208	0.500	1	11/27/2020 09:15	WG1582650

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	11.7		0.640	2.00	1	11/26/2020 23:43	WG1580123

Mercury by Method 7471B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	0.381		0.0180	0.0400	1	11/30/2020 10:00	WG1582991

Metals (ICP) by Method 6010D

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Cadmium	81.4		0.0471	0.500	1	11/27/2020 09:18	WG1582650
Chromium	98.5		0.133	1.00	1	11/27/2020 09:18	WG1582650
Lead	185		0.208	0.500	1	11/27/2020 09:18	WG1582650

Method Blank (MB)

(MB) R3597737-1 11/26/20 23:37

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Chromium,Hexavalent	U		0.640	2.00

L1287803-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1287803-01 11/26/20 23:39 • (DUP) R3597737-3 11/26/20 23:40

Analyte	Original Result mg/kg	DUP Result mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chromium,Hexavalent	13.3	12.4	1	7.15		20

Original Sample (OS) • Duplicate (DUP)

(OS) • (DUP) R3597737-6 11/26/20 23:48

Analyte	Original Result	DUP Result mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chromium,Hexavalent		U	1	0.000		20

Laboratory Control Sample (LCS)

(LCS) R3597737-2 11/26/20 23:37

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chromium,Hexavalent	24.0	23.0	95.7	80.0-120	

L1288001-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1288001-01 11/26/20 23:44 • (MS) R3597737-8 11/27/20 00:44 • (MSD) R3597737-4 11/26/20 23:45

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chromium,Hexavalent	20.0	1.88	18.2	17.2	81.8	76.6	1	75.0-125			5.87	20

L1288001-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1288001-01 11/26/20 23:44 • (MS) R3597737-7 11/27/20 00:37

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chromium,Hexavalent	675	1.88	657	97.4	50	75.0-125	

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Method Blank (MB)

(MB) R3598517-1 11/30/20 09:16

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Mercury	U		0.0180	0.0400

Laboratory Control Sample (LCS)

(LCS) R3598517-2 11/30/20 09:19

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Mercury	0.500	0.439	87.8	80.0-120	

L1288085-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1288085-01 11/30/20 09:22 • (MS) R3598517-3 11/30/20 09:24 • (MSD) R3598517-4 11/30/20 09:27

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Mercury	0.500	0.116	0.558	0.597	88.3	96.1	1	75.0-125			6.71	20

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Method Blank (MB)

(MB) R3597917-1 11/27/20 08:38

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Cadmium	U		0.0471	0.500
Chromium	U		0.133	1.00
Lead	U		0.208	0.500

Laboratory Control Sample (LCS)

(LCS) R3597917-2 11/27/20 08:41

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Cadmium	100	98.1	98.1	80.0-120	
Chromium	100	101	101	80.0-120	
Lead	100	99.1	99.1	80.0-120	

L1289932-17 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1289932-17 11/27/20 08:44 • (MS) R3597917-5 11/27/20 08:52 • (MSD) R3597917-6 11/27/20 08:55

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Cadmium	99.7	3.83	100	96.4	96.7	92.6	1	75.0-125			4.11	20
Chromium	99.7	8.65	106	102	97.2	93.6	1	75.0-125			3.55	20
Lead	99.7	423	1150	600	722	177	1	75.0-125	M3	M3 R5	62.5	20

Method Blank (MB)

(MB) R3597881-1 11/27/20 07:47

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Cadmium	U		0.0471	0.500
Chromium	U		0.133	1.00
Lead	U		0.208	0.500

Laboratory Control Sample (LCS)

(LCS) R3597881-2 11/27/20 07:50

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Cadmium	100	97.7	97.7	80.0-120	
Chromium	100	100	100	80.0-120	
Lead	100	98.9	98.9	80.0-120	

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDL	Method Detection Limit.
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The associated blank spike recovery was acceptable.
R5	MS/MSD RPD exceeded the laboratory acceptance limit. Recovery met acceptance criteria.

ACCREDITATIONS & LOCATIONS

Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.
* Not all certifications held by the laboratory are applicable to the results reported in the attached report.
* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO00356
Kentucky [1 6]	90010	South Carolina	84004
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana [1]	LA180010	Texas	T104704245-18-15
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

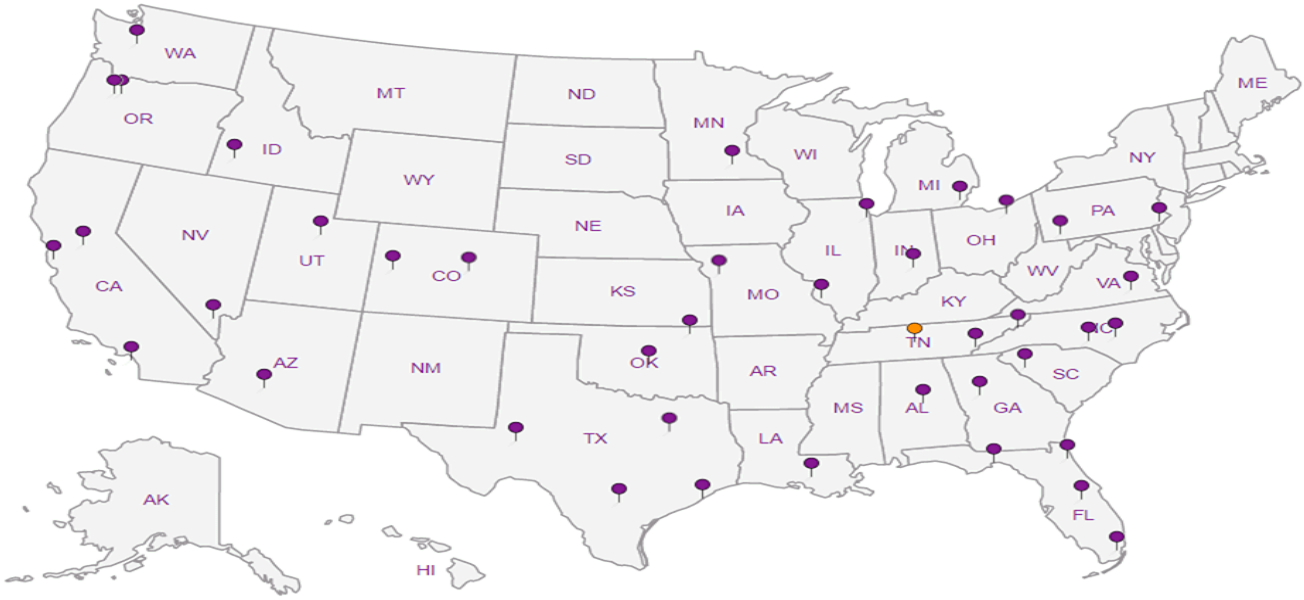
Third Party Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

Our Locations

Pace National has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. Pace National performs all testing at our central laboratory.



Brown & Caldwell
2 North Central Avenue
Suite 1600
Phoenix, Arizona 85004

Billing Information:

Pres Chk

Analysis / Container / Preservative

Chain of Custody Page 1 of 1

Pace Analytical®
National Center for Testing & Innovation

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

Report to: **Matthew Frailey**

Email To: **mfrailey@BrwnCald.com**

Project Description: **HVF West**

City/State Collected:

Phone: **602-567-3844**
Fax:

Client Project # 154686

Lab Project #

L# 1287803

Table # E200

Collected by (print): Harrison Schultz

Site/Facility ID #

P.O. #

Acctnum: **BROCAPAZ**

Template:

Prelogin:

TSR:

PB:

Collected by (signature): Harrison Schultz

Immediately Packed on Ice N ____ Y ✓

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed: Normal TAT

Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Hexavalent Chromium 3060A/7196A	Total Metals 6010C/7471	SPLP Metals 1312/6010C; 1312/7470A							Remarks	Sample # (lab only)
DU-19-Comp	Grab	SS	~~0-6"~~ 15	11-17-20	1522	3	X	X									-01
DU-18-Comp	Grab	SS	0-6"	11-17-20	1558	2	X	X									-02
DU-17-Comp	Grab	SS	0-6"	11-17-20	1645	2	X	X									-03
DU-20-Comp	Grab	SS	0-6"	11-18-20	1008	2	X	X									-04
DUP-3	Grab	SS	0-6"	11-18-20	1200	2	X	X									-05
DU-22-Comp	Grab	SS	0-6"	11-18-20	1101	2	X	X									-06
DU-21-Comp	Grab	SS	0-6"	11-18-20	1130	2	X	X									-07
DUP-4	Grab	SS	0-6"	11-18-20	1300	2	X	X									-08
DU-23-Comp	Grab	SS	0-6"	11-18-20	1201	2	X	X									-09
DU-24-Comp	Grab	SS	0-6"	11-18-20	1231	2	X	X									-10

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

Total & SPLP Metals = (Cd, Cr, Pb, Hg)

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier __ _____

Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: __NP ✓Y __N
COC Signed/Accurate: ✓Y __N
Bottles arrive intact: ✓Y __N
Correct bottles used: ✓Y __N
Sufficient volume sent: ✓Y __N
If Applicable
VOA Zero Headspace: __Y __N
Preservation Correct/Checked: __Y __N

RAD SCREEN: <0.5 mR/hr

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR	
Harrison Schultz	11-18-20	1536	[illegible]		
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received:	If preservation required by Login: Date/Time
[illegible]	11/18/20	1800	SLA	1.4 -1 21.3 ~~3~~ 20	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: Time:	Hold: / Condition:
			[illegible]	11-19-20 9:50	NCF ✓ OK

ANDA7

ANALYTICAL REPORT

December 02, 2020

Brown & Caldwell - Phoenix, AZ

Sample Delivery Group:	L1288001
Samples Received:	11/19/2020
Project Number:	154686
Description:	HVF West
Site:	HVF WEST
Report To:	Matthew Frailey 2 North Central Ave Suite 1600 Phoenix, AZ 85004

Entire Report Reviewed By: Daphne R Richards

Daphne Richards
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

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DU-21-12	L1288001-39	58
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DUP-7	L1288001-41	60
DU-23-12	L1288001-42	61
DU-23-24	L1288001-43	62
DU-31-12	L1288001-44	63
DU-31-12	L1288001-45	64
DU-31-24	L1288001-46	65
DU-11-12	L1288001-47	66
DU-11-24	L1288001-48	67
DU-12-12	L1288001-49	68
DU-12-24	L1288001-50	69
DU-08-12	L1288001-51	70
DU-08-24	L1288001-52	71
DU-07-12	L1288001-53	72
DU-07-24	L1288001-54	73
DU-03-12	L1288001-55	74
DU-03-12	L1288001-56	75
DU-03-24	L1288001-57	76
DU-04-12	L1288001-58	77
DU-04-24	L1288001-59	78
DUP-1	L1288001-60	79
DU-02-12	L1288001-61	80
DU-02-24	L1288001-62	81
DU-01-12	L1288001-63	82
DU-01-24	L1288001-64	83
DU-26-12	L1288001-65	84
DU-26-24	L1288001-66	85
DU-27-12	L1288001-67	86
DU-27-24	L1288001-68	87
DU-05-12	L1288001-69	88
DU-05-12	L1288001-70	89
DU-05-24	L1288001-71	90
DU-09-12	L1288001-72	91
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DU-29-12 L1288001-01 Solid

Collected by: Harrison Schultz | Collected date/time: 11/17/20 09:27 | Received date/time: 11/19/20 09:50

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 3060A/7196A	WG1580123	1	11/21/20 12:38	11/26/20 23:44	BJD	Mt. Juliet, TN
Mercury by Method 7471B	WG1582998	1	11/27/20 09:26	11/30/20 10:38	BMF	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1582877	1	11/26/20 11:18	11/30/20 19:58	EL	Mt. Juliet, TN

DU-29-24 L1288001-02 Solid

Collected by: Harrison Schultz | Collected date/time: 11/17/20 09:27 | Received date/time: 11/19/20 09:50

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 3060A/7196A	WG1580123	1	11/21/20 12:38	11/26/20 23:46	BJD	Mt. Juliet, TN
Mercury by Method 7471B	WG1582998	1	11/27/20 09:26	11/30/20 10:46	BMF	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1582877	1	11/26/20 11:18	11/30/20 20:11	EL	Mt. Juliet, TN

DU-28-12 L1288001-03 Solid

Collected by: Harrison Schultz | Collected date/time: 11/17/20 09:39 | Received date/time: 11/19/20 09:50

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 3060A/7196A	WG1580123	1	11/21/20 12:38	11/26/20 23:46	BJD	Mt. Juliet, TN
Mercury by Method 7471B	WG1582998	1	11/27/20 09:26	11/30/20 10:49	BMF	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1582877	1	11/26/20 11:18	11/30/20 20:14	EL	Mt. Juliet, TN

DU-28-24 L1288001-04 Solid

Collected by: Harrison Schultz | Collected date/time: 11/17/20 09:39 | Received date/time: 11/19/20 09:50

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 3060A/7196A	WG1580123	1	11/21/20 12:38	11/26/20 23:47	BJD	Mt. Juliet, TN
Mercury by Method 7471B	WG1582998	1	11/27/20 09:26	11/30/20 10:51	BMF	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1582877	1	11/26/20 11:18	11/30/20 20:17	EL	Mt. Juliet, TN

DU-15-12 L1288001-05 Solid

Collected by: Harrison Schultz | Collected date/time: 11/17/20 09:59 | Received date/time: 11/19/20 09:50

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 3060A/7196A	WG1580376	1	11/21/20 11:42	11/27/20 02:21	BJD	Mt. Juliet, TN
Mercury by Method 7471B	WG1582998	1	11/27/20 09:26	11/30/20 10:54	BMF	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1582877	1	11/26/20 11:18	11/30/20 20:25	EL	Mt. Juliet, TN

DU-15-12 L1288001-06 GW

Collected by: Harrison Schultz | Collected date/time: 11/17/20 09:59 | Received date/time: 11/19/20 09:50

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Preparation by Method 1312	WG1581559	1	11/24/20 11:51	11/24/20 11:51	APH	Mt. Juliet, TN
Mercury by Method 7470A	WG1582967	1	11/27/20 06:43	11/27/20 14:21	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1583051	1	11/27/20 09:56	11/27/20 18:13	CCE	Mt. Juliet, TN

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

DU-15-24 L1288001-07 Solid

Collected by: Harrison Schultz | Collected date/time: 11/17/20 09:59 | Received date/time: 11/19/20 09:50

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 3060A/7196A	WG1580376	1	11/21/20 11:42	11/27/20 02:21	BJD	Mt. Juliet, TN
Mercury by Method 7471B	WG1582998	1	11/27/20 09:26	11/30/20 10:56	BMF	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1582877	1	11/26/20 11:18	11/30/20 20:28	EL	Mt. Juliet, TN

DUP-5 L1288001-08 Solid

Collected by: Harrison Schultz | Collected date/time: 11/17/20 13:00 | Received date/time: 11/19/20 09:50

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 3060A/7196A	WG1580376	1	11/21/20 11:42	11/27/20 02:21	BJD	Mt. Juliet, TN
Mercury by Method 7471B	WG1582998	1	11/27/20 09:26	11/30/20 10:59	BMF	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1582877	1	11/26/20 11:18	11/30/20 20:31	EL	Mt. Juliet, TN

DU-14-12 L1288001-09 Solid

Collected by: Harrison Schultz | Collected date/time: 11/17/20 10:08 | Received date/time: 11/19/20 09:50

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 3060A/7196A	WG1580376	1	11/21/20 11:42	11/27/20 02:22	BJD	Mt. Juliet, TN
Mercury by Method 7471B	WG1582998	1	11/27/20 09:26	11/30/20 11:01	BMF	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1582877	1	11/26/20 11:18	11/30/20 20:33	EL	Mt. Juliet, TN

DU-14-12 L1288001-10 GW

Collected by: Harrison Schultz | Collected date/time: 11/17/20 10:08 | Received date/time: 11/19/20 09:50

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Preparation by Method 1312	WG1581559	1	11/24/20 11:51	11/24/20 11:51	APH	Mt. Juliet, TN
Mercury by Method 7470A	WG1582967	1	11/27/20 06:43	11/27/20 14:27	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1583051	1	11/27/20 09:56	11/27/20 18:15	CCE	Mt. Juliet, TN

DU-14-24 L1288001-11 Solid

Collected by: Harrison Schultz | Collected date/time: 11/17/20 10:08 | Received date/time: 11/19/20 09:50

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 3060A/7196A	WG1580376	1	11/21/20 11:42	11/27/20 02:22	BJD	Mt. Juliet, TN
Mercury by Method 7471B	WG1582998	1	11/27/20 09:26	11/30/20 11:09	BMF	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1582877	1	11/26/20 11:18	11/30/20 20:36	EL	Mt. Juliet, TN

DUP-6 L1288001-12 Solid

Collected by: Harrison Schultz | Collected date/time: 11/17/20 14:00 | Received date/time: 11/19/20 09:50

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 3060A/7196A	WG1580376	1	11/21/20 11:42	11/27/20 02:22	BJD	Mt. Juliet, TN
Mercury by Method 7471B	WG1582998	1	11/27/20 09:26	11/30/20 11:12	BMF	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1582877	1	11/26/20 11:18	11/30/20 20:39	EL	Mt. Juliet, TN

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

DU-10-12 L1288001-13 Solid

Collected by: Harrison Schultz | Collected date/time: 11/16/20 14:51 | Received date/time: 11/19/20 09:50

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 3060A/7196A	WG1580376	1	11/21/20 11:42	11/27/20 02:23	BJD	Mt. Juliet, TN
Mercury by Method 7471B	WG1582998	1	11/27/20 09:26	11/30/20 11:14	BMF	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1582877	1	11/26/20 11:18	11/30/20 20:42	EL	Mt. Juliet, TN

DU-10-24 L1288001-14 Solid

Collected by: Harrison Schultz | Collected date/time: 11/16/20 14:51 | Received date/time: 11/19/20 09:50

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 3060A/7196A	WG1580376	1	11/21/20 11:42	11/27/20 02:25	BJD	Mt. Juliet, TN
Mercury by Method 7471B	WG1582998	1	11/27/20 09:26	11/30/20 11:17	BMF	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1582877	1	11/26/20 11:18	11/30/20 20:44	EL	Mt. Juliet, TN

DU-06-12 L1288001-15 Solid

Collected by: Harrison Schultz | Collected date/time: 11/16/20 15:05 | Received date/time: 11/19/20 09:50

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 3060A/7196A	WG1580376	1	11/21/20 11:42	11/27/20 02:26	BJD	Mt. Juliet, TN
Mercury by Method 7471B	WG1582998	1	11/27/20 09:26	11/30/20 11:19	BMF	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1582877	1	11/26/20 11:18	11/30/20 20:47	EL	Mt. Juliet, TN

DU-06-24 L1288001-16 Solid

Collected by: Harrison Schultz | Collected date/time: 11/16/20 15:05 | Received date/time: 11/19/20 09:50

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 3060A/7196A	WG1580376	1	11/21/20 11:42	11/27/20 02:52	BJD	Mt. Juliet, TN
Mercury by Method 7471B	WG1582998	1	11/27/20 09:26	11/30/20 11:22	BMF	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1582877	1	11/26/20 11:18	11/30/20 20:50	EL	Mt. Juliet, TN

DU-20-12 L1288001-17 Solid

Collected by: Harrison Schultz | Collected date/time: 11/16/20 15:16 | Received date/time: 11/19/20 09:50

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 3060A/7196A	WG1580376	1	11/21/20 11:42	11/27/20 02:26	BJD	Mt. Juliet, TN
Mercury by Method 7471B	WG1582998	1	11/27/20 09:26	11/30/20 11:25	BMF	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1582877	1	11/26/20 11:18	11/30/20 20:58	EL	Mt. Juliet, TN

DU-20-24 L1288001-18 Solid

Collected by: Harrison Schultz | Collected date/time: 11/16/20 15:16 | Received date/time: 11/19/20 09:50

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 3060A/7196A	WG1580376	1	11/21/20 11:42	11/27/20 02:29	BJD	Mt. Juliet, TN
Mercury by Method 7471B	WG1582998	1	11/27/20 09:26	11/30/20 11:27	BMF	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1582877	1	11/26/20 11:18	11/30/20 21:01	EL	Mt. Juliet, TN

DU-19-12 L1288001-19 Solid

Collected by: Harrison Schultz | Collected date/time: 11/16/20 15:38 | Received date/time: 11/19/20 09:50

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 3060A/7196A	WG1580376	1	11/21/20 11:42	11/27/20 02:29	BJD	Mt. Juliet, TN
Mercury by Method 7471B	WG1582998	1	11/27/20 09:26	11/30/20 11:30	BMF	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1582877	1	11/26/20 11:18	11/30/20 21:04	EL	Mt. Juliet, TN

DU-19-24 L1288001-20 Solid

Collected by: Harrison Schultz | Collected date/time: 11/16/20 15:38 | Received date/time: 11/19/20 09:50

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 3060A/7196A	WG1580376	1	11/21/20 11:42	11/27/20 02:30	BJD	Mt. Juliet, TN
Mercury by Method 7471B	WG1582998	1	11/27/20 09:26	11/30/20 11:32	BMF	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1582877	1	11/26/20 11:18	11/30/20 21:07	EL	Mt. Juliet, TN

DU-18-12 L1288001-21 Solid

Collected by: Harrison Schultz | Collected date/time: 11/16/20 16:08 | Received date/time: 11/19/20 09:50

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 3060A/7196A	WG1580376	1	11/21/20 11:42	11/27/20 02:30	BJD	Mt. Juliet, TN
Mercury by Method 7471B	WG1582998	1	11/27/20 09:26	11/30/20 11:40	BMF	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1582880	1	11/26/20 11:20	12/01/20 14:27	EL	Mt. Juliet, TN

DU-18-24 L1288001-22 Solid

Collected by: Harrison Schultz | Collected date/time: 11/16/20 16:08 | Received date/time: 11/19/20 09:50

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 3060A/7196A	WG1580376	1	11/21/20 11:42	11/27/20 02:30	BJD	Mt. Juliet, TN
Mercury by Method 7471B	WG1582998	1	11/27/20 09:26	11/30/20 11:43	BMF	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1582877	1	11/26/20 11:18	11/30/20 21:10	EL	Mt. Juliet, TN

DU-22-12 L1288001-23 Solid

Collected by: Harrison Schultz | Collected date/time: 11/16/20 16:22 | Received date/time: 11/19/20 09:50

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 3060A/7196A	WG1580376	1	11/21/20 11:42	11/27/20 02:31	BJD	Mt. Juliet, TN
Mercury by Method 7471B	WG1583002	1	11/27/20 07:47	11/27/20 12:24	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1582877	1	11/26/20 11:18	11/30/20 21:12	EL	Mt. Juliet, TN

DU-22-24 L1288001-24 Solid

Collected by: Harrison Schultz | Collected date/time: 11/16/20 16:22 | Received date/time: 11/19/20 09:50

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 3060A/7196A	WG1580376	1	11/21/20 11:42	11/27/20 02:31	BJD	Mt. Juliet, TN
Mercury by Method 7471B	WG1583002	1	11/27/20 07:47	11/27/20 12:31	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1582880	1	11/26/20 11:20	12/01/20 14:42	EL	Mt. Juliet, TN

DU-16-12 L1288001-25 Solid

Collected by: Harrison Schultz | Collected date/time: 11/16/20 16:56 | Received date/time: 11/19/20 09:50

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 3060A/7196A	WG1580376	1	11/21/20 11:42	11/27/20 02:32	BJD	Mt. Juliet, TN
Mercury by Method 7471B	WG1583002	1	11/27/20 07:47	11/27/20 12:34	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1582880	1	11/26/20 11:20	12/01/20 14:44	EL	Mt. Juliet, TN

DU-16-12 L1288001-26 GW

Collected by: Harrison Schultz | Collected date/time: 11/16/20 16:56 | Received date/time: 11/19/20 09:50

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Preparation by Method 1312	WG1581559	1	11/24/20 11:51	11/24/20 11:51	APH	Mt. Juliet, TN
Mercury by Method 7470A	WG1582967	1	11/27/20 06:43	11/27/20 14:59	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1583051	1	11/27/20 09:56	11/27/20 18:18	CCE	Mt. Juliet, TN

DU-16-24 L1288001-27 Solid

Collected by: Harrison Schultz | Collected date/time: 11/16/20 16:56 | Received date/time: 11/19/20 09:50

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 3060A/7196A	WG1580376	1	11/21/20 11:42	11/27/20 02:32	BJD	Mt. Juliet, TN
Mercury by Method 7471B	WG1583002	1	11/27/20 07:47	11/27/20 12:36	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1582880	1	11/26/20 11:20	12/01/20 14:47	EL	Mt. Juliet, TN

DU-17-12 L1288001-28 Solid

Collected by: Harrison Schultz | Collected date/time: 11/16/20 17:19 | Received date/time: 11/19/20 09:50

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 3060A/7196A	WG1580585	1	11/22/20 00:26	11/25/20 19:31	KPS	Mt. Juliet, TN
Mercury by Method 7471B	WG1583002	1	11/27/20 07:47	11/27/20 12:39	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1582880	1	11/26/20 11:20	12/01/20 14:56	EL	Mt. Juliet, TN

DU-17-24 L1288001-29 Solid

Collected by: Harrison Schultz | Collected date/time: 11/16/20 17:19 | Received date/time: 11/19/20 09:50

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 3060A/7196A	WG1580585	1	11/22/20 00:26	11/25/20 19:31	KPS	Mt. Juliet, TN
Mercury by Method 7471B	WG1583002	1	11/27/20 07:47	11/27/20 12:41	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1582880	1	11/26/20 11:20	12/01/20 14:59	EL	Mt. Juliet, TN

DUP-3 L1288001-30 Solid

Collected by: Harrison Schultz | Collected date/time: 11/16/20 17:00 | Received date/time: 11/19/20 09:50

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 3060A/7196A	WG1580585	1	11/22/20 00:26	11/25/20 19:32	KPS	Mt. Juliet, TN
Mercury by Method 7471B	WG1583002	1	11/27/20 07:47	11/27/20 12:44	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1582880	1	11/26/20 11:20	12/01/20 15:03	EL	Mt. Juliet, TN

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

DU-30-12 L1288001-31 Solid

Collected by: Harrison Schultz | Collected date/time: 11/17/20 09:02 | Received date/time: 11/19/20 09:50

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 3060A/7196A	WG1582941	1	11/27/20 00:07	11/27/20 19:31	BJD	Mt. Juliet, TN
Mercury by Method 7471B	WG1583002	1	11/27/20 07:47	11/27/20 12:46	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1582880	1	11/26/20 11:20	12/01/20 15:05	EL	Mt. Juliet, TN

DU-30-12 L1288001-32 GW

Collected by: Harrison Schultz | Collected date/time: 11/17/20 09:02 | Received date/time: 11/19/20 09:50

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Preparation by Method 1312	WG1581559	1	11/24/20 11:51	11/24/20 11:51	APH	Mt. Juliet, TN
Mercury by Method 7470A	WG1582967	1	11/27/20 06:43	11/27/20 15:01	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1583051	1	11/27/20 09:56	11/27/20 18:21	CCE	Mt. Juliet, TN

DU-30-24 L1288001-33 Solid

Collected by: Harrison Schultz | Collected date/time: 11/17/20 09:02 | Received date/time: 11/19/20 09:50

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 3060A/7196A	WG1582941	1	11/27/20 00:07	11/27/20 19:32	BJD	Mt. Juliet, TN
Mercury by Method 7471B	WG1583002	1	11/27/20 07:47	11/27/20 12:49	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1582880	1	11/26/20 11:20	12/01/20 15:08	EL	Mt. Juliet, TN

DUP-4 L1288001-34 Solid

Collected by: Harrison Schultz | Collected date/time: 11/17/20 12:00 | Received date/time: 11/19/20 09:50

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 3060A/7196A	WG1582941	1	11/27/20 00:07	11/27/20 19:32	BJD	Mt. Juliet, TN
Mercury by Method 7471B	WG1583002	1	11/27/20 07:47	11/27/20 12:51	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1582880	1	11/26/20 11:20	12/01/20 15:11	EL	Mt. Juliet, TN

DU-24-12 L1288001-35 Solid

Collected by: Harrison Schultz | Collected date/time: 11/17/20 10:30 | Received date/time: 11/19/20 09:50

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 3060A/7196A	WG1582941	1	11/27/20 00:07	11/27/20 19:33	BJD	Mt. Juliet, TN
Mercury by Method 7471B	WG1583002	1	11/27/20 07:47	11/27/20 12:54	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1582880	1	11/26/20 11:20	12/01/20 15:14	EL	Mt. Juliet, TN

DU-24-24 L1288001-36 Solid

Collected by: Harrison Schultz | Collected date/time: 11/17/20 10:30 | Received date/time: 11/19/20 09:50

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 3060A/7196A	WG1582941	1	11/27/20 00:07	11/27/20 19:34	BJD	Mt. Juliet, TN
Mercury by Method 7471B	WG1583002	1	11/27/20 07:47	11/27/20 13:02	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1582880	1	11/26/20 11:20	12/01/20 15:17	EL	Mt. Juliet, TN

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

DU-24-24 L1288001-37 GW

Collected by: Harrison Schultz | Collected date/time: 11/17/20 10:30 | Received date/time: 11/19/20 09:50

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Preparation by Method 1312	WG1581559	1	11/24/20 11:51	11/24/20 11:51	APH	Mt. Juliet, TN
Mercury by Method 7470A	WG1582967	1	11/27/20 06:43	11/27/20 15:03	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1583051	1	11/27/20 09:56	11/27/20 18:03	CCE	Mt. Juliet, TN

DU-21-12 L1288001-38 Solid

Collected by: Harrison Schultz | Collected date/time: 11/17/20 10:46 | Received date/time: 11/19/20 09:50

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 3060A/7196A	WG1582941	1	11/27/20 00:07	11/27/20 19:34	BJD	Mt. Juliet, TN
Mercury by Method 7471B	WG1583002	1	11/27/20 07:47	11/27/20 13:04	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1582880	1	11/26/20 11:20	12/01/20 15:20	EL	Mt. Juliet, TN

DU-21-12 L1288001-39 GW

Collected by: Harrison Schultz | Collected date/time: 11/17/20 10:46 | Received date/time: 11/19/20 09:50

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Preparation by Method 1312	WG1581559	1	11/24/20 11:51	11/24/20 11:51	APH	Mt. Juliet, TN
Mercury by Method 7470A	WG1582967	1	11/27/20 06:43	11/27/20 15:05	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1583051	1	11/27/20 09:56	11/27/20 18:29	CCE	Mt. Juliet, TN

DU-21-24 L1288001-40 Solid

Collected by: Harrison Schultz | Collected date/time: 11/17/20 10:46 | Received date/time: 11/19/20 09:50

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 3060A/7196A	WG1582941	1	11/27/20 00:07	11/27/20 19:35	BJD	Mt. Juliet, TN
Mercury by Method 7471B	WG1583002	1	11/27/20 07:47	11/27/20 13:07	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1582880	1	11/26/20 11:20	12/01/20 15:23	EL	Mt. Juliet, TN

DUP-7 L1288001-41 Solid

Collected by: Harrison Schultz | Collected date/time: 11/17/20 15:00 | Received date/time: 11/19/20 09:50

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 3060A/7196A	WG1582941	1	11/27/20 00:07	11/27/20 19:35	BJD	Mt. Juliet, TN
Mercury by Method 7471B	WG1583002	1	11/27/20 07:47	11/27/20 13:09	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1582880	1	11/26/20 11:20	12/01/20 15:31	EL	Mt. Juliet, TN

DU-23-12 L1288001-42 Solid

Collected by: Harrison Schultz | Collected date/time: 11/17/20 11:10 | Received date/time: 11/19/20 09:50

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 3060A/7196A	WG1580586	1	11/26/20 22:54	11/27/20 17:37	KPS	Mt. Juliet, TN
Mercury by Method 7471B	WG1583002	1	11/27/20 07:47	11/27/20 13:12	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1582880	1	11/26/20 11:20	12/01/20 15:34	EL	Mt. Juliet, TN

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

DU-23-24 L1288001-43 Solid

Collected by: Harrison Schultz | Collected date/time: 11/17/20 11:10 | Received date/time: 11/19/20 09:50

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 3060A/7196A	WG1580586	1	11/26/20 22:54	11/27/20 17:37	KPS	Mt. Juliet, TN
Mercury by Method 7471B	WG1583002	1	11/27/20 07:47	11/27/20 12:16	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1582886	1	11/26/20 11:44	12/01/20 17:08	EL	Mt. Juliet, TN

DU-31-12 L1288001-44 Solid

Collected by: Harrison Schultz | Collected date/time: 11/17/20 11:44 | Received date/time: 11/19/20 09:50

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 3060A/7196A	WG1580586	1	11/26/20 22:54	11/27/20 17:38	KPS	Mt. Juliet, TN
Mercury by Method 7471B	WG1583002	1	11/27/20 07:47	11/27/20 13:14	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1582880	1	11/26/20 11:20	12/01/20 15:37	EL	Mt. Juliet, TN

DU-31-12 L1288001-45 GW

Collected by: Harrison Schultz | Collected date/time: 11/17/20 11:44 | Received date/time: 11/19/20 09:50

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Preparation by Method 1312	WG1581559	1	11/24/20 11:51	11/24/20 11:51	APH	Mt. Juliet, TN
Mercury by Method 7470A	WG1582967	1	11/27/20 06:43	11/27/20 15:07	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1583051	1	11/27/20 09:56	11/27/20 18:31	CCE	Mt. Juliet, TN

DU-31-24 L1288001-46 Solid

Collected by: Harrison Schultz | Collected date/time: 11/17/20 11:44 | Received date/time: 11/19/20 09:50

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 3060A/7196A	WG1580586	1	11/26/20 22:54	11/27/20 17:38	KPS	Mt. Juliet, TN
Mercury by Method 7471B	WG1583002	1	11/27/20 07:47	11/27/20 13:17	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1582880	1	11/26/20 11:20	12/01/20 15:40	EL	Mt. Juliet, TN

DU-11-12 L1288001-47 Solid

Collected by: Harrison Schultz | Collected date/time: 11/16/20 10:25 | Received date/time: 11/19/20 09:50

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 3060A/7196A	WG1580586	1	11/26/20 22:54	11/27/20 17:38	KPS	Mt. Juliet, TN
Mercury by Method 7471B	WG1583002	1	11/27/20 07:47	11/27/20 13:19	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1582880	1	11/26/20 11:20	12/01/20 15:42	EL	Mt. Juliet, TN

DU-11-24 L1288001-48 Solid

Collected by: Harrison Schultz | Collected date/time: 11/16/20 10:30 | Received date/time: 11/19/20 09:50

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 3060A/7196A	WG1580586	1	11/26/20 22:54	11/27/20 17:38	KPS	Mt. Juliet, TN
Mercury by Method 7471B	WG1582995	1	11/27/20 09:24	11/30/20 08:38	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1582880	1	11/26/20 11:20	12/01/20 15:45	EL	Mt. Juliet, TN

DU-12-12 L1288001-49 Solid

Collected by: Harrison Schultz | Collected date/time: 11/16/20 10:42 | Received date/time: 11/19/20 09:50

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 3060A/7196A	WG1580586	1	11/26/20 22:54	11/27/20 17:38	KPS	Mt. Juliet, TN
Mercury by Method 7471B	WG1582995	1	11/27/20 09:24	11/30/20 08:41	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1582886	1	11/26/20 11:44	12/01/20 17:22	EL	Mt. Juliet, TN

DU-12-24 L1288001-50 Solid

Collected by: Harrison Schultz | Collected date/time: 11/16/20 10:45 | Received date/time: 11/19/20 09:50

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 3060A/7196A	WG1580586	1	11/26/20 22:54	11/27/20 17:39	KPS	Mt. Juliet, TN
Mercury by Method 7471B	WG1582995	1	11/27/20 09:24	11/30/20 08:43	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1582886	1	11/26/20 11:44	12/01/20 17:25	EL	Mt. Juliet, TN

DU-08-12 L1288001-51 Solid

Collected by: Harrison Schultz | Collected date/time: 11/16/20 10:59 | Received date/time: 11/19/20 09:50

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 3060A/7196A	WG1580586	1	11/26/20 22:54	11/27/20 17:39	KPS	Mt. Juliet, TN
Mercury by Method 7471B	WG1582995	1	11/27/20 09:24	11/30/20 08:46	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1582886	1	11/26/20 11:44	12/01/20 17:28	EL	Mt. Juliet, TN

DU-08-24 L1288001-52 Solid

Collected by: Harrison Schultz | Collected date/time: 11/16/20 10:59 | Received date/time: 11/19/20 09:50

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 3060A/7196A	WG1580586	1	11/26/20 22:54	11/27/20 17:39	KPS	Mt. Juliet, TN
Mercury by Method 7471B	WG1583214	1	11/27/20 12:42	11/27/20 14:04	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1582886	1	11/26/20 11:44	12/01/20 17:37	EL	Mt. Juliet, TN

DU-07-12 L1288001-53 Solid

Collected by: Harrison Schultz | Collected date/time: 11/16/20 11:09 | Received date/time: 11/19/20 09:50

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 3060A/7196A	WG1580586	1	11/26/20 22:54	11/27/20 17:40	KPS	Mt. Juliet, TN
Mercury by Method 7471B	WG1582995	1	11/27/20 09:24	11/30/20 08:48	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1582886	1	11/26/20 11:44	12/01/20 17:40	EL	Mt. Juliet, TN

DU-07-24 L1288001-54 Solid

Collected by: Harrison Schultz | Collected date/time: 11/16/20 11:09 | Received date/time: 11/19/20 09:50

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 3060A/7196A	WG1580586	1	11/26/20 22:54	11/27/20 17:41	KPS	Mt. Juliet, TN
Mercury by Method 7471B	WG1582995	1	11/27/20 09:24	11/30/20 08:51	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1582886	1	11/26/20 11:44	12/01/20 17:42	EL	Mt. Juliet, TN

DU-03-12 L1288001-55 Solid

Collected by: Harrison Schultz | Collected date/time: 11/16/20 11:15 | Received date/time: 11/19/20 09:50

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 3060A/7196A	WG1580586	1	11/26/20 22:54	11/27/20 17:41	KPS	Mt. Juliet, TN
Mercury by Method 7471B	WG1582995	1	11/27/20 09:24	11/30/20 08:53	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1582886	1	11/26/20 11:44	12/01/20 17:45	EL	Mt. Juliet, TN

DU-03-12 L1288001-56 GW

Collected by: Harrison Schultz | Collected date/time: 11/16/20 11:15 | Received date/time: 11/19/20 09:50

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Preparation by Method 1312	WG1581559	1	11/24/20 11:51	11/24/20 11:51	APH	Mt. Juliet, TN
Mercury by Method 7470A	WG1582967	1	11/27/20 06:43	11/27/20 15:13	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1583051	1	11/27/20 09:56	11/27/20 18:34	CCE	Mt. Juliet, TN

DU-03-24 L1288001-57 Solid

Collected by: Harrison Schultz | Collected date/time: 11/16/20 11:15 | Received date/time: 11/19/20 09:50

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 3060A/7196A	WG1580586	1	11/26/20 22:54	11/27/20 17:41	KPS	Mt. Juliet, TN
Mercury by Method 7471B	WG1582995	1	11/27/20 09:24	11/30/20 08:56	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1582886	1	11/26/20 11:44	12/01/20 17:48	EL	Mt. Juliet, TN

DU-04-12 L1288001-58 Solid

Collected by: Harrison Schultz | Collected date/time: 11/16/20 11:38 | Received date/time: 11/19/20 09:50

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 3060A/7196A	WG1580586	1	11/26/20 22:54	11/27/20 17:41	KPS	Mt. Juliet, TN
Mercury by Method 7471B	WG1582995	1	11/27/20 09:24	11/30/20 08:59	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1582886	1	11/26/20 11:44	12/01/20 17:51	EL	Mt. Juliet, TN

DU-04-24 L1288001-59 Solid

Collected by: Harrison Schultz | Collected date/time: 11/16/20 11:38 | Received date/time: 11/19/20 09:50

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 3060A/7196A	WG1580586	1	11/26/20 22:54	11/27/20 17:42	KPS	Mt. Juliet, TN
Mercury by Method 7471B	WG1582995	1	11/27/20 09:24	11/30/20 09:06	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1582886	1	11/26/20 11:44	12/01/20 17:54	EL	Mt. Juliet, TN

DUP-1 L1288001-60 Solid

Collected by: Harrison Schultz | Collected date/time: 11/16/20 12:00 | Received date/time: 11/19/20 09:50

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 3060A/7196A	WG1580586	1	11/26/20 22:54	11/27/20 17:42	KPS	Mt. Juliet, TN
Mercury by Method 7471B	WG1582995	1	11/27/20 09:24	11/30/20 09:09	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1582886	1	11/26/20 11:44	12/01/20 17:56	EL	Mt. Juliet, TN

DU-02-12 L1288001-61 Solid

Collected by: Harrison Schultz | Collected date/time: 11/16/20 12:05 | Received date/time: 11/19/20 09:50

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 3060A/7196A	WG1580586	1	11/26/20 22:54	11/27/20 17:42	KPS	Mt. Juliet, TN
Mercury by Method 7471B	WG1582995	1	11/27/20 09:24	11/30/20 09:11	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1582886	1	11/26/20 11:44	12/01/20 17:59	EL	Mt. Juliet, TN

DU-02-24 L1288001-62 Solid

Collected by: Harrison Schultz | Collected date/time: 11/16/20 12:05 | Received date/time: 11/19/20 09:50

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 3060A/7196A	WG1580586	1	11/26/20 22:54	11/27/20 17:42	KPS	Mt. Juliet, TN
Mercury by Method 7471B	WG1582995	1	11/27/20 09:24	11/30/20 09:14	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1582886	1	11/26/20 11:44	12/01/20 18:02	EL	Mt. Juliet, TN

DU-01-12 L1288001-63 Solid

Collected by: Harrison Schultz | Collected date/time: 11/16/20 12:10 | Received date/time: 11/19/20 09:50

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 3060A/7196A	WG1580586	1	11/26/20 22:54	11/27/20 17:43	KPS	Mt. Juliet, TN
Mercury by Method 7471B	WG1583001	1	11/27/20 07:45	11/27/20 11:05	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1582889	1	11/26/20 11:46	11/30/20 14:23	EL	Mt. Juliet, TN

DU-01-24 L1288001-64 Solid

Collected by: Harrison Schultz | Collected date/time: 11/16/20 12:10 | Received date/time: 11/19/20 09:50

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 3060A/7196A	WG1580587	1	11/26/20 23:30	11/27/20 18:41	BJD	Mt. Juliet, TN
Mercury by Method 7471B	WG1583001	1	11/27/20 07:45	11/27/20 11:12	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1582886	1	11/26/20 11:44	12/01/20 18:11	EL	Mt. Juliet, TN

DU-26-12 L1288001-65 Solid

Collected by: Harrison Schultz | Collected date/time: 11/16/20 12:20 | Received date/time: 11/19/20 09:50

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 3060A/7196A	WG1580587	1	11/26/20 23:30	11/27/20 18:42	BJD	Mt. Juliet, TN
Mercury by Method 7471B	WG1583001	1	11/27/20 07:45	11/27/20 11:15	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1582886	1	11/26/20 11:44	12/01/20 18:13	EL	Mt. Juliet, TN

DU-26-24 L1288001-66 Solid

Collected by: Harrison Schultz | Collected date/time: 11/16/20 12:20 | Received date/time: 11/19/20 09:50

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 3060A/7196A	WG1580587	1	11/26/20 23:30	11/27/20 18:42	BJD	Mt. Juliet, TN
Mercury by Method 7471B	WG1583001	1	11/27/20 07:45	11/27/20 11:18	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1582886	1	11/26/20 11:44	12/01/20 18:16	EL	Mt. Juliet, TN

DU-27-12 L1288001-67 Solid

Collected by: Harrison Schultz | Collected date/time: 11/16/20 12:40 | Received date/time: 11/19/20 09:50

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 3060A/7196A	WG1580587	1	11/26/20 23:30	11/27/20 18:43	BJD	Mt. Juliet, TN
Mercury by Method 7471B	WG1583001	1	11/27/20 07:45	11/27/20 11:20	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1582886	1	11/26/20 11:44	12/01/20 18:19	EL	Mt. Juliet, TN

DU-27-24 L1288001-68 Solid

Collected by: Harrison Schultz | Collected date/time: 11/16/20 12:40 | Received date/time: 11/19/20 09:50

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 3060A/7196A	WG1580587	1	11/26/20 23:30	11/27/20 18:43	BJD	Mt. Juliet, TN
Mercury by Method 7471B	WG1583001	1	11/27/20 07:45	11/27/20 11:23	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1582886	1	11/26/20 11:44	12/01/20 18:22	EL	Mt. Juliet, TN

DU-05-12 L1288001-69 Solid

Collected by: Harrison Schultz | Collected date/time: 11/16/20 13:05 | Received date/time: 11/19/20 09:50

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 3060A/7196A	WG1580587	1	11/26/20 23:30	11/27/20 18:44	BJD	Mt. Juliet, TN
Mercury by Method 7471B	WG1583001	1	11/27/20 07:45	11/27/20 11:30	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1582886	1	11/26/20 11:44	12/01/20 18:25	EL	Mt. Juliet, TN

DU-05-12 L1288001-70 GW

Collected by: Harrison Schultz | Collected date/time: 11/16/20 13:05 | Received date/time: 11/19/20 09:50

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Preparation by Method 1312	WG1581559	1	11/24/20 11:51	11/24/20 11:51	APH	Mt. Juliet, TN
Mercury by Method 7470A	WG1582967	1	11/27/20 06:43	11/27/20 15:15	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1583051	1	11/27/20 09:56	11/27/20 18:37	CCE	Mt. Juliet, TN

DU-05-24 L1288001-71 Solid

Collected by: Harrison Schultz | Collected date/time: 11/16/20 13:05 | Received date/time: 11/19/20 09:50

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 3060A/7196A	WG1580587	1	11/26/20 23:30	11/27/20 18:44	BJD	Mt. Juliet, TN
Mercury by Method 7471B	WG1583001	1	11/27/20 07:45	11/27/20 11:33	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1582889	1	11/26/20 11:46	11/30/20 14:36	EL	Mt. Juliet, TN

DU-09-12 L1288001-72 Solid

Collected by: Harrison Schultz | Collected date/time: 11/16/20 13:50 | Received date/time: 11/19/20 09:50

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 3060A/7196A	WG1580587	1	11/26/20 23:30	11/27/20 18:45	BJD	Mt. Juliet, TN
Mercury by Method 7471B	WG1583001	1	11/27/20 07:45	11/27/20 11:35	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1582889	1	11/26/20 11:46	11/30/20 14:39	EL	Mt. Juliet, TN

DU-09-24 L1288001-73 Solid

Collected by: Harrison Schultz | Collected date/time: 11/16/20 13:50 | Received date/time: 11/19/20 09:50

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 3060A/7196A	WG1580587	1	11/26/20 23:30	11/27/20 18:45	BJD	Mt. Juliet, TN
Mercury by Method 7471B	WG1583001	1	11/27/20 07:45	11/27/20 11:38	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1582889	1	11/26/20 11:46	11/30/20 14:42	EL	Mt. Juliet, TN

DUP-2 L1288001-74 Solid

Collected by: Harrison Schultz | Collected date/time: 11/16/20 13:00 | Received date/time: 11/19/20 09:50

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 3060A/7196A	WG1580587	1	11/26/20 23:30	11/27/20 18:46	BJD	Mt. Juliet, TN
Mercury by Method 7471B	WG1583001	1	11/27/20 07:45	11/27/20 11:40	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1582889	1	11/26/20 11:46	11/30/20 14:50	EL	Mt. Juliet, TN

DU-25-12 L1288001-75 Solid

Collected by: Harrison Schultz | Collected date/time: 11/16/20 14:32 | Received date/time: 11/19/20 09:50

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 3060A/7196A	WG1580587	1	11/26/20 23:30	11/27/20 18:47	BJD	Mt. Juliet, TN
Mercury by Method 7471B	WG1583001	1	11/27/20 07:45	11/27/20 11:43	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1582889	1	11/26/20 11:46	11/30/20 14:53	EL	Mt. Juliet, TN

DU-25-24 L1288001-76 Solid

Collected by: Harrison Schultz | Collected date/time: 11/16/20 14:32 | Received date/time: 11/19/20 09:50

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 3060A/7196A	WG1580587	1	11/26/20 23:30	11/27/20 18:48	BJD	Mt. Juliet, TN
Mercury by Method 7471B	WG1583001	1	11/27/20 07:45	11/27/20 11:45	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1582889	1	11/26/20 11:46	11/30/20 14:56	EL	Mt. Juliet, TN

DU-13-12 L1288001-77 Solid

Collected by: Harrison Schultz | Collected date/time: 11/16/20 14:32 | Received date/time: 11/19/20 09:50

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 3060A/7196A	WG1580587	1	11/26/20 23:30	11/27/20 18:48	BJD	Mt. Juliet, TN
Mercury by Method 7471B	WG1582997	1	11/27/20 16:23	11/30/20 10:06	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1582889	1	11/26/20 11:46	11/30/20 14:58	EL	Mt. Juliet, TN

DU-13-12 L1288001-78 GW

Collected by: Harrison Schultz | Collected date/time: 11/16/20 14:41 | Received date/time: 11/19/20 09:50

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Preparation by Method 1312	WG1581559	1	11/24/20 11:51	11/24/20 11:51	APH	Mt. Juliet, TN
Mercury by Method 7470A	WG1582967	1	11/27/20 06:43	11/27/20 15:17	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1583051	1	11/27/20 09:56	11/27/20 18:39	CCE	Mt. Juliet, TN

DU-13-24 L1288001-79 Solid

Collected by	Collected date/time	Received date/time
Harrison Schultz	11/16/20 14:41	11/19/20 09:50

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 3060A/7196A	WG1580587	1	11/26/20 23:30	11/27/20 18:49	BJD	Mt. Juliet, TN
Mercury by Method 7471B	WG1582997	1	11/27/20 16:23	11/30/20 10:08	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1582889	1	11/26/20 11:46	11/30/20 15:01	EL	Mt. Juliet, TN

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Daphne R Richards

Daphne Richards
Project Manager

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	1.88	E4	0.640	2.00	1	11/26/2020 23:44	WG1580123

Mercury by Method 7471B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	0.0455		0.0180	0.0400	1	11/30/2020 10:38	WG1582998

Metals (ICP) by Method 6010D

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Cadmium	4.88		0.0471	0.500	1	11/30/2020 19:58	WG1582877
Chromium	25.1		0.133	1.00	1	11/30/2020 19:58	WG1582877
Lead	29.5		0.208	0.500	1	11/30/2020 19:58	WG1582877

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	U		0.640	2.00	1	11/26/2020 23:46	WG1580123

Mercury by Method 7471B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	U		0.0180	0.0400	1	11/30/2020 10:46	WG1582998

Metals (ICP) by Method 6010D

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Cadmium	0.142	E4	0.0471	0.500	1	11/30/2020 20:11	WG1582877
Chromium	12.7		0.133	1.00	1	11/30/2020 20:11	WG1582877
Lead	6.44		0.208	0.500	1	11/30/2020 20:11	WG1582877

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	U		0.640	2.00	1	11/26/2020 23:46	WG1580123

Mercury by Method 7471B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	U		0.0180	0.0400	1	11/30/2020 10:49	WG1582998

Metals (ICP) by Method 6010D

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Cadmium	0.178	E4	0.0471	0.500	1	11/30/2020 20:14	WG1582877
Chromium	12.0		0.133	1.00	1	11/30/2020 20:14	WG1582877
Lead	7.89		0.208	0.500	1	11/30/2020 20:14	WG1582877

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	U		0.640	2.00	1	11/26/2020 23:47	WG1580123

Mercury by Method 7471B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	0.0192	E4	0.0180	0.0400	1	11/30/2020 10:51	WG1582998

Metals (ICP) by Method 6010D

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Cadmium	0.163	E4	0.0471	0.500	1	11/30/2020 20:17	WG1582877
Chromium	14.4		0.133	1.00	1	11/30/2020 20:17	WG1582877
Lead	8.60		0.208	0.500	1	11/30/2020 20:17	WG1582877

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	2.72		0.640	2.00	1	11/27/2020 02:21	WG1580376

Mercury by Method 7471B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	0.0825		0.0180	0.0400	1	11/30/2020 10:54	WG1582998

Metals (ICP) by Method 6010D

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Cadmium	13.9		0.0471	0.500	1	11/30/2020 20:25	WG1582877
Chromium	33.4		0.133	1.00	1	11/30/2020 20:25	WG1582877
Lead	51.2		0.208	0.500	1	11/30/2020 20:25	WG1582877

Preparation by Method 1312

Analyte	Result	Qualifier	Prep date / time	Batch
SPLP Extraction	-		11/24/2020 11:51:00 AM	WG1581559
Fluid	1		11/24/2020 11:51:00 AM	WG1581559
Final pH	8.23		11/24/2020 11:51:00 AM	WG1581559

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury	U		0.100	0.200	1	11/27/2020 14:21	WG1582967

Metals (ICP) by Method 6010D

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Cadmium	U		0.479	2.00	1	11/27/2020 18:13	WG1583051
Chromium	10.2		1.40	10.0	1	11/27/2020 18:13	WG1583051
Lead	U		2.99	6.00	1	11/27/2020 18:13	WG1583051

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	U		0.640	2.00	1	11/27/2020 02:21	WG1580376

Mercury by Method 7471B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	0.0263	E4	0.0180	0.0400	1	11/30/2020 10:56	WG1582998

Metals (ICP) by Method 6010D

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Cadmium	1.79		0.0471	0.500	1	11/30/2020 20:28	WG1582877
Chromium	11.3		0.133	1.00	1	11/30/2020 20:28	WG1582877
Lead	12.3		0.208	0.500	1	11/30/2020 20:28	WG1582877

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	U		0.640	2.00	1	11/27/2020 02:21	WG1580376

Mercury by Method 7471B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	U		0.0180	0.0400	1	11/30/2020 10:59	WG1582998

Metals (ICP) by Method 6010D

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Cadmium	2.04		0.0471	0.500	1	11/30/2020 20:31	WG1582877
Chromium	17.1		0.133	1.00	1	11/30/2020 20:31	WG1582877
Lead	14.9		0.208	0.500	1	11/30/2020 20:31	WG1582877

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	U		0.640	2.00	1	11/27/2020 02:22	WG1580376

Mercury by Method 7471B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	U		0.0180	0.0400	1	11/30/2020 11:01	WG1582998

Metals (ICP) by Method 6010D

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Cadmium	1.49		0.0471	0.500	1	11/30/2020 20:33	WG1582877
Chromium	11.0		0.133	1.00	1	11/30/2020 20:33	WG1582877
Lead	21.4		0.208	0.500	1	11/30/2020 20:33	WG1582877

Preparation by Method 1312

Analyte	Result	Qualifier	Prep date / time	Batch
SPLP Extraction	-		11/24/2020 11:51:00 AM	WG1581559
Fluid	1		11/24/2020 11:51:00 AM	WG1581559
Final pH	7.81		11/24/2020 11:51:00 AM	WG1581559

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury	U		0.100	0.200	1	11/27/2020 14:27	WG1582967

Metals (ICP) by Method 6010D

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Cadmium	2.25		0.479	2.00	1	11/27/2020 18:15	WG1583051
Chromium	15.5		1.40	10.0	1	11/27/2020 18:15	WG1583051
Lead	39.4		2.99	6.00	1	11/27/2020 18:15	WG1583051

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	U		0.640	2.00	1	11/27/2020 02:22	WG1580376

Mercury by Method 7471B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	U		0.0180	0.0400	1	11/30/2020 11:09	WG1582998

Metals (ICP) by Method 6010D

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Cadmium	0.0935	E4	0.0471	0.500	1	11/30/2020 20:36	WG1582877
Chromium	8.81		0.133	1.00	1	11/30/2020 20:36	WG1582877
Lead	5.99		0.208	0.500	1	11/30/2020 20:36	WG1582877

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	U		0.640	2.00	1	11/27/2020 02:22	WG1580376

Mercury by Method 7471B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	U		0.0180	0.0400	1	11/30/2020 11:12	WG1582998

Metals (ICP) by Method 6010D

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Cadmium	0.109	E4	0.0471	0.500	1	11/30/2020 20:39	WG1582877
Chromium	10.6		0.133	1.00	1	11/30/2020 20:39	WG1582877
Lead	7.15		0.208	0.500	1	11/30/2020 20:39	WG1582877

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	U		0.640	2.00	1	11/27/2020 02:23	WG1580376

Mercury by Method 7471B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	0.0213	E4	0.0180	0.0400	1	11/30/2020 11:14	WG1582998

Metals (ICP) by Method 6010D

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Cadmium	2.11		0.0471	0.500	1	11/30/2020 20:42	WG1582877
Chromium	13.5		0.133	1.00	1	11/30/2020 20:42	WG1582877
Lead	13.2		0.208	0.500	1	11/30/2020 20:42	WG1582877

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	0.800	E4	0.640	2.00	1	11/27/2020 02:25	WG1580376

Mercury by Method 7471B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	0.0221	E4	0.0180	0.0400	1	11/30/2020 11:17	WG1582998

Metals (ICP) by Method 6010D

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Cadmium	2.43		0.0471	0.500	1	11/30/2020 20:44	WG1582877
Chromium	15.1		0.133	1.00	1	11/30/2020 20:44	WG1582877
Lead	13.4		0.208	0.500	1	11/30/2020 20:44	WG1582877

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	U		0.640	2.00	1	11/27/2020 02:26	WG1580376

Mercury by Method 7471B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	U		0.0180	0.0400	1	11/30/2020 11:19	WG1582998

Metals (ICP) by Method 6010D

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Cadmium	0.211	E4	0.0471	0.500	1	11/30/2020 20:47	WG1582877
Chromium	13.3		0.133	1.00	1	11/30/2020 20:47	WG1582877
Lead	8.91		0.208	0.500	1	11/30/2020 20:47	WG1582877

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	U		0.640	2.00	1	11/27/2020 02:52	WG1580376

Mercury by Method 7471B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	U		0.0180	0.0400	1	11/30/2020 11:22	WG1582998

Metals (ICP) by Method 6010D

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Cadmium	0.113	E4	0.0471	0.500	1	11/30/2020 20:50	WG1582877
Chromium	12.3		0.133	1.00	1	11/30/2020 20:50	WG1582877
Lead	7.76		0.208	0.500	1	11/30/2020 20:50	WG1582877

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	0.720	E4	0.640	2.00	1	11/27/2020 02:26	WG1580376

Mercury by Method 7471B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	0.279		0.0180	0.0400	1	11/30/2020 11:25	WG1582998

Metals (ICP) by Method 6010D

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Cadmium	42.7		0.0471	0.500	1	11/30/2020 20:58	WG1582877
Chromium	71.5		0.133	1.00	1	11/30/2020 20:58	WG1582877
Lead	130		0.208	0.500	1	11/30/2020 20:58	WG1582877

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	U		0.640	2.00	1	11/27/2020 02:29	WG1580376

Mercury by Method 7471B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	U		0.0180	0.0400	1	11/30/2020 11:27	WG1582998

Metals (ICP) by Method 6010D

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Cadmium	0.197	E4	0.0471	0.500	1	11/30/2020 21:01	WG1582877
Chromium	10.6		0.133	1.00	1	11/30/2020 21:01	WG1582877
Lead	7.46		0.208	0.500	1	11/30/2020 21:01	WG1582877

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	11.8		0.640	2.00	1	11/27/2020 02:29	WG1580376

Mercury by Method 7471B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	0.449		0.0180	0.0400	1	11/30/2020 11:30	WG1582998

Metals (ICP) by Method 6010D

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Cadmium	85.9		0.0471	0.500	1	11/30/2020 21:04	WG1582877
Chromium	258		0.133	1.00	1	11/30/2020 21:04	WG1582877
Lead	340		0.208	0.500	1	11/30/2020 21:04	WG1582877

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	U		0.640	2.00	1	11/27/2020 02:30	WG1580376

Mercury by Method 7471B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	0.0204	E4	0.0180	0.0400	1	11/30/2020 11:32	WG1582998

Metals (ICP) by Method 6010D

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Cadmium	1.43		0.0471	0.500	1	11/30/2020 21:07	WG1582877
Chromium	14.0		0.133	1.00	1	11/30/2020 21:07	WG1582877
Lead	12.0		0.208	0.500	1	11/30/2020 21:07	WG1582877

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	2.96		0.640	2.00	1	11/27/2020 02:30	WG1580376

Mercury by Method 7471B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	0.500		0.0180	0.0400	1	11/30/2020 11:40	WG1582998

Metals (ICP) by Method 6010D

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Cadmium	59.3		0.0471	0.500	1	12/01/2020 14:27	WG1582880
Chromium	71.7	M1	0.133	1.00	1	12/01/2020 14:27	WG1582880
Lead	167	M1 R5	0.208	0.500	1	12/01/2020 14:27	WG1582880

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	U		0.640	2.00	1	11/27/2020 02:30	WG1580376

Mercury by Method 7471B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	U		0.0180	0.0400	1	11/30/2020 11:43	WG1582998

Metals (ICP) by Method 6010D

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Cadmium	0.273	E4	0.0471	0.500	1	11/30/2020 21:10	WG1582877
Chromium	10.0		0.133	1.00	1	11/30/2020 21:10	WG1582877
Lead	6.91		0.208	0.500	1	11/30/2020 21:10	WG1582877

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	U		0.640	2.00	1	11/27/2020 02:31	WG1580376

Mercury by Method 7471B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	0.0188	E4	0.0180	0.0400	1	11/27/2020 12:24	WG1583002

Metals (ICP) by Method 6010D

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Cadmium	0.264	E4	0.0471	0.500	1	11/30/2020 21:12	WG1582877
Chromium	15.8		0.133	1.00	1	11/30/2020 21:12	WG1582877
Lead	10.6		0.208	0.500	1	11/30/2020 21:12	WG1582877

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	U		0.640	2.00	1	11/27/2020 02:31	WG1580376

Mercury by Method 7471B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	0.0215	E4	0.0180	0.0400	1	11/27/2020 12:31	WG1583002

Metals (ICP) by Method 6010D

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Cadmium	0.163	E4	0.0471	0.500	1	12/01/2020 14:42	WG1582880
Chromium	15.6		0.133	1.00	1	12/01/2020 14:42	WG1582880
Lead	8.80		0.208	0.500	1	12/01/2020 14:42	WG1582880

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	U		0.640	2.00	1	11/27/2020 02:32	WG1580376

Mercury by Method 7471B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	0.0367	E4	0.0180	0.0400	1	11/27/2020 12:34	WG1583002

Metals (ICP) by Method 6010D

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Cadmium	0.191	E4	0.0471	0.500	1	12/01/2020 14:44	WG1582880
Chromium	12.0		0.133	1.00	1	12/01/2020 14:44	WG1582880
Lead	7.77		0.208	0.500	1	12/01/2020 14:44	WG1582880

Preparation by Method 1312

Analyte	Result	Qualifier	Prep date / time	Batch
SPLP Extraction	-		11/24/2020 11:51:00 AM	WG1581559
Fluid	1		11/24/2020 11:51:00 AM	WG1581559
Final pH	8.83		11/24/2020 11:51:00 AM	WG1581559

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury	0.114	E4	0.100	0.200	1	11/27/2020 14:59	WG1582967

Metals (ICP) by Method 6010D

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Cadmium	1.28	E4	0.479	2.00	1	11/27/2020 18:18	WG1583051
Chromium	16.3		1.40	10.0	1	11/27/2020 18:18	WG1583051
Lead	9.92	B1	2.99	6.00	1	11/27/2020 18:18	WG1583051

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	U		0.640	2.00	1	11/27/2020 02:32	WG1580376

Mercury by Method 7471B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	U		0.0180	0.0400	1	11/27/2020 12:36	WG1583002

Metals (ICP) by Method 6010D

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Cadmium	0.125	E4	0.0471	0.500	1	12/01/2020 14:47	WG1582880
Chromium	4.86		0.133	1.00	1	12/01/2020 14:47	WG1582880
Lead	3.76		0.208	0.500	1	12/01/2020 14:47	WG1582880

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	5.16		0.640	2.00	1	11/25/2020 19:31	WG1580585

Mercury by Method 7471B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	0.740		0.0180	0.0400	1	11/27/2020 12:39	WG1583002

Metals (ICP) by Method 6010D

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Cadmium	97.8		0.0471	0.500	1	12/01/2020 14:56	WG1582880
Chromium	422		0.133	1.00	1	12/01/2020 14:56	WG1582880
Lead	515		0.208	0.500	1	12/01/2020 14:56	WG1582880

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	U		0.640	2.00	1	11/25/2020 19:31	WG1580585

Mercury by Method 7471B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	U		0.0180	0.0400	1	11/27/2020 12:41	WG1583002

Metals (ICP) by Method 6010D

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Cadmium	0.177	E4	0.0471	0.500	1	12/01/2020 14:59	WG1582880
Chromium	6.91		0.133	1.00	1	12/01/2020 14:59	WG1582880
Lead	5.06		0.208	0.500	1	12/01/2020 14:59	WG1582880

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	U		0.640	2.00	1	11/25/2020 19:32	WG1580585

Mercury by Method 7471B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	U		0.0180	0.0400	1	11/27/2020 12:44	WG1583002

Metals (ICP) by Method 6010D

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Cadmium	0.113	E4	0.0471	0.500	1	12/01/2020 15:03	WG1582880
Chromium	5.14		0.133	1.00	1	12/01/2020 15:03	WG1582880
Lead	3.83		0.208	0.500	1	12/01/2020 15:03	WG1582880

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	0.675	E4	0.640	2.00	1	11/27/2020 19:31	WG1582941

Mercury by Method 7471B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	0.0745		0.0180	0.0400	1	11/27/2020 12:46	WG1583002

Metals (ICP) by Method 6010D

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Cadmium	8.31		0.0471	0.500	1	12/01/2020 15:05	WG1582880
Chromium	19.6		0.133	1.00	1	12/01/2020 15:05	WG1582880
Lead	31.7		0.208	0.500	1	12/01/2020 15:05	WG1582880

Preparation by Method 1312

Analyte	Result	Qualifier	Prep date / time	Batch
SPLP Extraction	-		11/24/2020 11:51:00 AM	WG1581559
Fluid	1		11/24/2020 11:51:00 AM	WG1581559
Final pH	8.91		11/24/2020 11:51:00 AM	WG1581559

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury	U		0.100	0.200	1	11/27/2020 15:01	WG1582967

Metals (ICP) by Method 6010D

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Cadmium	U		0.479	2.00	1	11/27/2020 18:21	WG1583051
Chromium	2.59	E4	1.40	10.0	1	11/27/2020 18:21	WG1583051
Lead	3.89	B1 E4	2.99	6.00	1	11/27/2020 18:21	WG1583051

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	U		0.640	2.00	1	11/27/2020 19:32	WG1582941

Mercury by Method 7471B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	U		0.0180	0.0400	1	11/27/2020 12:49	WG1583002

Metals (ICP) by Method 6010D

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Cadmium	0.0823	E4	0.0471	0.500	1	12/01/2020 15:08	WG1582880
Chromium	6.13		0.133	1.00	1	12/01/2020 15:08	WG1582880
Lead	3.48		0.208	0.500	1	12/01/2020 15:08	WG1582880

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	U		0.640	2.00	1	11/27/2020 19:32	WG1582941

Mercury by Method 7471B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	U		0.0180	0.0400	1	11/27/2020 12:51	WG1583002

Metals (ICP) by Method 6010D

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Cadmium	0.0972	E4	0.0471	0.500	1	12/01/2020 15:11	WG1582880
Chromium	6.85		0.133	1.00	1	12/01/2020 15:11	WG1582880
Lead	4.37		0.208	0.500	1	12/01/2020 15:11	WG1582880

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	7.61		0.640	2.00	1	11/27/2020 19:33	WG1582941

Mercury by Method 7471B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	0.182		0.0180	0.0400	1	11/27/2020 12:54	WG1583002

Metals (ICP) by Method 6010D

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Cadmium	38.3		0.0471	0.500	1	12/01/2020 15:14	WG1582880
Chromium	126		0.133	1.00	1	12/01/2020 15:14	WG1582880
Lead	251		0.208	0.500	1	12/01/2020 15:14	WG1582880

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	U		0.640	2.00	1	11/27/2020 19:34	WG1582941

Mercury by Method 7471B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	0.0431		0.0180	0.0400	1	11/27/2020 13:02	WG1583002

Metals (ICP) by Method 6010D

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Cadmium	3.25		0.0471	0.500	1	12/01/2020 15:17	WG1582880
Chromium	15.5		0.133	1.00	1	12/01/2020 15:17	WG1582880
Lead	17.7		0.208	0.500	1	12/01/2020 15:17	WG1582880

Preparation by Method 1312

Analyte	Result	Qualifier	Prep date / time	Batch
SPLP Extraction	-		11/24/2020 11:51:00 AM	WG1581559
Fluid	1		11/24/2020 11:51:00 AM	WG1581559
Final pH	8.42		11/24/2020 11:51:00 AM	WG1581559

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury	0.120	E4	0.100	0.200	1	11/27/2020 15:03	WG1582967

Metals (ICP) by Method 6010D

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Cadmium	2.71		0.479	2.00	1	11/27/2020 18:03	WG1583051
Chromium	13.3		1.40	10.0	1	11/27/2020 18:03	WG1583051
Lead	13.1	B1	2.99	6.00	1	11/27/2020 18:03	WG1583051

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	0.906	E4	0.640	2.00	1	11/27/2020 19:34	WG1582941

Mercury by Method 7471B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	0.0519		0.0180	0.0400	1	11/27/2020 13:04	WG1583002

Metals (ICP) by Method 6010D

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Cadmium	5.62		0.0471	0.500	1	12/01/2020 15:20	WG1582880
Chromium	20.2		0.133	1.00	1	12/01/2020 15:20	WG1582880
Lead	25.2		0.208	0.500	1	12/01/2020 15:20	WG1582880

Preparation by Method 1312

Analyte	Result	Qualifier	Prep date / time	Batch
SPLP Extraction	-		11/24/2020 11:51:00 AM	WG1581559
Fluid	1		11/24/2020 11:51:00 AM	WG1581559
Final pH	7.67		11/24/2020 11:51:00 AM	WG1581559

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury	0.115	E4	0.100	0.200	1	11/27/2020 15:05	WG1582967

Metals (ICP) by Method 6010D

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Cadmium	0.891	E4	0.479	2.00	1	11/27/2020 18:29	WG1583051
Chromium	15.8		1.40	10.0	1	11/27/2020 18:29	WG1583051
Lead	9.23	B1	2.99	6.00	1	11/27/2020 18:29	WG1583051

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	U		0.640	2.00	1	11/27/2020 19:35	WG1582941

Mercury by Method 7471B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	0.0197	E4	0.0180	0.0400	1	11/27/2020 13:07	WG1583002

Metals (ICP) by Method 6010D

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Cadmium	0.236	E4	0.0471	0.500	1	12/01/2020 15:23	WG1582880
Chromium	17.0		0.133	1.00	1	12/01/2020 15:23	WG1582880
Lead	10.3		0.208	0.500	1	12/01/2020 15:23	WG1582880

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	U		0.640	2.00	1	11/27/2020 19:35	WG1582941

Mercury by Method 7471B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	0.0258	E4	0.0180	0.0400	1	11/27/2020 13:09	WG1583002

Metals (ICP) by Method 6010D

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Cadmium	0.238	E4	0.0471	0.500	1	12/01/2020 15:31	WG1582880
Chromium	17.3		0.133	1.00	1	12/01/2020 15:31	WG1582880
Lead	10.3		0.208	0.500	1	12/01/2020 15:31	WG1582880

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	U		0.640	2.00	1	11/27/2020 17:37	WG1580586

Mercury by Method 7471B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	0.233		0.0180	0.0400	1	11/27/2020 13:12	WG1583002

Metals (ICP) by Method 6010D

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Cadmium	33.1		0.0471	0.500	1	12/01/2020 15:34	WG1582880
Chromium	55.6		0.133	1.00	1	12/01/2020 15:34	WG1582880
Lead	102		0.208	0.500	1	12/01/2020 15:34	WG1582880

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	U		0.640	2.00	1	11/27/2020 17:37	WG1580586

Mercury by Method 7471B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	0.697	M2 R5	0.0180	0.0400	1	11/27/2020 12:16	WG1583002

Metals (ICP) by Method 6010D

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Cadmium	123		0.0471	0.500	1	12/01/2020 17:08	WG1582886
Chromium	227	M1	0.133	1.00	1	12/01/2020 17:08	WG1582886
Lead	505	M3	0.208	0.500	1	12/01/2020 17:08	WG1582886

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	U		0.640	2.00	1	11/27/2020 17:38	WG1580586

Mercury by Method 7471B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	0.0638		0.0180	0.0400	1	11/27/2020 13:14	WG1583002

Metals (ICP) by Method 6010D

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Cadmium	7.80		0.0471	0.500	1	12/01/2020 15:37	WG1582880
Chromium	25.2		0.133	1.00	1	12/01/2020 15:37	WG1582880
Lead	26.1		0.208	0.500	1	12/01/2020 15:37	WG1582880

Preparation by Method 1312

Analyte	Result	Qualifier	Prep date / time	Batch
SPLP Extraction	-		11/24/2020 11:51:00 AM	WG1581559
Fluid	1		11/24/2020 11:51:00 AM	WG1581559
Final pH	8.73		11/24/2020 11:51:00 AM	WG1581559

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury	0.108	E4	0.100	0.200	1	11/27/2020 15:07	WG1582967

Metals (ICP) by Method 6010D

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Cadmium	2.20		0.479	2.00	1	11/27/2020 18:31	WG1583051
Chromium	5.47	E4	1.40	10.0	1	11/27/2020 18:31	WG1583051
Lead	5.82	B1 E4	2.99	6.00	1	11/27/2020 18:31	WG1583051

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	U		0.640	2.00	1	11/27/2020 17:38	WG1580586

Mercury by Method 7471B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	0.0205	E4	0.0180	0.0400	1	11/27/2020 13:17	WG1583002

Metals (ICP) by Method 6010D

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Cadmium	0.124	E4	0.0471	0.500	1	12/01/2020 15:40	WG1582880
Chromium	11.4		0.133	1.00	1	12/01/2020 15:40	WG1582880
Lead	6.35		0.208	0.500	1	12/01/2020 15:40	WG1582880

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	U		0.640	2.00	1	11/27/2020 17:38	WG1580586

Mercury by Method 7471B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	0.0222	E4	0.0180	0.0400	1	11/27/2020 13:19	WG1583002

Metals (ICP) by Method 6010D

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Cadmium	0.255	E4	0.0471	0.500	1	12/01/2020 15:42	WG1582880
Chromium	11.1		0.133	1.00	1	12/01/2020 15:42	WG1582880
Lead	7.60		0.208	0.500	1	12/01/2020 15:42	WG1582880

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	U		0.640	2.00	1	11/27/2020 17:38	WG1580586

Mercury by Method 7471B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	U		0.0180	0.0400	1	11/30/2020 08:38	WG1582995

Metals (ICP) by Method 6010D

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Cadmium	0.125	E4	0.0471	0.500	1	12/01/2020 15:45	WG1582880
Chromium	8.11		0.133	1.00	1	12/01/2020 15:45	WG1582880
Lead	5.62		0.208	0.500	1	12/01/2020 15:45	WG1582880

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	U		0.640	2.00	1	11/27/2020 17:38	WG1580586

Mercury by Method 7471B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	U		0.0180	0.0400	1	11/30/2020 08:41	WG1582995

Metals (ICP) by Method 6010D

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Cadmium	0.157	E4	0.0471	0.500	1	12/01/2020 17:22	WG1582886
Chromium	11.0		0.133	1.00	1	12/01/2020 17:22	WG1582886
Lead	7.97		0.208	0.500	1	12/01/2020 17:22	WG1582886

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	U		0.640	2.00	1	11/27/2020 17:39	WG1580586

Mercury by Method 7471B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	U		0.0180	0.0400	1	11/30/2020 08:43	WG1582995

Metals (ICP) by Method 6010D

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Cadmium	0.133	E4	0.0471	0.500	1	12/01/2020 17:25	WG1582886
Chromium	5.93		0.133	1.00	1	12/01/2020 17:25	WG1582886
Lead	5.53		0.208	0.500	1	12/01/2020 17:25	WG1582886

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	U		0.640	2.00	1	11/27/2020 17:39	WG1580586

Mercury by Method 7471B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	U		0.0180	0.0400	1	11/30/2020 08:46	WG1582995

Metals (ICP) by Method 6010D

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Cadmium	0.205	E4	0.0471	0.500	1	12/01/2020 17:28	WG1582886
Chromium	17.0		0.133	1.00	1	12/01/2020 17:28	WG1582886
Lead	10.3		0.208	0.500	1	12/01/2020 17:28	WG1582886

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	U		0.640	2.00	1	11/27/2020 17:39	WG1580586

Mercury by Method 7471B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	0.0337	E4	0.0180	0.0400	1	11/27/2020 14:04	WG1583214

Metals (ICP) by Method 6010D

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Cadmium	U		0.0471	0.500	1	12/01/2020 17:37	WG1582886
Chromium	17.3		0.133	1.00	1	12/01/2020 17:37	WG1582886
Lead	10.6		0.208	0.500	1	12/01/2020 17:37	WG1582886

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	U		0.640	2.00	1	11/27/2020 17:40	WG1580586

Mercury by Method 7471B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	U		0.0180	0.0400	1	11/30/2020 08:48	WG1582995

Metals (ICP) by Method 6010D

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Cadmium	0.789		0.0471	0.500	1	12/01/2020 17:40	WG1582886
Chromium	9.45		0.133	1.00	1	12/01/2020 17:40	WG1582886
Lead	8.25		0.208	0.500	1	12/01/2020 17:40	WG1582886

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	U		0.640	2.00	1	11/27/2020 17:41	WG1580586

Mercury by Method 7471B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	U		0.0180	0.0400	1	11/30/2020 08:51	WG1582995

Metals (ICP) by Method 6010D

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Cadmium	0.163	E4	0.0471	0.500	1	12/01/2020 17:42	WG1582886
Chromium	14.2		0.133	1.00	1	12/01/2020 17:42	WG1582886
Lead	9.58		0.208	0.500	1	12/01/2020 17:42	WG1582886

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	U		0.640	2.00	1	11/27/2020 17:41	WG1580586

Mercury by Method 7471B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	U		0.0180	0.0400	1	11/30/2020 08:53	WG1582995

Metals (ICP) by Method 6010D

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Cadmium	0.367	E4	0.0471	0.500	1	12/01/2020 17:45	WG1582886
Chromium	13.9		0.133	1.00	1	12/01/2020 17:45	WG1582886
Lead	9.18		0.208	0.500	1	12/01/2020 17:45	WG1582886

Preparation by Method 1312

Analyte	Result	Qualifier	Prep date / time	Batch
SPLP Extraction	-		11/24/2020 11:51:00 AM	WG1581559
Fluid	1		11/24/2020 11:51:00 AM	WG1581559
Final pH	8.90		11/24/2020 11:51:00 AM	WG1581559

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury	0.117	E4	0.100	0.200	1	11/27/2020 15:13	WG1582967

Metals (ICP) by Method 6010D

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Cadmium	U		0.479	2.00	1	11/27/2020 18:34	WG1583051
Chromium	13.7		1.40	10.0	1	11/27/2020 18:34	WG1583051
Lead	7.02	B1	2.99	6.00	1	11/27/2020 18:34	WG1583051

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	U		0.640	2.00	1	11/27/2020 17:41	WG1580586

Mercury by Method 7471B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	U		0.0180	0.0400	1	11/30/2020 08:56	WG1582995

Metals (ICP) by Method 6010D

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Cadmium	0.191	E4	0.0471	0.500	1	12/01/2020 17:48	WG1582886
Chromium	16.7		0.133	1.00	1	12/01/2020 17:48	WG1582886
Lead	9.45		0.208	0.500	1	12/01/2020 17:48	WG1582886

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	U		0.640	2.00	1	11/27/2020 17:41	WG1580586

Mercury by Method 7471B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	U		0.0180	0.0400	1	11/30/2020 08:59	WG1582995

Metals (ICP) by Method 6010D

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Cadmium	0.146	E4	0.0471	0.500	1	12/01/2020 17:51	WG1582886
Chromium	14.3		0.133	1.00	1	12/01/2020 17:51	WG1582886
Lead	8.68		0.208	0.500	1	12/01/2020 17:51	WG1582886

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	U		0.640	2.00	1	11/27/2020 17:42	WG1580586

Mercury by Method 7471B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	0.0240	E4	0.0180	0.0400	1	11/30/2020 09:06	WG1582995

Metals (ICP) by Method 6010D

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Cadmium	0.830		0.0471	0.500	1	12/01/2020 17:54	WG1582886
Chromium	21.9		0.133	1.00	1	12/01/2020 17:54	WG1582886
Lead	12.7		0.208	0.500	1	12/01/2020 17:54	WG1582886

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	U		0.640	2.00	1	11/27/2020 17:42	WG1580586

Mercury by Method 7471B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	0.0267	E4	0.0180	0.0400	1	11/30/2020 09:09	WG1582995

Metals (ICP) by Method 6010D

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Cadmium	0.638		0.0471	0.500	1	12/01/2020 17:56	WG1582886
Chromium	20.0		0.133	1.00	1	12/01/2020 17:56	WG1582886
Lead	12.3		0.208	0.500	1	12/01/2020 17:56	WG1582886

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	U		0.640	2.00	1	11/27/2020 17:42	WG1580586

Mercury by Method 7471B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	U		0.0180	0.0400	1	11/30/2020 09:11	WG1582995

Metals (ICP) by Method 6010D

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Cadmium	0.979		0.0471	0.500	1	12/01/2020 17:59	WG1582886
Chromium	10.9		0.133	1.00	1	12/01/2020 17:59	WG1582886
Lead	7.86		0.208	0.500	1	12/01/2020 17:59	WG1582886

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	U		0.640	2.00	1	11/27/2020 17:42	WG1580586

Mercury by Method 7471B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	U		0.0180	0.0400	1	11/30/2020 09:14	WG1582995

Metals (ICP) by Method 6010D

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Cadmium	0.210	E4	0.0471	0.500	1	12/01/2020 18:02	WG1582886
Chromium	16.2		0.133	1.00	1	12/01/2020 18:02	WG1582886
Lead	8.36		0.208	0.500	1	12/01/2020 18:02	WG1582886

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	U		0.640	2.00	1	11/27/2020 17:43	WG1580586

Mercury by Method 7471B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	0.0356	E4	0.0180	0.0400	1	11/27/2020 11:05	WG1583001

Metals (ICP) by Method 6010D

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Cadmium	0.489	E4	0.0471	0.500	1	11/30/2020 14:23	WG1582889
Chromium	21.0		0.133	1.00	1	11/30/2020 14:23	WG1582889
Lead	13.2		0.208	0.500	1	11/30/2020 14:23	WG1582889

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	U		0.640	2.00	1	11/27/2020 18:41	WG1580587

Mercury by Method 7471B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	0.0230	E4	0.0180	0.0400	1	11/27/2020 11:12	WG1583001

Metals (ICP) by Method 6010D

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Cadmium	0.376	E4	0.0471	0.500	1	12/01/2020 18:11	WG1582886
Chromium	19.3		0.133	1.00	1	12/01/2020 18:11	WG1582886
Lead	11.7		0.208	0.500	1	12/01/2020 18:11	WG1582886

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	U		0.640	2.00	1	11/27/2020 18:42	WG1580587

Mercury by Method 7471B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	0.0241	E4	0.0180	0.0400	1	11/27/2020 11:15	WG1583001

Metals (ICP) by Method 6010D

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Cadmium	0.886		0.0471	0.500	1	12/01/2020 18:13	WG1582886
Chromium	12.6		0.133	1.00	1	12/01/2020 18:13	WG1582886
Lead	10.7		0.208	0.500	1	12/01/2020 18:13	WG1582886

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	U		0.640	2.00	1	11/27/2020 18:42	WG1580587

Mercury by Method 7471B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	U		0.0180	0.0400	1	11/27/2020 11:18	WG1583001

Metals (ICP) by Method 6010D

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Cadmium	0.210	E4	0.0471	0.500	1	12/01/2020 18:16	WG1582886
Chromium	12.7		0.133	1.00	1	12/01/2020 18:16	WG1582886
Lead	8.63		0.208	0.500	1	12/01/2020 18:16	WG1582886

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	U		0.640	2.00	1	11/27/2020 18:43	WG1580587

Mercury by Method 7471B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	0.0279	E4	0.0180	0.0400	1	11/27/2020 11:20	WG1583001

Metals (ICP) by Method 6010D

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Cadmium	1.39		0.0471	0.500	1	12/01/2020 18:19	WG1582886
Chromium	14.7		0.133	1.00	1	12/01/2020 18:19	WG1582886
Lead	12.4		0.208	0.500	1	12/01/2020 18:19	WG1582886

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	U		0.640	2.00	1	11/27/2020 18:43	WG1580587

Mercury by Method 7471B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	0.0263	E4	0.0180	0.0400	1	11/27/2020 11:23	WG1583001

Metals (ICP) by Method 6010D

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Cadmium	0.736		0.0471	0.500	1	12/01/2020 18:22	WG1582886
Chromium	10.9		0.133	1.00	1	12/01/2020 18:22	WG1582886
Lead	6.91		0.208	0.500	1	12/01/2020 18:22	WG1582886

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	U		0.640	2.00	1	11/27/2020 18:44	WG1580587

Mercury by Method 7471B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	0.0260	E4	0.0180	0.0400	1	11/27/2020 11:30	WG1583001

Metals (ICP) by Method 6010D

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Cadmium	2.85		0.0471	0.500	1	12/01/2020 18:25	WG1582886
Chromium	15.7		0.133	1.00	1	12/01/2020 18:25	WG1582886
Lead	14.0		0.208	0.500	1	12/01/2020 18:25	WG1582886

Preparation by Method 1312

Analyte	Result	Qualifier	Prep date / time	Batch
SPLP Extraction	-		11/24/2020 11:51:00 AM	WG1581559
Fluid	1		11/24/2020 11:51:00 AM	WG1581559
Final pH	7.66		11/24/2020 11:51:00 AM	WG1581559

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury	0.109	E4	0.100	0.200	1	11/27/2020 15:15	WG1582967

Metals (ICP) by Method 6010D

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Cadmium	2.48		0.479	2.00	1	11/27/2020 18:37	WG1583051
Chromium	7.43	E4	1.40	10.0	1	11/27/2020 18:37	WG1583051
Lead	9.82	B1	2.99	6.00	1	11/27/2020 18:37	WG1583051

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	U		0.640	2.00	1	11/27/2020 18:44	WG1580587

Mercury by Method 7471B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	0.0197	E4	0.0180	0.0400	1	11/27/2020 11:33	WG1583001

Metals (ICP) by Method 6010D

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Cadmium	0.0930	E4	0.0471	0.500	1	11/30/2020 14:36	WG1582889
Chromium	10.2		0.133	1.00	1	11/30/2020 14:36	WG1582889
Lead	6.24		0.208	0.500	1	11/30/2020 14:36	WG1582889

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	U		0.640	2.00	1	11/27/2020 18:45	WG1580587

Mercury by Method 7471B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	0.0193	E4	0.0180	0.0400	1	11/27/2020 11:35	WG1583001

Metals (ICP) by Method 6010D

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Cadmium	0.958		0.0471	0.500	1	11/30/2020 14:39	WG1582889
Chromium	14.1		0.133	1.00	1	11/30/2020 14:39	WG1582889
Lead	10.7		0.208	0.500	1	11/30/2020 14:39	WG1582889

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	0.996	E4	0.640	2.00	1	11/27/2020 18:45	WG1580587

Mercury by Method 7471B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	0.0919		0.0180	0.0400	1	11/27/2020 11:38	WG1583001

Metals (ICP) by Method 6010D

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Cadmium	26.0		0.0471	0.500	1	11/30/2020 14:42	WG1582889
Chromium	32.3		0.133	1.00	1	11/30/2020 14:42	WG1582889
Lead	41.7		0.208	0.500	1	11/30/2020 14:42	WG1582889

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	1.40	E4	0.640	2.00	1	11/27/2020 18:46	WG1580587

Mercury by Method 7471B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	0.128		0.0180	0.0400	1	11/27/2020 11:40	WG1583001

Metals (ICP) by Method 6010D

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Cadmium	45.6		0.0471	0.500	1	11/30/2020 14:50	WG1582889
Chromium	77.8		0.133	1.00	1	11/30/2020 14:50	WG1582889
Lead	49.0		0.208	0.500	1	11/30/2020 14:50	WG1582889

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	U		0.640	2.00	1	11/27/2020 18:47	WG1580587

Mercury by Method 7471B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	0.0417		0.0180	0.0400	1	11/27/2020 11:43	WG1583001

Metals (ICP) by Method 6010D

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Cadmium	10.1		0.0471	0.500	1	11/30/2020 14:53	WG1582889
Chromium	25.3		0.133	1.00	1	11/30/2020 14:53	WG1582889
Lead	27.8		0.208	0.500	1	11/30/2020 14:53	WG1582889

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	U		0.640	2.00	1	11/27/2020 18:48	WG1580587

Mercury by Method 7471B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	0.0200	E4	0.0180	0.0400	1	11/27/2020 11:45	WG1583001

Metals (ICP) by Method 6010D

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Cadmium	0.156	E4	0.0471	0.500	1	11/30/2020 14:56	WG1582889
Chromium	12.8		0.133	1.00	1	11/30/2020 14:56	WG1582889
Lead	8.79		0.208	0.500	1	11/30/2020 14:56	WG1582889

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	1.73	E4	0.640	2.00	1	11/27/2020 18:48	WG1580587

Mercury by Method 7471B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	0.397		0.0180	0.0400	1	11/30/2020 10:06	WG1582997

Metals (ICP) by Method 6010D

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Cadmium	59.1		0.0471	0.500	1	11/30/2020 14:58	WG1582889
Chromium	77.7		0.133	1.00	1	11/30/2020 14:58	WG1582889
Lead	207		0.208	0.500	1	11/30/2020 14:58	WG1582889

Preparation by Method 1312

Analyte	Result	Qualifier	Prep date / time	Batch
SPLP Extraction	-		11/24/2020 11:51:00 AM	WG1581559
Fluid	1		11/24/2020 11:51:00 AM	WG1581559
Final pH	8.49		11/24/2020 11:51:00 AM	WG1581559

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury	U		0.100	0.200	1	11/27/2020 15:17	WG1582967

Metals (ICP) by Method 6010D

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Cadmium	U		0.479	2.00	1	11/27/2020 18:39	WG1583051
Chromium	7.14	E4	1.40	10.0	1	11/27/2020 18:39	WG1583051
Lead	6.19	B1	2.99	6.00	1	11/27/2020 18:39	WG1583051

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	U		0.640	2.00	1	11/27/2020 18:49	WG1580587

Mercury by Method 7471B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	U		0.0180	0.0400	1	11/30/2020 10:08	WG1582997

Metals (ICP) by Method 6010D

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Cadmium	0.229	E4	0.0471	0.500	1	11/30/2020 15:01	WG1582889
Chromium	11.9		0.133	1.00	1	11/30/2020 15:01	WG1582889
Lead	8.20		0.208	0.500	1	11/30/2020 15:01	WG1582889

Method Blank (MB)

(MB) R3597737-1 11/26/20 23:37

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Chromium,Hexavalent	U		0.640	2.00

L1287803-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1287803-01 11/26/20 23:39 • (DUP) R3597737-3 11/26/20 23:40

Analyte	Original Result mg/kg	DUP Result mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chromium,Hexavalent	13.3	12.4	1	7.15		20

Original Sample (OS) • Duplicate (DUP)

(OS) • (DUP) R3597737-6 11/26/20 23:48

Analyte	Original Result	DUP Result mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chromium,Hexavalent		U	1	0.000		20

Laboratory Control Sample (LCS)

(LCS) R3597737-2 11/26/20 23:37

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chromium,Hexavalent	24.0	23.0	95.7	80.0-120	

L1288001-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1288001-01 11/26/20 23:44 • (MS) R3597737-8 11/27/20 00:44 • (MSD) R3597737-4 11/26/20 23:45

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chromium,Hexavalent	20.0	1.88	18.2	17.2	81.8	76.6	1	75.0-125			5.87	20

L1288001-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1288001-01 11/26/20 23:44 • (MS) R3597737-7 11/27/20 00:37

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chromium,Hexavalent	675	1.88	657	97.4	50	75.0-125	

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Method Blank (MB)

(MB) R3597738-1 11/27/20 02:20

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Chromium,Hexavalent	U		0.640	2.00

L1288001-11 Original Sample (OS) • Duplicate (DUP)

(OS) L1288001-11 11/27/20 02:22 • (DUP) R3597738-3 11/27/20 02:22

Analyte	Original Result mg/kg	DUP Result mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chromium,Hexavalent	U	U	1	0.000		20

L1288001-24 Original Sample (OS) • Duplicate (DUP)

(OS) L1288001-24 11/27/20 02:31 • (DUP) R3597738-8 11/27/20 02:31

Analyte	Original Result mg/kg	DUP Result mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chromium,Hexavalent	U	U	1	0.000		20

Laboratory Control Sample (LCS)

(LCS) R3597738-2 11/27/20 02:20

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chromium,Hexavalent	24.0	22.6	94.0	80.0-120	

L1288001-17 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1288001-17 11/27/20 02:26 • (MS) R3597738-4 11/27/20 02:27 • (MSD) R3597738-5 11/27/20 02:27

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chromium,Hexavalent	20.0	0.720	18.0	17.5	86.6	83.8	1	75.0-125			3.15	20

L1288001-17 Original Sample (OS) • Matrix Spike (MS)

(OS) L1288001-17 11/27/20 02:26 • (MS) R3597738-6 11/27/20 02:28

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chromium,Hexavalent	669	0.720	567	84.8	50	75.0-125	

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Method Blank (MB)

(MB) R3597605-1 11/25/20 19:21

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Chromium,Hexavalent	U		0.640	2.00

L1287342-09 Original Sample (OS) • Duplicate (DUP)

(OS) L1287342-09 11/25/20 19:24 • (DUP) R3597605-3 11/25/20 19:24

Analyte	Original Result mg/kg	DUP Result mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chromium,Hexavalent	U	U	1	0.000		20

L1289156-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1289156-04 11/25/20 19:34 • (DUP) R3597605-8 11/25/20 19:34

Analyte	Original Result mg/kg	DUP Result mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chromium,Hexavalent	U	U	1	0.000		20

Laboratory Control Sample (LCS)

(LCS) R3597605-2 11/25/20 19:21

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chromium,Hexavalent	24.0	23.6	98.5	80.0-120	

L1287986-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1287986-03 11/25/20 19:24 • (MS) R3597605-4 11/25/20 19:25 • (MSD) R3597605-5 11/25/20 19:26

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chromium,Hexavalent	20.0	U	19.2	18.8	95.8	93.8	1	75.0-125			2.11	20

L1287986-03 Original Sample (OS) • Matrix Spike (MS)

(OS) L1287986-03 11/25/20 19:24 • (MS) R3597605-6 11/25/20 19:26

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chromium,Hexavalent	698	U	679	97.3	50	75.0-125	

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Method Blank (MB)

(MB) R3597982-1 11/27/20 17:36

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Chromium,Hexavalent	U		0.640	2.00

L1288001-42 Original Sample (OS) • Duplicate (DUP)

(OS) L1288001-42 11/27/20 17:37 • (DUP) R3597982-3 11/27/20 17:37

Analyte	Original Result mg/kg	DUP Result mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chromium,Hexavalent	U	U	1	0.000		20

L1288001-53 Original Sample (OS) • Duplicate (DUP)

(OS) L1288001-53 11/27/20 17:40 • (DUP) R3597982-4 11/27/20 17:40

Analyte	Original Result mg/kg	DUP Result mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chromium,Hexavalent	U	U	1	0.000		20

Laboratory Control Sample (LCS)

(LCS) R3597982-2 11/27/20 17:36

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chromium,Hexavalent	24.0	21.7	90.5	80.0-120	

L1288001-63 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1288001-63 11/27/20 17:43 • (MS) R3597982-5 11/27/20 17:43 • (MSD) R3597982-6 11/27/20 17:43

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chromium,Hexavalent	20.0	U	15.9	16.2	79.4	81.1	1	75.0-125			2.19	20

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Method Blank (MB)

(MB) R3597990-1 11/27/20 18:33

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Chromium,Hexavalent	U		0.640	2.00

L1287643-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1287643-01 11/27/20 18:34 • (DUP) R3597990-3 11/27/20 18:35

Analyte	Original Result mg/kg	DUP Result mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chromium,Hexavalent	U	U	1	0.000		20

L1288001-72 Original Sample (OS) • Duplicate (DUP)

(OS) L1288001-72 11/27/20 18:45 • (DUP) R3597990-4 11/27/20 18:45

Analyte	Original Result mg/kg	DUP Result mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chromium,Hexavalent	U	U	1	0.000		20

Laboratory Control Sample (LCS)

(LCS) R3597990-2 11/27/20 18:33

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chromium,Hexavalent	24.0	21.7	90.4	80.0-120	

L1288450-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1288450-01 11/27/20 18:50 • (MS) R3597990-5 11/27/20 18:51 • (MSD) R3597990-6 11/27/20 18:52

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chromium,Hexavalent	20.0	U	18.0	18.5	90.2	92.4	1	75.0-125			2.37	20

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Method Blank (MB)

(MB) R3597994-1 11/27/20 19:28

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Chromium,Hexavalent	U		0.640	2.00

L1287643-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1287643-04 11/27/20 19:30 • (DUP) R3597994-3 11/27/20 19:31

Analyte	Original Result mg/kg	DUP Result mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chromium,Hexavalent	U	U	1	0.000		20

L1288535-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1288535-01 11/27/20 19:36 • (DUP) R3597994-4 11/27/20 19:38

Analyte	Original Result mg/kg	DUP Result mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chromium,Hexavalent	2.27	2.20	1	2.98		20

Laboratory Control Sample (LCS)

(LCS) R3597994-2 11/27/20 19:28

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chromium,Hexavalent	24.0	21.8	91.0	80.0-120	

L1288535-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1288535-06 11/27/20 19:38 • (MS) R3597994-5 11/27/20 19:39 • (MSD) R3597994-6 11/27/20 19:40

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chromium,Hexavalent	20.0	U	15.8	16.1	78.8	80.3	1	75.0-125			1.91	20

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Method Blank (MB)

(MB) R3597955-1 11/27/20 14:17

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Mercury	U		0.100	0.200

Laboratory Control Sample (LCS)

(LCS) R3597955-2 11/27/20 14:19

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Mercury	3.00	3.10	103	80.0-120	

L1288001-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1288001-06 11/27/20 14:21 • (MS) R3597955-3 11/27/20 14:23 • (MSD) R3597955-4 11/27/20 14:25

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Mercury	3.00	U	3.10	3.09	103	103	1	75.0-125			0.462	20

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Method Blank (MB)

(MB) R3598444-1 11/30/20 08:05

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Mercury	U		0.0180	0.0400

Laboratory Control Sample (LCS)

(LCS) R3598444-2 11/30/20 08:07

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Mercury	0.500	0.451	90.1	80.0-120	

L1287953-13 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1287953-13 11/30/20 08:10 • (MS) R3598444-3 11/30/20 08:13 • (MSD) R3598444-4 11/30/20 08:15

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Mercury	0.500	U	0.441	0.462	88.2	92.5	1	75.0-125			4.71	20

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Method Blank (MB)

(MB) R3598466-1 11/30/20 09:17

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Mercury	U		0.0180	0.0400

Laboratory Control Sample (LCS)

(LCS) R3598466-2 11/30/20 09:19

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Mercury	0.500	0.492	98.3	80.0-120	

L1288009-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1288009-01 11/30/20 09:22 • (MS) R3598466-3 11/30/20 09:24 • (MSD) R3598466-4 11/30/20 09:27

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Mercury	0.500	U	0.352	0.402	70.3	80.3	1	75.0-125	M2		13.3	20

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Method Blank (MB)

(MB) R3598491-1 11/30/20 10:28

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Mercury	U		0.0180	0.0400

Laboratory Control Sample (LCS)

(LCS) R3598491-2 11/30/20 10:31

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Mercury	0.500	0.440	88.1	80.0-120	

L1288001-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1288001-01 11/30/20 10:38 • (MS) R3598491-3 11/30/20 10:41 • (MSD) R3598491-4 11/30/20 10:43

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Mercury	0.500	0.0455	0.449	0.428	80.6	76.6	1	75.0-125			4.62	20

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Method Blank (MB)

(MB) R3597873-1 11/27/20 11:00

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Mercury	U		0.0180	0.0400

Laboratory Control Sample (LCS)

(LCS) R3597873-2 11/27/20 11:02

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Mercury	0.500	0.467	93.3	80.0-120	

L1288001-63 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1288001-63 11/27/20 11:05 • (MS) R3597873-3 11/27/20 11:07 • (MSD) R3597873-4 11/27/20 11:10

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Mercury	0.500	0.0356	0.478	0.437	88.5	80.2	1	75.0-125			9.00	20

Method Blank (MB)

(MB) R3597888-1 11/27/20 12:11

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Mercury	U		0.0180	0.0400

Laboratory Control Sample (LCS)

(LCS) R3597888-2 11/27/20 12:13

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Mercury	0.500	0.453	90.7	80.0-120	

L1288001-43 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1288001-43 11/27/20 12:16 • (MS) R3597888-3 11/27/20 12:18 • (MSD) R3597888-4 11/27/20 12:21

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Mercury	0.500	0.697	1.07	0.797	75.4	20.0	1	75.0-125		M2 R5	29.6	20

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Method Blank (MB)

(MB) R3597913-1 11/27/20 13:59

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Mercury	U		0.0180	0.0400

Laboratory Control Sample (LCS)

(LCS) R3597913-2 11/27/20 14:02

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Mercury	0.500	0.525	105	80.0-120	

L1288001-52 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1288001-52 11/27/20 14:04 • (MS) R3597913-3 11/27/20 14:07 • (MSD) R3597913-4 11/27/20 14:09

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Mercury	0.500	0.0337	0.430	0.480	79.4	89.2	1	75.0-125			10.9	20

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Method Blank (MB)

(MB) R3598818-1 11/30/20 19:49

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Cadmium	U		0.0471	0.500
Chromium	U		0.133	1.00
Lead	U		0.208	0.500

Laboratory Control Sample (LCS)

(LCS) R3598818-2 11/30/20 19:55

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Cadmium	100	108	108	80.0-120	
Chromium	100	112	112	80.0-120	
Lead	100	110	110	80.0-120	

L1288001-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1288001-01 11/30/20 19:58 • (MS) R3598818-5 11/30/20 20:06 • (MSD) R3598818-6 11/30/20 20:08

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Cadmium	100	4.88	97.5	97.7	92.6	92.8	1	75.0-125			0.234	20
Chromium	100	25.1	118	120	92.7	94.5	1	75.0-125			1.44	20
Lead	100	29.5	124	122	94.7	92.2	1	75.0-125			2.04	20

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Method Blank (MB)

(MB) R3599201-1 12/01/20 14:21

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Cadmium	U		0.0471	0.500
Chromium	U		0.133	1.00
Lead	U		0.208	0.500

Laboratory Control Sample (LCS)

(LCS) R3599201-2 12/01/20 14:24

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Cadmium	100	109	109	80.0-120	
Chromium	100	113	113	80.0-120	
Lead	100	111	111	80.0-120	

L1288001-21 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1288001-21 12/01/20 14:27 • (MS) R3599201-5 12/01/20 14:36 • (MSD) R3599201-6 12/01/20 14:39

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Cadmium	100	59.3	184	163	125	104	1	75.0-125			12.4	20
Chromium	100	71.7	203	176	131	104	1	75.0-125	M1		14.2	20
Lead	100	167	348	256	181	88.6	1	75.0-125	M1	R5	30.5	20

Method Blank (MB)

(MB) R3599203-1 12/01/20 17:02

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Cadmium	U		0.0471	0.500
Chromium	U		0.133	1.00
Lead	U		0.208	0.500

Laboratory Control Sample (LCS)

(LCS) R3599203-2 12/01/20 17:05

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Cadmium	100	93.4	93.4	80.0-120	
Chromium	100	97.9	97.9	80.0-120	
Lead	100	94.9	94.9	80.0-120	

L1288001-43 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1288001-43 12/01/20 17:08 • (MS) R3599203-5 12/01/20 17:17 • (MSD) R3599203-6 12/01/20 17:19

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Cadmium	100	123	215	200	91.9	76.8	1	75.0-125			7.30	20
Chromium	100	227	367	310	140	83.2	1	75.0-125	M1		16.8	20
Lead	100	505	477	498	0.000	0.000	1	75.0-125	M3	M3	4.29	20

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Method Blank (MB)

(MB) R3598688-1 11/30/20 14:17

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Cadmium	U		0.0471	0.500
Chromium	U		0.133	1.00
Lead	U		0.208	0.500

Laboratory Control Sample (LCS)

(LCS) R3598688-2 11/30/20 14:20

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Cadmium	100	108	108	80.0-120	
Chromium	100	114	114	80.0-120	
Lead	100	112	112	80.0-120	

L1288001-63 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1288001-63 11/30/20 14:23 • (MS) R3598688-5 11/30/20 14:31 • (MSD) R3598688-6 11/30/20 14:33

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Cadmium	100	0.489	89.1	85.7	88.6	85.2	1	75.0-125			3.82	20
Chromium	100	21.0	113	109	92.3	88.4	1	75.0-125			3.52	20
Lead	100	13.2	108	105	94.8	91.7	1	75.0-125			2.93	20

Method Blank (MB)

(MB) R3598282-1 11/27/20 17:57

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Cadmium	U		0.479	2.00
Chromium	U		1.40	10.0
Lead	3.53	E4	2.99	6.00

Laboratory Control Sample (LCS)

(LCS) R3598282-2 11/27/20 18:00

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Cadmium	1000	1020	102	80.0-120	
Chromium	1000	1030	103	80.0-120	
Lead	1000	1020	102	80.0-120	

L1288001-37 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1288001-37 11/27/20 18:03 • (MS) R3598282-4 11/27/20 18:08 • (MSD) R3598282-5 11/27/20 18:10

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Cadmium	1000	2.71	1040	1020	104	102	1	75.0-125			1.39	20
Chromium	1000	13.3	1060	1050	104	103	1	75.0-125			1.01	20
Lead	1000	13.1	1050	1040	104	103	1	75.0-125			1.05	20

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDL	Method Detection Limit.
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
B1	Target analyte detected in method blank at or above the method reporting limit.
E4	Concentration estimated. Analyte was detected below laboratory minimum reporting level (MRL) but above MDL.
M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
M2	Matrix spike recovery was low, the method control sample recovery was acceptable.
M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The associated blank spike recovery was acceptable.
R5	MS/MSD RPD exceeded the laboratory acceptance limit. Recovery met acceptance criteria.

ACCREDITATIONS & LOCATIONS

ONE LAB. NATIONWIDE.

Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.
* Not all certifications held by the laboratory are applicable to the results reported in the attached report.
* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO00356
Kentucky [1 6]	90010	South Carolina	84004
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana [1]	LA180010	Texas	T104704245-18-15
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

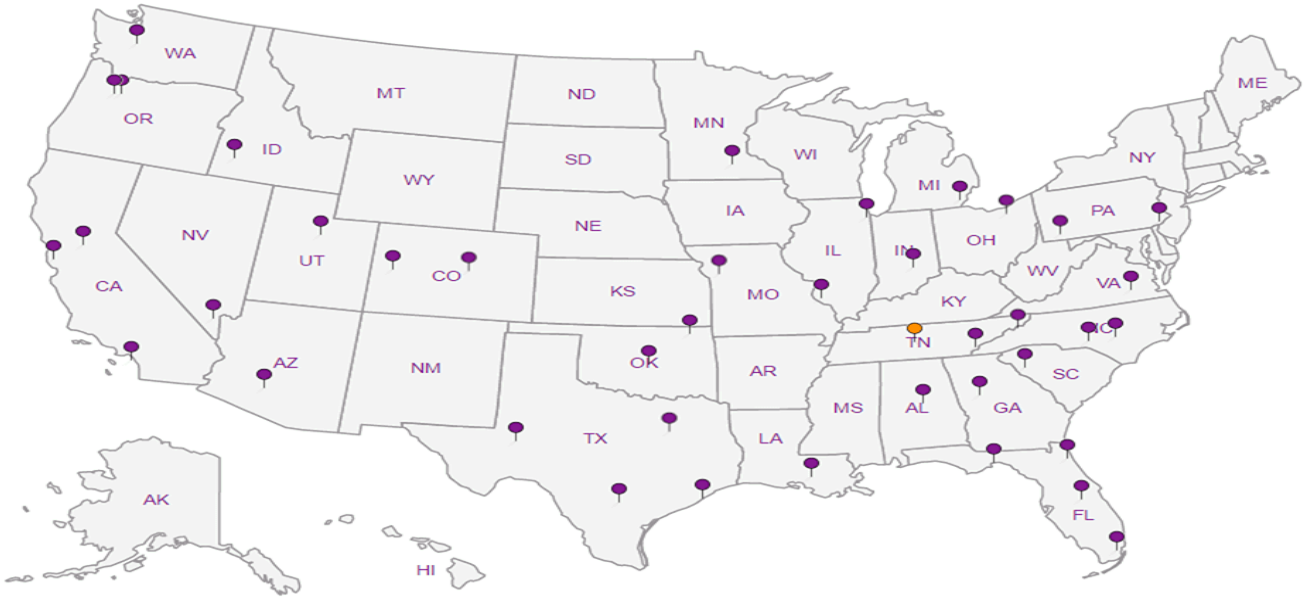
Third Party Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

Our Locations

Pace National has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. Pace National performs all testing at our central laboratory.



Brown & Caldwell
2 North Central Avenue
Suite 1600
Phoenix, Arizona 85004

Billing Information:

Pres Chk

Analysis / Container / Preservative

Chain of Custody Page 1 of 7

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National Center for Testing & Innovation

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Mount Juliet, TN 37122
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Fax: 615-758-5859

L # 1288001
E201

Tab...

Acctnum: **BROCAPAZ**
Template:
Prelogin:
TSR:
PB:
Shipped Via:

Report to: **Matthew Frailey**

Email To: **mfrailey@BrwnCald.com**

Project Description: **HVF West**

City/State Collected: Tucson, AZ

Phone: **602-567-3844**
Fax:

Client Project # 154684

Lab Project #

Collected by (print): Harrison Schultz

Site/Facility ID # HVF West

P.O. #

Collected by (signature): Harrison Schultz

Immediately Packed on Ice N ___ Y ✓

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed: Normal TAT

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Hexavalent Chromium 3060A/7196A	Total Metals 6010C/7471	SPLP Metals 1312/6010C; 1312/7470A	Remarks	Sample # (lab only)
DU-29-12	Grab	SS	0-12"	11-17-20	0927	~~3~~ 2	X	X			-01
DU-29-24	Grab	SS	12-24"	11-17-20	0927	2	X	X			-02
DU-28-12	Grab	SS	0-12"	11-17-20	0939	2	X	X			-03
DU-28-24	Grab	SS	12-24"	11-17-20	0939	2	X	X			-04
DU-15-12	Grab	SS	0-12"	11-17-20	0959	3	X	X	X		-05/-06
DU-15-24	Grab	SS	12-24"	11-17-20	0959	2	X	X			-07
DUP-5	Grab	SS	—	11-17-20	1300	2	X	X			-08
DU-14-12	Grab	SS	0-12"	11-17-20	1008	~~3~~ 2	X	X	X		-09/-10
DU-14-24	Grab	SS	12-24"	11-17-20	1008	2	X	X			-11
DUP-6	Grab	SS	—	11-17-20	1400	2	X	X			-12

* Matrix:
SS - Soil **AIR** - Air **F** - Filter
GW - Groundwater **B** - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:
Total & SPLP Metals = (Cd, Cr, Pb, Hg)

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier __ _____

Tracking # 525 5616 1106 0605 / 0609 / 0605

Sample Receipt Checklist
COC Seal Present/Intact: __NP ✓Y __N
COC Signed/Accurate: ✓Y __N
Bottles arrive intact: ✓Y __N
Correct bottles used: ✓Y __N
Sufficient volume sent: ✓Y __N
If Applicable
VOA Zero Headspace: __Y __N
Preservation Correct/Checked: __Y __N

RAD SCREEN: <0.5 mR/hr

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR	If preservation required by Login: Date/Time
Harrison Schultz	11/18/20	1547	[illegible]		
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received:	
[illegible]	11/18/20	1800	SWA	1.5-3=1286 KB	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: Time:	Hold: / Condition: NCF / OK
			[illegible]	11-19-20 9:50	

PNPAZ

Brown & Caldwell
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Suite 1600
Phoenix, Arizona 85004

Billing Information:

Pres Chk

Analysis / Container / Preservative

Chain of Custody Page 2 of 7

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National Center for Testing & Innovation

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
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Report to: **Matthew Frailey**

Email To: **mfrailey@BrwnCald.com**

Project Description: **HVF West**

City/State Collected: Tucson, AZ

Phone: **602-567-3844**
Fax:

Client Project # 154686

Lab Project #

L# 1288001

Table #

Collected by (print): Harrison Schultz

Site/Facility ID # HVF West

P.O. #

Acctnum: **BROCAPAZ**

Template:

Prelogin:

TSR:

PB:

Collected by (signature): Harrison Schultz

Immediately Packed on Ice N ___ Y ✓

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed: Normal TAT

Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Hexavalent Chromium 3060A/7196A	Total Metals 6010C/7471	SPLP Metals 1312/6010C; 1312/7470A	Remarks	Sample # (lab only)
DU-10-12	Grab	SS	0-12"	11-16-20	1457	3 HS	X	X			-13
DU-10-24	Grab	SS	12-24"	11-16-20	1457	2	X	X			-14
DU-06-12	Grab	SS	0-12"	11-16-20	1505	~~2~~ HS	X	X	X HS		-15
DU-06-24	Grab	SS	12-24"	11-16-20	1505	2	X	X			-16
DU-20-12	Grab	SS	0-12"	11-16-20	1516	2	X	X			-17
DU-20-24	Grab	SS	12-24"	11-16-20	1516	2	X	X			-18
DU-19-12	Grab	SS	0-12"	11-16-20	1538	2	X	X			-19
DU-19-24	Grab	SS	12-24"	11-16-20	1538	2	X	X			-20
DU-18-12	Grab	SS	0-12"	11-16-20	1608	2	X	X			-21
DU-18-24	Grab	SS	12-24"	11-16-20	1608	2	X	X			-22

* Matrix:
SS - Soil **AIR** - Air **F** - Filter
GW - Groundwater **B** - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:
Total & SPLP Metals = (Cd, Cr, Pb, Hg)

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier __ _____

Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: __NP ✓Y __N
COC Signed/Accurate: ✓Y __N
Bottles arrive intact: ✓Y __N
Correct bottles used: ✓Y __N
Sufficient volume sent: __Y __N
If Applicable
VOA Zero Headspace: __Y __N
Preservation Correct/Checked: __Y __N

RAD SCREEN: <0.5 mR/hr

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeOH TBR	If preservation required by Login: Date/Time
Harrison Schultz	11/18/20	1547	[illegible]		
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received:	
[illegible]	11/18/20	1800	SWA	1.5:3:1.2 AG CK	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: Time:	Hold: / Condition: NCF / OK
			[illegible]	11-19-20 9:50	

PNPA2

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Suite 1600
Phoenix, Arizona 85004

Billing Information:

Pres Chk

Analysis / Container / Preservative

Chain of Custody Page 3 of 7

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12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

Report to: Matthew Frailey

Email To: mfrailey@BrwnCald.com

Project Description: HVF West

City/State Collected: Tucson, AZ

Phone: 602-567-3844
Fax:

Client Project # 1546E6

Lab Project #

L# 1288001

Table #

Collected by (print): Harrison Schultz

Site/Facility ID # HVF West

P.O. #

Acctnum: BROCAPAZ

Collected by (signature): Harrison Schultz

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed: Normal TAT

Template:
Prelogin:
TSR:
PB:

Immediately Packed on Ice N ___ Y ✓

Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Hexavalent Chromium 3060A/7196A	Total Metals 6010C/7471	SPLP Metals 1312/6010C; 1312/7470A							Remarks	Sample # (lab only)
DU-22-12	Grab	SS	0-12"	11-16-20	1622	3	X	X									-23
DU-22-24	Grab	SS	12-24"	11-16-20	1622	2	X	X									-24
DU-16-12	Grab	SS	0-12"	11-16-20	1656	3	X	X	X								-25/-26
DU-16-24	Grab	SS	12-24"	11-16-20	1656	2	X	X									-27
DU-17-12	Grab	SS	0-12"	11-16-20	1719	~~3~~ 2 HS	X	X	~~X~~ HS								-28
DU-17-24	Grab	SS	12-24"	11-16-20	1719	2	X	X									-29
DUP-3	Grab	SS	—	11-16-20	1700	2	X	X									-30
DU-30-12	Grab	SS	12-24"	11-17-20	0902	2	X	X	X								-31/-32
DU-30-24	Grab	SS	12-24"	11-17-20	0902	2	X	X									-33
DUP-4	Grab	SS	—	11-17-20	1200	2	X	X									-34

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:
Total & SPLP Metals = (Cd, Cr, Pb, Hg)

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier __ _____

Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: __NP ~~__Y~~ __N
COC Signed/Accurate: ~~__Y~~ __N
Bottles arrive intact: ~~__Y~~ __N
Correct bottles used: ~~__Y~~ __N
Sufficient volume sent: ~~__Y~~ __N
If Applicable
VOA Zero Headspace: __Y __N
Preservation Correct/Checked: __Y __N

RAD SCREEN: <0.5 mR/hr

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR	
Harrison Schultz	11/18/20	1547	[illegible]		
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received:	If preservation required by Login: Date/Time
[illegible]	11/18/20	1800	[illegible]	1.5-.3=1.2 [illegible]	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date:	Time:	Hold:	Conditions: NCF / OK
			[illegible]	11-18-21	9:50		

PWPAZ

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Analysis / Container / Preservative

Chain of Custody Page 4 of 7

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Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

Report to: Matthew Frailey

Email To: mfrailey@BrownCald.com

Project Description: HVF West

City/State Collected: Tucson, AZ

Phone: 602-567-3844
Fax:

Client Project # 154686

Lab Project #

L# 1288001

Collected by (print): Harrison Schultz

Site/Facility ID # HVF West

P.O. #

Table #

Acctnum:

Collected by (signature): Harrison Schultz

Immediately Packed on Ice N ___ Y ___

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed: Normal TAT

Template:
Prelogin:
TSR:
PB:
Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Hexavalent Chromium 3060A/7196A	Total Metals 6010C/7471	SPLP Metals 1312/6010C, 1312/7470A							Remarks	Sample # (lab only)
DU-24-12	Grab	SS	0-12"	11-17-20	1030	~~3~~ 2	X	X	~~X~~								-35
DU-24-24	Grab	SS	12-24"	11-17-20	1030	3	X	X	X								-36/-37
DU-21-12	Grab	SS	0-12"	11-17-20	1046	3	X	X	X								-38/-39
DU-21-24	Grab	SS	12-24"	11-17-20	1046	2	X	X									-40
~~DUP-12~~ DUP-7	Grab	SS	—	11-17-20	1500	2	X	X									-41
DU-23-12	Grab	SS	0-12"	11-17-20	1110	2	X	X									-42
DU-23-24	Grab	SS	12-24"	11-17-20	1110	2	X	X									-43
DU-31-12	Grab	SS	0-12"	11-17-20	1144	3	X	X	X								-44/-45
DU-31-24	Grab	SS	12-24"	11-17-20	1144	2	X	X									-46

* Matrix:
SS - Soil AiR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier __ _____

Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: __NP ✓Y __N
COC Signed/Accurate: ✓Y __N
Bottles arrive intact: ✓Y __N
Correct bottles used: ✓Y __N
Sufficient volume sent: ✓Y __N
If Applicable
VOA Zero Headspace: __Y __N
Preservation Correct/Checked: __Y __N
RAD SCREEN: <0.5 mR/hr

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR	If preservation required by Login: Date/Time
Harrison Schultz	11/18/20	1547	[illegible]		
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received:	
[illegible]	11/18/20	1800	SWA	1.5-3-1.2 SG CK	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date:	Time:	Hold:	Condition: NCF / OK
			[illegible]	11/19/20	9:50		

DWDAZ

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Chain of Custody Page 2 of 1

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Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

Report to: **Matthew Frailey**

Email To: **mfrailey@BrwnCald.com**

Project Description: **HVF West**

City/State Collected: Tucson, AZ

Phone: **602-567-3844**
Fax:

Client Project # 154686

Lab Project #

L# 1288001

Table #

Collected by (print): Harrison Schultz

Site/Facility ID # HVF West

P.O. #

Acctnum: **BROCAPAZ**

Collected by (signature): Harrison Schultz

Immediately Packed on Ice N ___ Y ___

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed: Normal TAT

Template:
Prelogin:
TSR:
PB:
Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Hexavalent Chromium 3060A/7196A	Total Metals 6010C/7471	SPLP Metals 1312/6010C; 1312/7470A							Remarks	Sample # (lab only)
DU-11-12	Grab	SS	0-12"	11-16-20	1025	3	X	X									-47
DU-11-24	Grab	SS	12-24"	11-16-20	1030	2	X	X									-48
DU-12-12	Grab	SS	0-12"	11-16-20	1042	2	X	X									-49
DU-12-24	Grab	SS	12-24"	11-16-20	1045	2	X	X									-50
DU-08-12	Grab	SS	0-12"	11-16-20	1059	2	X	X									-51
DU-08-24	Grab	SS	12-24"	11-16-20	1059	2	X	X									-52
DU-07-12	Grab	SS	0-12	11-16-20	1109	2	X	X									-53
DU-07-24	Grab	SS	12-24	11-16-20	1109	2	X	X									-54
DU-03-12	Grab	SS	0-12	11-16-20	1115	3	X	X	X								-55/-56
DU-03-24	Grab	SS	12-24	11-16-20	1115	2	X	X									-57

* Matrix:
SS - Soil **AIR** - Air **F** - Filter
GW - Groundwater **B** - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:
Total & SPLP Metals = (Cd, Cr, Pb, Hg)

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier __ _____

Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: __NP __Y __N
COC Signed/Accurate: __Y __N
Bottles arrive intact: __Y __N
Correct bottles used: __Y __N
Sufficient volume sent: __Y __N
If Applicable
VOA Zero Headspace: __Y __N
Preservation Correct/Checked: __Y __N

RAD SCREEN: <0.5 mR/hr

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR	If preservation required by Login: Date/Time
Harrison Schultz	11/18/20	1547	[illegible]		
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received:	
[illegible]	11/18/20	1800	SWA	1.5-3=1.2 CK	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: Time:	Hold: / Condition: NCF OK
			[illegible]	11/19/20 9:50	

PWDAZ

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Chain of Custody Page 6 of 7

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Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

Report to: **Matthew Frailey**

Email To: **mfrailey@BrwnCald.com**

Project Description: **HVF West**

City/State Collected: Tucson, AZ

Phone: **602-567-3844**
Fax:

Client Project # 154686

Lab Project #

L # 1288001

Table #

Collected by (print): Harrison Schultz

Site/Facility ID # HVF West

P.O. #

Acctnum: **BROCAPAZ**

Template:

Prelogin:

TSR:

PB:

Collected by (signature): Harrison Schultz

Immediately Packed on Ice N ____ Y ____

Rush? (Lab MUST Be Notified)
____ Same Day ____ Five Day
____ Next Day ____ 5 Day (Rad Only)
____ Two Day ____ 10 Day (Rad Only)
____ Three Day

Quote #

Date Results Needed: Normal TAT

Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Hexavalent Chromium 3060A/7196A	Total Metals 6010C/7471	SPLP Metals 1312/6010C; 1312/7470A							Remarks	Sample # (lab only)
DU-04-12	Grab	SS	0-12"	11-16-20	1138	~~3~~	X	X									-58
DU-04-24	Grab	SS	12-24"	11-16-20	1138	2	X	X									-59
DUP-1	Grab	SS	—	11-16-20	1200	2	X	X									-60
DU-02-12	Grab	SS	0-12"	11-16-20	1205	2	X	X									-61
DU-02-24	Grab	SS	12-24"	11-16-20	1205	2	X	X									-62
DU-01-12	Grab	SS	0-12"	11-16-20	1210	~~3~~ 2	~~X~~	X	~~X~~ HS								-63
DU-01-24	Grab	SS	12-24"	11-16-20	1210	2	X	X									-64
DU-26-12	Grab	SS	0-12"	11-16-20	1220	2	X	X									-65
DU-26-24	Grab	SS	12-24"	11-16-20	1220	2	X	X									-66
DU-27-12	Grab	SS	0-12"	11-16-20	1240	2	X	X									-67

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:
Total & SPLP Metals = (Cd, Cr, Pb, Hg)

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier __ _____

Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: __NP __Y __N
COC Signed/Accurate: __Y __N
Bottles arrive intact: __Y __N
Correct bottles used: __Y __N
Sufficient volume sent: __Y __N
If Applicable
VOA Zero Headspace: __Y __N
Preservation Correct/Checked: __Y __N

RAD SCREEN: <0.5 mR/hr

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR	
Harrison Schultz	11/18/20	1805 47	[illegible]		
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received:	If preservation required by Login: Date/Time
[illegible]	11/18/20	1800	SWA	1.5-3-1.2 AG CK	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: Time:	Hold: / Condition: NCF / OK
			[illegible]	11/19/20 9:50	

PNPAZ

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Billing Information:

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Chain of Custody Page 2 of 7

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National Center for Testing & Innovation

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

Report to: **Matthew Frailey**

Email To: **mfrailey@BrwnCald.com**

Project Description: **HVF West**

City/State Collected: Tucson, AZ

Phone: **602-567-3844**
Fax:

Client Project # 154686

Lab Project #

L# 1288001

Table #

Collected by (print): Harrison Schultz

Site/Facility ID # HVF West

P.O. #

Acctnum: **BROCAPAZ**

Collected by (signature): Harrison Schultz

Immediately Packed on Ice N ____ Y ____

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed: Normal TAT

Template:
Prelogin:
TSR:
PB:
Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Hexavalent Chromium 3060A/7196A	Total Metals 6010C/7471	SPLP Metals 1312/6010C; 1312/7470A	Remarks	Sample # (lab only)
DU-27-24	Grab	SS	12-24"	11-16-20	1240	~~2~~	X	X			-68
DU-05-12	Grab	SS	0-12"	11-16-20	1305	3	X	X	X		-69/-70
DU-05-24	Grab	SS	12-24"	11-16-20	1305	2	X	X			-71
DU-09-12	Grab	SS	0-12"	11-16-20	1350	2	X	X			-72
DU-09-24	Grab	SS	12-24"	11-16-20	1350	2	X	X			-73
DUP-2	Grab	SS	—	11-16-20	1300	2	X	X			-74
DU-25-12	Grab	SS	0-12"	11-16-20	1432	2	X	X			-75
DU-25-24	Grab	SS	12-24"	11-16-20	1432	2	X	X			-76
DU-13-12	Grab	SS	0-12"	11-16-20	1441	3	X	X	X		-77/-78
DU-13-24	Grab	SS	12-24"	11-16-20	1441	2	X	X			-79

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:
Total & SPLP Metals = (Cd, Cr, Pb, Hg)

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier __ _____

Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: __NP __Y __N
COC Signed/Accurate: __Y __N
Bottles arrive intact: __Y __N
Correct bottles used: __Y __N
Sufficient volume sent: __Y __N
If Applicable
VOA Zero Headspace: __Y __N
Preservation Correct/Checked: __Y __N

RAD SCREEN: <0.5 mR/hr

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeOH TBR
Harrison Schultz	11/18/20	1547	[illegible]	
Relinquished by : (Signature)	**Date:**	**Time:**	**Received by: (Signature)**	**Temp: °C Bottles Received:**
[illegible]	11/18/20	1800	SWA	15.3=1.026
Relinquished by : (Signature)	**Date:**	**Time:**	**Received for lab by: (Signature)**	**Date: Time:**
			[illegible]	11/19/20 9:50

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

PNPA2

Appendix C

Validation Memo November 2020

Memorandum

August 9, 2021

To:	Larry Williams	Ref. No.:	11224790
From:	Sheri Finn/ro/2-NF	Tel:	716-205-1977

Subject: **Analytical Results and Reduced Validation**
Soil Characterization Sampling
HVF West, LLC
Tucson, Arizona
November 2020

1. Introduction

This document details a reduced validation of analytical results for soil samples collected in support of the soil characterization sampling at the HVF West, LLC site during November 2020. Samples were submitted to Pace Analytical National Laboratory, located in Mount Juliet, Tennessee. A sample collection and analysis summary is presented in Table 1. The validated analytical results are summarized in Tables 2A and 2B. A summary of the analytical methodology is presented in Table 3.

Standard GHD report deliverables were submitted by the laboratory. The final results and supporting quality assurance/quality control (QA/QC) data were assessed. Evaluation of the data was based on information obtained from the chain of custody forms, finished report forms, method blank data, recovery data from laboratory control samples (LCS)/matrix spikes/matrix spike duplicate (MS/MSD) and field QA/QC.

The QA/QC criteria by which these data have been assessed are outlined in the analytical method referenced in Table 3 and applicable guidance from the document entitled:

i) "USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review", USEPA 540-R-2017-001

item i) will subsequently be referred to as the "Guidelines" in this Memorandum.

2. Sample Holding Time and Preservation

The sample holding time criteria for the analyses are summarized in Table 3. The sample chain of custody documents and analytical reports were used to determine sample holding times. All samples were prepared and analyzed within the required holding times.

All samples were properly preserved, delivered on ice, and stored by the laboratory at the required temperature (0-6°C).

3. Laboratory Method Blank Analyses

Method blanks are prepared from a purified matrix and analyzed with investigative samples to determine the existence and magnitude of sample contamination introduced during the analytical procedures.

For this study, laboratory method blanks were analyzed at a minimum frequency of 1 per 20 investigative samples and/or 1 per analytical batch.

All method blank results were non-detect, indicating that laboratory contamination was not a factor for this investigation with the exception of lead. The associated sample results with concentrations similar to that found in the blank were qualified as non-detect. (see Table 4).

4. Laboratory Control Sample Analyses

LCS are prepared and analyzed as samples to assess the analytical efficiencies of the methods employed, independent of sample matrix effects.

For this study, LCS were analyzed at a minimum frequency of 1 per 20 investigative samples and/or 1 per analytical batch.

The LCS contained the analytes of interest. LCS recoveries were assessed per the "Guidelines". All LCS recoveries were within the control limits, demonstrating acceptable analytical accuracy.

5. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Analyses

To evaluate the effects of sample matrices on the distillation process, measurement procedures, and accuracy of a particular analysis, samples are spiked with a known concentration of the analyte of concern and analyzed as MS/MSD samples. The RPD between the MS and MSD is used to assess analytical precision. If the original sample concentration is significantly greater than the spike concentration, the recovery is not assessed.

MS/MSD analyses were performed internally by the laboratory.

The MS/MSD samples were spiked with the analytes of interest, and the results were evaluated using the "Guidelines". Percent recoveries and RPD values were within the control limits, demonstrating acceptable analytical accuracy and precision with the exception of the samples qualified in Table 5.

6. Field QA/QC Samples

The field QA/QC consisted of 11 field duplicate sample sets.

To assess the analytical and sampling protocol precision, 11 field duplicate samples were collected and submitted "blind" to the laboratory, as specified in Table 1. The RPDs associated with these duplicate samples must be less than 100 percent for soil samples. If the reported concentration in either the

investigative sample or its duplicate is less than five times the reporting limit (RL), the evaluation criteria is two times the RL value for soil samples.

All field duplicate results were within acceptable agreement, demonstrating acceptable sampling and analytical precision.

7. Analyte Reporting

The laboratory reported detected results down to the laboratory's method detection limit (MDL) for each analyte.

8. Conclusion

Based on the assessment detailed in the foregoing, the data summarized in Table 2 are acceptable with the qualifications noted.

Table 1

Sample Collection and Analysis Summary
Soil Characterization Sampling
HVF West, LLC
Tucson, Arizona
November 2020

Sample Identification	Location	Matrix	Collection Date (mm/dd/yyyy)	Collection Time (hr:min)	Metals	Metals (SPLP)	Mercury	Mercury (SPLP)	Hexavalent Chromium	Comments
DU01	DU-01	Soil	10/28/2020	23:59	X	X	X	X	X	
DUP1~DU01	DU-01	Soil	10/28/2020	23:59	X	X	X	X	X	Field Duplicate of DU01
DU-01-12	DU-01	Soil	11/16/2020	23:59	X		X		X	
DU-01-24	DU-01	Soil	11/16/2020	23:59	X		X		X	
DU02	DU-02	Soil	10/28/2020	23:59	X	X	X	X	X	
DU-02-12	DU-02	Soil	11/16/2020	23:59	X		X		X	
DU-02-24	DU-02	Soil	11/16/2020	23:59	X		X		X	
DU03	DU-03	Soil	10/28/2020	23:59	X	X	X	X	X	
DU-03-12	DU-03	Soil	11/16/2020	23:59	X	X	X	X	X	
DU-03-24	DU-03	Soil	11/16/2020	23:59	X		X		X	
DU04	DU-04	Soil	10/29/2020	23:59	X	X	X	X	X	
DU-04-12	DU-04	Soil	11/16/2020	23:59	X		X		X	
DU-04-24	DU-04	Soil	11/16/2020	23:59	X		X		X	
DUP-1~DU-04-24	DU-04	Soil	11/16/2020	23:59	X		X		X	Field Duplicate of DU-04
DU05	DU-05	Soil	10/30/2020	23:59	X	X	X	X	X	
DUP2~DU05~0-6	DU-05	Soil	10/30/2020	23:59	X	X	X	X	X	Field Duplicate of DU05
DU-05-12	DU-05	Soil	11/16/2020	23:59	X	X	X	X	X	
DU-05-24	DU-05	Soil	11/16/2020	23:59	X		X		X	
DU06	DU-06	Soil	10/30/2020	23:59	X	X	X	X	X	
DU-06-12	DU-06	Soil	11/16/2020	23:59	X		X		X	
DU-06-24	DU-06	Soil	11/16/2020	23:59	X		X		X	
DU07	DU-07	Soil	10/28/2020	23:59	X	X	X	X	X	
DU-07-12	DU-07	Soil	11/16/2020	23:59	X		X		X	
DU-07-24	DU-07	Soil	11/16/2020	23:59	X		X		X	
DU08	DU-08	Soil	10/29/2020	23:59	X	X	X	X	X	
DU-08-12	DU-08	Soil	11/16/2020	23:59	X		X		X	
DU-08-24	DU-08	Soil	11/16/2020	23:59	X		X		X	

Table 1

Sample Collection and Analysis Summary
Soil Characterization Sampling
HVF West, LLC
Tucson, Arizona
November 2020

Sample Identification	Location	Matrix	Collection Date (mm/dd/yyyy)	Collection Time (hr:min)	Metals	Metals (SPLP)	Mercury	Mercury (SPLP)	Hexavalent Chromium	Comments
DU09	DU-09	Soil	10/30/2020	23:59	X	X	X	X	X	
DU-09-12	DU-09	Soil	11/16/2020	23:59	X		X		X	
DU-09-24	DU-09	Soil	11/16/2020	23:59	X		X		X	
DUP-2~DU-09-24	DU-09	Soil	11/16/2020	23:59	X		X		X	Field Duplicate of DU-09-24
DU10	DU-10	Soil	10/30/2020	23:59	X	X	X	X	X	
DU-10-12	DU-10	Soil	11/16/2020	23:59	X		X		X	
DU-10-24	DU-10	Soil	11/16/2020	23:59	X		X		X	
DU11	DU-11	Soil	10/29/2020	23:59	X	X	X	X	X	
DU-11-12	DU-11	Soil	11/16/2020	23:59	X		X		X	
DU-11-24	DU-11	Soil	11/16/2020	23:59	X		X		X	
DU12	DU-12	Soil	10/29/2020	23:59	X	X	X	X	X	
DU-12-12	DU-12	Soil	11/16/2020	23:59	X		X		X	
DU-12-24	DU-12	Soil	11/16/2020	23:59	X		X		X	
DU13	DU-13	Soil	10/30/2020	23:59	X	X	X	X	X	
DU-13-12	DU-13	Soil	11/16/2020	23:59	X	X	X	X	X	
DU-13-24	DU-13	Soil	11/16/2020	23:59	X		X		X	
DU14	DU-14	Soil	10/28/2020	23:59	X	X	X	X	X	
DU-14-12	DU-14	Soil	11/17/2020	23:59	X	X	X	X	X	
DU-14-24	DU-14	Soil	11/17/2020	23:59	X		X		X	
DUP-6~DU-14-24	DU-14	Soil	11/17/2020	23:59	X		X		X	Field Duplicate of DU-14-24
DU15	DU-15	Soil	10/28/2020	23:59	X	X	X	X	X	
DU-15-12	DU-15	Soil	11/17/2020	23:59	X	X	X	X	X	
DU-15-24	DU-15	Soil	11/17/2020	23:59	X		X		X	
DUP-5~DU-15-24	DU-15	Soil	11/17/2020	23:59	X		X		X	Field Duplicate of DU-15-24
DU-16-12	DU-16	Soil	11/16/2020	23:59	X	X	X	X	X	
DU-16-24	DU-16	Soil	11/16/2020	23:59	X		X		X	
DUP-3~DU-16-24	DU-16	Soil	11/16/2020	23:59	X		X		X	Field Duplicate of DU-16-24

Table 1

Sample Collection and Analysis Summary
Soil Characterization Sampling
HVF West, LLC
Tucson, Arizona
November 2020

Sample Identification	Location	Matrix	Collection Date (mm/dd/yyyy)	Collection Time (hr:min)	Metals	Metals (SPLP)	Mercury	Mercury (SPLP)	Hexavalent Chromium	Comments
DU-17-12	DU-17	Soil	11/16/2020	23:59	X		X		X	
DU-17-24	DU-17	Soil	11/16/2020	23:59	X		X		X	
DU-17-COMP	DU-17	Soil	11/17/2020	23:59	X		X		X	
DU-18-12	DU-18	Soil	11/16/2020	23:59	X		X		X	
DU-18-24	DU-18	Soil	11/16/2020	23:59	X		X		X	
DU-18-COMP	DU-18	Soil	11/17/2020	23:59	X		X		X	
DU-19-12	DU-19	Soil	11/16/2020	23:59	X		X		X	
DU-19-24	DU-19	Soil	11/16/2020	23:59	X		X		X	
DU-19-COMP	DU-19	Soil	11/17/2020	23:59	X		X		X	
DU-20-12	DU-20	Soil	11/16/2020	23:59	X		X		X	
DU-20-24	DU-20	Soil	11/16/2020	23:59	X		X		X	
DU-20-COMP	DU-20	Soil	11/18/2020	23:59	X		X		X	
DUP-3~DU20~0-6	DU-20	Soil	11/18/2020	23:59	X		X		X	Field Duplicate of DU-20-COMP
DU-21-12	DU-21	Soil	11/17/2020	23:59	X	X	X	X	X	
DU-21-24	DU-21	Soil	11/17/2020	23:59	X		X		X	
DUP-7~DU-21-24	DU-21	Soil	11/17/2020	23:59	X		X		X	Field Duplicate of DU-21-24
DU-21-COMP	DU-21	Soil	11/18/2020	23:59	X		X		X	
DUP-4~DU21~0-6	DU-21	Soil	11/18/2020	23:59	X		X		X	Field Duplicate of DU-21-COMP
DU-22-12	DU-22	Soil	11/16/2020	23:59	X		X		X	
DU-22-24	DU-22	Soil	11/16/2020	23:59	X		X		X	
DU-22-COMP	DU-22	Soil	11/18/2020	23:59	X		X		X	
DU-23-12	DU-23	Soil	11/17/2020	23:59	X		X		X	
DU-23-24	DU-23	Soil	11/17/2020	23:59	X		X		X	
DU-23-COMP	DU-23	Soil	11/18/2020	23:59	X		X		X	
DU-24-12	DU-24	Soil	11/17/2020	23:59	X		X		X	
DU-24-24	DU-24	Soil	11/17/2020	23:59	X	X	X	X	X	
DU-24-COMP	DU-24	Soil	11/18/2020	23:59	X		X		X	

Table 1

Sample Collection and Analysis Summary
Soil Characterization Sampling
HVF West, LLC
Tucson, Arizona
November 2020

Sample Identification	Location	Matrix	Collection Date (mm/dd/yyyy)	Collection Time (hr:min)	Metals	Metals (SPLP)	Mercury	Mercury (SPLP)	Hexavalent Chromium	Comments
DU25	DU-25	Soil	10/30/2020	23:59	X	X	X	X	X	
DU-25-12	DU-25	Soil	11/16/2020	23:59	X		X		X	
DU-25-24	DU-25	Soil	11/16/2020	23:59	X		X		X	
DU26	DU-26	Soil	10/29/2020	23:59	X	X	X	X	X	
DU-26-12	DU-26	Soil	11/16/2020	23:59	X		X		X	
DU-26-24	DU-26	Soil	11/16/2020	23:59	X		X		X	
DU27	DU-27	Soil	10/29/2020	23:59	X	X	X	X	X	
DU-27-12	DU-27	Soil	11/16/2020	23:59	X		X		X	
DU-27-24	DU-27	Soil	11/16/2020	23:59	X		X		X	
DU28	DU-28	Soil	10/27/2020	23:59	X	X	X	X	X	
DU-28-12	DU-28	Soil	11/17/2020	23:59	X		X		X	
DU-28-24	DU-28	Soil	11/17/2020	23:59	X		X		X	
DU29	DU-29	Soil	10/27/2020	23:59	X	X	X	X	X	
DU-29-12	DU-29	Soil	11/17/2020	23:59	X		X		X	
DU-29-24	DU-29	Soil	11/17/2020	23:59	X		X		X	
DU30	DU-30	Soil	10/27/2020	23:59	X	X	X	X	X	
DU-30-12	DU-30	Soil	11/17/2020	23:59	X	X	X	X	X	
DU-30-24	DU-30	Soil	11/17/2020	23:59	X		X		X	
DUP-4~DU-30-24	DU-30	Soil	11/17/2020	23:59	X		X		X	Field Duplicate of DU-30-24
DU31	DU-31	Soil	10/27/2020	23:59	X	X	X	X	X	
DU-31-12	DU-31	Soil	11/17/2020	23:59	X	X	X	X	X	
DU-31-24	DU-31	Soil	11/17/2020	23:59	X		X		X	

Notes:

SPLP - Synthetic Precipitation Leaching Procedure

Table 2A

Analytical Results Summary
Soil Characterization Sampling
HVF West, LLC
Tucson, Arizona
November 2020

Location ID:		**DU-01**	**DU-01**	**DU-01**	**DU-01**	**DU-02**	**DU-02**	**DU-02**	**DU-03**	**DU-03**
Sample Name:		**DU01**	**DUP1~DU01**	**DU-01-12**	**DU-01-24**	**DU02**	**DU-02-12**	**DU-02-24**	**DU03**	**DU-03-12**
Sample Date:		**10/28/2020**	**10/28/2020**	**11/16/2020**	**11/16/2020**	**10/28/2020**	**11/16/2020**	**11/16/2020**	**10/28/2020**	**11/16/2020**
Depth:		**0-6 ft BGS**	**0-6 ft BGS Duplicate**	**12 ft BGS**	**24 ft BGS**	**0-6 ft BGS**	**12 ft BGS**	**24 ft BGS**	**0-6 ft BGS**	**12 ft BGS**
Parameters	**Unit**									
Metals										
Cadmium	mg/kg	15.5	15.7	0.489 J	0.376 J	23.3	0.979	0.210 J	26	0.367 J
Chromium	mg/kg	28.7 J	25.1 J	21.0	19.3	34.2 J	10.9	16.2	33 J	13.9
Chromium VI (hexavalent)	mg/kg	2.01	0.640 U	0.640 U	0.640 U	1.0 J	0.640 U	0.640 U	3.2	0.640 U
Lead	mg/kg	50.3	41.7	13.2	11.7	54.8	7.86	8.36	65.3	9.18
Mercury	mg/kg	0.847 J	0.0597 J	0.0356 J	0.023 J	0.0921 J	0.0180 U	0.0180 U	0.133 J	0.0180 U

Table 2A

Analytical Results Summary
Soil Characterization Sampling
HVF West, LLC
Tucson, Arizona
November 2020

Location ID:		**DU-03**	**DU-04**	**DU-04**	**DU-04**	**DU-04**	**DU-05**	**DU-05**	**DU-05**
Sample Name:		**DU-03-24**	**DU04**	**DU-04-12**	**DU-04-24**	**DUP-1~DU-04-24**	**DU05**	**DUP2~DU05~0-6**	**DU-05-12**
Sample Date:		**11/16/2020**	**10/29/2020**	**11/16/2020**	**11/16/2020**	**11/16/2020**	**10/30/2020**	**10/30/2020**	**11/16/2020**
Depth:		**24 ft BGS**	**0-6 ft BGS**	**12 ft BGS**	**24 ft BGS**	**24 ft BGS Duplicate**	**0-6 ft BGS**	**0-6 ft BGS Duplicate**	**12 ft BGS**
Parameters	**Unit**								
Metals									
Cadmium	mg/kg	0.191 J	26.9	0.146 J	0.830	0.638	199	203	2.85
Chromium	mg/kg	16.7	34.5 J	14.3	21.9	20.0	379 J	204 J	15.7
Chromium VI (hexavalent)	mg/kg	0.640 U	3.35	0.640 U	0.640 U	0.640 U	17.9	12.3	0.640 U
Lead	mg/kg	9.45	96.6	8.68	12.7	12.3	487	427	14.0
Mercury	mg/kg	0.0180 U	0.105 J	0.0180 U	0.024 J	0.0267 J	1.47 J	1.35 J	0.026 J

Table 2A

Analytical Results Summary
Soil Characterization Sampling
HVF West, LLC
Tucson, Arizona
November 2020

Location ID:		**DU-05**	**DU-06**	**DU-06**	**DU-06**	**DU-07**	**DU-07**	**DU-07**	**DU-08**
Sample Name:		**DU-05-24**	**DU06**	**DU-06-12**	**DU-06-24**	**DU07**	**DU-07-12**	**DU-07-24**	**DU08**
Sample Date:		**11/16/2020**	**10/30/2020**	**11/16/2020**	**11/16/2020**	**10/28/2020**	**11/16/2020**	**11/16/2020**	**10/29/2020**
Depth:		**24 ft BGS**	**0-6 ft BGS**	**12 ft BGS**	**24 ft BGS**	**0-6 ft BGS**	**12 ft BGS**	**24 ft BGS**	**0-6 ft BGS**
Parameters	**Unit**								
Metals									
Cadmium	mg/kg	0.0930 J	52.5	0.211 J	0.113 J	35.2	0.789	0.163 J	40.1
Chromium	mg/kg	10.2	146 J	13.3	12.3	29.2 J	9.45	14.2	52.5 J
Chromium VI (hexavalent)	mg/kg	0.640 U	4.64	0.640 U	0.640 U	0.640 U	0.640 U	0.640 U	2.5
Lead	mg/kg	6.24	222	8.91	7.76	62.5	8.25	9.58	92.3
Mercury	mg/kg	0.0197 J	0.288 J	0.0180 U	0.0180 U	0.214 J	0.0180 U	0.0180 U	0.181 J

Table 2A

Analytical Results Summary
Soil Characterization Sampling
HVF West, LLC
Tucson, Arizona
November 2020

Location ID:		**DU-08**	**DU-08**	**DU-09**	**DU-09**	**DU-09**	**DU-09**	**DU-10**	**DU-10**
Sample Name:		**DU-08-12**	**DU-08-24**	**DU09**	**DU-09-12**	**DU-09-24**	**DUP-2~DU-09-24**	**DU10**	**DU-10-12**
Sample Date:		**11/16/2020**	**11/16/2020**	**10/30/2020**	**11/16/2020**	**11/16/2020**	**11/16/2020**	**10/30/2020**	**11/16/2020**
Depth:		**12 ft BGS**	**24 ft BGS**	**0-6 ft BGS**	**12 ft BGS**	**24 ft BGS**	**24 ft BGS Duplicate**	**0-6 ft BGS**	**12 ft BGS**
Parameters	**Unit**								
Metals									
Cadmium	mg/kg	0.205 J	0.0471 U	114	0.958	26.0	45.6	88.6	2.11
Chromium	mg/kg	17.0	17.3	259 J	14.1	32.3	77.8	150 J	13.5
Chromium VI (hexavalent)	mg/kg	0.640 U	0.640 U	10	0.640 U	0.996 J	1.40 J	5.71	0.640 U
Lead	mg/kg	10.3	10.6	348	10.7	41.7	49	260	13.2
Mercury	mg/kg	0.0180 U	0.0337 J	1.1 J	0.0193 J	0.0919	0.128	0.497 J	0.0213 J

Table 2A

Analytical Results Summary
Soil Characterization Sampling
HVF West, LLC
Tucson, Arizona
November 2020

Location ID:		**DU-10**	**DU-11**	**DU-11**	**DU-11**	**DU-12**	**DU-12**	**DU-12**	**DU-13**
Sample Name:		**DU-10-24**	**DU11**	**DU-11-12**	**DU-11-24**	**DU12**	**DU-12-12**	**DU-12-24**	**DU13**
Sample Date:		**11/16/2020**	**10/29/2020**	**11/16/2020**	**11/16/2020**	**10/29/2020**	**11/16/2020**	**11/16/2020**	**10/30/2020**
Depth:		**24 ft BGS**	**0-6 ft BGS**	**12 ft BGS**	**24 ft BGS**	**0-6 ft BGS**	**12 ft BGS**	**24 ft BGS**	**0-6 ft BGS**
Parameters	**Unit**								
Metals									
Cadmium	mg/kg	2.43	20.3	0.255 J	0.125 J	32.2	0.157 J	0.133 J	38.9
Chromium	mg/kg	15.1	31 J	11.1	8.11	43 J	11.0	5.93	50.7 J
Chromium VI (hexavalent)	mg/kg	0.800 J	1.99 J	0.640 U	0.640 U	2.99	0.640 U	0.640 U	2.92
Lead	mg/kg	13.4	53.2	7.6	5.62	117	7.97	5.53	101
Mercury	mg/kg	0.0221 J	0.101 J	0.0222 J	0.0180 U	0.221 J	0.0180 U	0.0180 U	0.211 J

Table 2A

Analytical Results Summary
Soil Characterization Sampling
HVF West, LLC
Tucson, Arizona
November 2020

Location ID:		**DU-13**	**DU-13**	**DU-14**	**DU-14**	**DU-14**	**DU-14**	**DU-15**	**DU-15**
Sample Name:		**DU-13-12**	**DU-13-24**	**DU14**	**DU-14-12**	**DU-14-24**	**DUP-6~DU-14-24**	**DU15**	**DU-15-12**
Sample Date:		**11/16/2020**	**11/16/2020**	**10/28/2020**	**11/17/2020**	**11/17/2020**	**11/17/2020**	**10/28/2020**	**11/17/2020**
Depth:		**12 ft BGS**	**24 ft BGS**	**0-6 ft BGS**	**12 ft BGS**	**24 ft BGS**	**24 ft BGS Duplicate**	**0-6 ft BGS**	**12 ft BGS**
Parameters	**Unit**								
Metals									
Cadmium	mg/kg	59.1	0.229 J	129	1.49	0.0935 J	0.109 J	149	13.9
Chromium	mg/kg	77.7	11.9	524 J	11.0	8.81	10.6	251 J	33.4
Chromium VI (hexavalent)	mg/kg	1.73 J	0.640 U	10.6	0.640 U	0.640 U	0.640 U	10.8	2.72
Lead	mg/kg	207	8.2	417	21.4	5.99	7.15	862	51.2
Mercury	mg/kg	0.397	0.0180 U	0.95 J	0.0180 U	0.0180 U	0.0180 U	1.22 J	0.0825

Table 2A

Analytical Results Summary
Soil Characterization Sampling
HVF West, LLC
Tucson, Arizona
November 2020

Location ID:		DU-15	DU-15	DU-16	DU-16	DU-16	DU-17	DU-17	DU-17
Sample Name:		DU-15-24	DUP-5~DU-15-24	DU-16-12	DU-16-24	DUP-3~DU-16-24	DU-17-12	DU-17-24	DU-17-COMP
Sample Date:		11/17/2020	11/17/2020	11/16/2020	11/16/2020	11/16/2020	11/16/2020	11/16/2020	11/17/2020
Depth:		24 ft BGS	24 ft BGS	12 ft BGS	24 ft BGS	24 ft BGS	12 ft BGS	24 ft BGS	0-6 ft BGS
			Duplicate			Duplicate			
Parameters	**Unit**								
Metals									
Cadmium	mg/kg	1.79	2.04	0.191 J	0.125 J	0.113 J	97.8	0.177 J	103
Chromium	mg/kg	11.3	17.1	12.0	4.86	5.14	422	6.91	182
Chromium VI (hexavalent)	mg/kg	0.640 U	0.640 U	0.640 U	0.640 U	0.640 U	5.16	0.640 U	11.2
Lead	mg/kg	12.3	14.9	7.77	3.76	3.83	515	5.06	335
Mercury	mg/kg	0.0263 J	0.0180 U	0.0367 J	0.0180 U	0.0180 U	0.740	0.0180 U	0.671

Table 2A

Analytical Results Summary
Soil Characterization Sampling
HVF West, LLC
Tucson, Arizona
November 2020

Location ID:		**DU-18**	**DU-18**	**DU-18**	**DU-19**	**DU-19**	**DU-19**	**DU-20**	**DU-20**
Sample Name:		**DU-18-12**	**DU-18-24**	**DU-18-COMP**	**DU-19-12**	**DU-19-24**	**DU-19-COMP**	**DU-20-12**	**DU-20-24**
Sample Date:		**11/16/2020**	**11/16/2020**	**11/17/2020**	**11/16/2020**	**11/16/2020**	**11/17/2020**	**11/16/2020**	**11/16/2020**
Depth:		**12 ft BGS**	**24 ft BGS**	**0-6 ft BGS**	**12 ft BGS**	**24 ft BGS**	**0-6 ft BGS**	**12 ft BGS**	**24 ft BGS**
Parameters	**Unit**								
Metals									
Cadmium	mg/kg	59.3	0.273 J	133	85.9	1.43	230	42.7	0.197 J
Chromium	mg/kg	71.7	10.0	353	258	14.0	357	71.5	10.6
Chromium VI (hexavalent)	mg/kg	2.96	0.640 U	6.36	11.8	0.640 U	13.3	0.720 J	0.640 U
Lead	mg/kg	167	6.91	307	340	12.0	690	130	7.46
Mercury	mg/kg	0.500	0.0180 U	0.613	0.449	0.0204 J	1.44	0.279	0.0180 U

Table 2A

Analytical Results Summary
Soil Characterization Sampling
HVF West, LLC
Tucson, Arizona
November 2020

Location ID:		**DU-20**	**DU-20**	**DU-21**	**DU-21**	**DU-21**	**DU-21**	**DU-21**
Sample Name:		**DU-20-COMP**	**DUP-3~DU20~0-6**	**DU-21-12**	**DU-21-24**	**DUP-7~DU-21-24**	**DU-21-COMP**	**DUP-4~DU21~0-6**
Sample Date:		**11/18/2020**	**11/18/2020**	**11/17/2020**	**11/17/2020**	**11/17/2020**	**11/18/2020**	**11/18/2020**
Depth:		**0-6 ft BGS**	**0-6 ft BGS**	**12 ft BGS**	**24 ft BGS**	**24 ft BGS**	**0-6 ft BGS**	**0-6 ft BGS**
			Duplicate			**Duplicate**		**Duplicate**
Parameters	**Unit**							
Metals								
Cadmium	mg/kg	157	105	5.62	0.236 J	0.238 J	166	188
Chromium	mg/kg	578	653	20.2	17.0	17.3	315	286
Chromium VI (hexavalent)	mg/kg	13.6	12.7	0.906 J	0.640 U	0.640 U	15.8	18.7
Lead	mg/kg	1040	588	25.2	10.3	10.3	571	532
Mercury	mg/kg	0.796	0.758	0.0519	0.0197 J	0.0258 J	1.20	1.33

Table 2A

Analytical Results Summary
Soil Characterization Sampling
HVF West, LLC
Tucson, Arizona
November 2020

Location ID:		**DU-22**	**DU-22**	**DU-22**	**DU-23**	**DU-23**	**DU-23**	**DU-24**	**DU-24**
Sample Name:		**DU-22-12**	**DU-22-24**	**DU-22-COMP**	**DU-23-12**	**DU-23-24**	**DU-23-COMP**	**DU-24-12**	**DU-24-24**
Sample Date:		**11/16/2020**	**11/16/2020**	**11/18/2020**	**11/17/2020**	**11/17/2020**	**11/18/2020**	**11/17/2020**	**11/17/2020**
Depth:		**12 ft BGS**	**24 ft BGS**	**0-6 ft BGS**	**12 ft BGS**	**24 ft BGS**	**0-6 ft BGS**	**12 ft BGS**	**24 ft BGS**
Parameters	**Unit**								
Metals									
Cadmium	mg/kg	0.264 J	0.163 J	268	33.1	123	69.2	38.3	3.25
Chromium	mg/kg	15.8	15.6	552	55.6	227	129	126	15.5
Chromium VI (hexavalent)	mg/kg	0.640 U	0.640 U	8.44	0.640 U	0.640 U	11.3	7.61	0.640 U
Lead	mg/kg	10.6	8.8	1070	102	505	285	251	17.7
Mercury	mg/kg	0.0188 J	0.0215 J	2.99	0.233	0.697	0.578	0.182	0.0431

Table 2A

Analytical Results Summary
Soil Characterization Sampling
HVF West, LLC
Tucson, Arizona
November 2020

Location ID:		**DU-24**	**DU-25**	**DU-25**	**DU-25**	**DU-26**	**DU-26**	**DU-26**	**DU-27**
Sample Name:		**DU-24-COMP**	**DU25**	**DU-25-12**	**DU-25-24**	**DU26**	**DU-26-12**	**DU-26-24**	**DU27**
Sample Date:		**11/18/2020**	**10/30/2020**	**11/16/2020**	**11/16/2020**	**10/29/2020**	**11/16/2020**	**11/16/2020**	**10/29/2020**
Depth:		**0-6 ft BGS**	**0-6 ft BGS**	**12 ft BGS**	**24 ft BGS**	**0-6 ft BGS**	**12 ft BGS**	**24 ft BGS**	**0-6 ft BGS**
Parameters	**Unit**								
Metals									
Cadmium	mg/kg	81.4	104	10.1	0.156 J	62.2	0.886	0.210 J	135
Chromium	mg/kg	98.5	147 J	25.3	12.8	107 J	12.6	12.7	298 J
Chromium VI (hexavalent)	mg/kg	11.7	6.6	0.640 U	0.640 U	0.640 U	0.640 U	0.640 U	14.9
Lead	mg/kg	185	393	27.8	8.79	160	10.7	8.63	373
Mercury	mg/kg	0.381	0.704 J	0.0417	0.020 J	0.335 J	0.0241 J	0.0180 U	0.869 J

Table 2A

Analytical Results Summary
Soil Characterization Sampling
HVF West, LLC
Tucson, Arizona
November 2020

Location ID:		**DU-27**	**DU-27**	**DU-28**	**DU-28**	**DU-28**	**DU-29**	**DU-29**	**DU-29**
Sample Name:		**DU-27-12**	**DU-27-24**	**DU28**	**DU-28-12**	**DU-28-24**	**DU29**	**DU-29-12**	**DU-29-24**
Sample Date:		**11/16/2020**	**11/16/2020**	**10/27/2020**	**11/17/2020**	**11/17/2020**	**10/27/2020**	**11/17/2020**	**11/17/2020**
Depth:		**12 ft BGS**	**24 ft BGS**	**0-6 ft BGS**	**12 ft BGS**	**24 ft BGS**	**0-6 ft BGS**	**12 ft BGS**	**24 ft BGS**
Parameters	**Unit**								
Metals									
Cadmium	mg/kg	1.39	0.736	143	0.178 J	0.163 J	124	4.88	0.142 J
Chromium	mg/kg	14.7	10.9	219 J	12.0	14.4	148 J	25.1	12.7
Chromium VI (hexavalent)	mg/kg	0.640 U	0.640 U	6.52	0.640 U	0.640 U	8.21	1.88 J	0.640 U
Lead	mg/kg	12.4	6.91	399	7.89	8.6	2350	29.5	6.44
Mercury	mg/kg	0.0279 J	0.0263 J	1.19 J	0.0180 U	0.0192 J	0.586 J	0.0455	0.0180 U

Table 2A

Analytical Results Summary
Soil Characterization Sampling
HVF West, LLC
Tucson, Arizona
November 2020

Location ID:		**DU-30**	**DU-30**	**DU-30**	**DU-30**	**DU-31**	**DU-31**	**DU-31**
Sample Name:		**DU30**	**DU-30-12**	**DU-30-24**	**DUP-4~DU-30-24**	**DU31**	**DU-31-12**	**DU-31-24**
Sample Date:		**10/27/2020**	**11/17/2020**	**11/17/2020**	**11/17/2020**	**10/27/2020**	**11/17/2020**	**11/17/2020**
Depth:		**0-6 ft BGS**	**12 ft BGS**	**24 ft BGS**	**24 ft BGS Duplicate**	**0-6 ft BGS**	**12 ft BGS**	**24 ft BGS**
Parameters	**Unit**							
Metals								
Cadmium	mg/kg	88.9	8.31	0.0823 J	0.0972 J	86.9	7.80	0.124 J
Chromium	mg/kg	132 J	19.6	6.13	6.85	126 J	25.2	11.4
Chromium VI (hexavalent)	mg/kg	8.78	0.675 J	0.640 U	0.640 U	9.96	0.640 U	0.640 U
Lead	mg/kg	394	31.7	3.48	4.37	269	26.1	6.35
Mercury	mg/kg	0.906 J	0.0745	0.0180 U	0.0180 U	1.25 J	0.0638	0.0205 J

Notes:

J - Estimated concentration
U - Not detected at the associated reporting limit

Table 2B

Analytical Results Summary
Soil Characterization Sampling
HVF West, LLC
Tucson, Arizona
November 2020

Location ID:		DU-01	DU-01	DU-02	DU-03	DU-03	DU-04	DU-05	DU-05	DU-05
Sample Name:		DU01	DUP1~DU01	DU02	DU03	DU-03-12	DU04	DU05	DUP2~DU05~0-6	DU-05-12
Sample Date:		10/28/2020	10/28/2020	10/28/2020	10/28/2020	11/16/2020	10/29/2020	10/30/2020	10/30/2020	11/16/2020
Depth:		0-6 ft BGS	0-6 ft BGS Duplicate	0-6 ft BGS	0-6 ft BGS	12 ft BGS	0-6 ft BGS	0-6 ft BGS	0-6 ft BGS Duplicate	12 ft BGS
Parameters	**Unit**									
Metals, SPLP										
Cadmium	µg/L	8.29	6.16	16.2	9.72	0.479 U	13.8	11.2	13.3	2.48
Chromium	µg/L	10.0	11.3	51.0	30.5	13.7	20.6	22.7	27.6	7.43 J
Lead	µg/L	25.6	22.4	258	1000	7.02	107	24.5	30.1	9.82
Mercury	µg/L	0.132 J	0.106 J	0.150 J	0.139 J	0.117 J	0.160 J	0.159 J	0.196 J	0.109 J

Table 2B

Analytical Results Summary
Soil Characterization Sampling
HVF West, LLC
Tucson, Arizona
November 2020

Location ID:		**DU-06**	**DU-07**	**DU-08**	**DU-09**	**DU-10**	**DU-11**	**DU-12**	**DU-13**	**DU-13**
Sample Name:		**DU06**	**DU07**	**DU08**	**DU09**	**DU10**	**DU11**	**DU12**	**DU13**	**DU-13-12**
Sample Date:		**10/30/2020**	**10/28/2020**	**10/29/2020**	**10/30/2020**	**10/30/2020**	**10/29/2020**	**10/29/2020**	**10/30/2020**	**11/16/2020**
Depth:		**0-6 ft BGS**	**0-6 ft BGS**	**0-6 ft BGS**	**0-6 ft BGS**	**0-6 ft BGS**	**0-6 ft BGS**	**0-6 ft BGS**	**0-6 ft BGS**	**12 ft BGS**
Parameters	**Unit**									
Metals, SPLP										
Cadmium	µg/L	17.8	8.34	15.2	8.17	19.2	11.0	5.25	6.04	0.479 U
Chromium	µg/L	25.8	12.5	18.0	19.2	25.9	12.9	9.55 J	24.2	7.14 J
Lead	µg/L	46.4	41.4	39.7	24.3	92.9	27.4	6.96	16.4	6.19
Mercury	µg/L	0.159 J	0.115 J	0.121 J	0.165 J	0.200	0.187 J	0.116 J	0.100 U	0.100 U

Table 2B

Analytical Results Summary
Soil Characterization Sampling
HVF West, LLC
Tucson, Arizona
November 2020

Location ID:		**DU-14**	**DU-14**	**DU-15**	**DU-15**	**DU-16**	**DU-21**	**DU-24**
Sample Name:		**DU14**	**DU-14-12**	**DU15**	**DU-15-12**	**DU-16-12**	**DU-21-12**	**DU-24-24**
Sample Date:		**10/28/2020**	**11/17/2020**	**10/28/2020**	**11/17/2020**	**11/16/2020**	**11/17/2020**	**11/17/2020**
Depth:		**0-6 ft BGS**	**12 ft BGS**	**0-6 ft BGS**	**12 ft BGS**	**12 ft BGS**	**12 ft BGS**	**24 ft BGS**
Parameters	**Unit**							
Metals, SPLP								
Cadmium	µg/L	4.17	2.25	1.81 J	0.479 U	1.28 J	0.891 J	2.71
Chromium	µg/L	8.03 J	15.5	17.5	10.2	16.3	15.8	13.3
Lead	µg/L	2.99 U	39.4	2.99 U	2.99 U	9.92	9.23	13.1
Mercury	µg/L	0.160 J	0.100 U	0.140 J	0.100 U	0.114 J	0.115 J	0.120 J

Table 2B

Analytical Results Summary
Soil Characterization Sampling
HVF West, LLC
Tucson, Arizona
November 2020

Location ID:		**DU-25**	**DU-26**	**DU-27**	**DU-28**	**DU-29**	**DU-30**	**DU-30**	**DU-31**	**DU-31**
Sample Name:		**DU25**	**DU26**	**DU27**	**DU28**	**DU29**	**DU30**	**DU-30-12**	**DU31**	**DU-31-12**
Sample Date:		**10/30/2020**	**10/29/2020**	**10/29/2020**	**10/27/2020**	**10/27/2020**	**10/27/2020**	**11/17/2020**	**10/27/2020**	**11/17/2020**
Depth:		**0-6 ft BGS**	**0-6 ft BGS**	**0-6 ft BGS**	**0-6 ft BGS**	**0-6 ft BGS**	**0-6 ft BGS**	**12 ft BGS**	**0-6 ft BGS**	**12 ft BGS**
Parameters	**Unit**									
Metals, SPLP										
Cadmium	µg/L	9.81	12.7	2.62	1.86 J	1.39 J	1.06 J	0.479 U	1.13 J	2.2
Chromium	µg/L	19.6	19.8	12.9	9.23 J	11.9	15.9	2.59 J	19.7	5.47 J
Lead	µg/L	34.2	47.3	9.66	2.99 U	2.99 U	2.99 U	3.89 U	2.99 U	5.82 U
Mercury	µg/L	0.184 J	0.183 J	0.111 J	0.170 J	0.100 U	0.100 U	0.100 U	0.100 U	0.108 J

Notes:

J - Estimated concentration
U - Not detected at the associated reporting limit
SPLP - Synthetic Precipitation Leaching Procedure

Table 3

Analytical Methods
Soil Characterization Sampling
HVF West, LLC
Tucson, Arizona
November 2020

Parameter	Method	Matrix	Holding Time Collection to Analysis (Days)
Metals	SW-846 6010/6010(SPLP)	Soil	180
Mercury	SW-846 7471/7470(SPLP)	Soil	28
Hexavalent Chromium	SW-846 7196	Soil	30 Days Ext./ 7 Days Analysis

Notes:

"-" - Not applicable

Method References:

SW-846 - "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", SW-846, Third Edition, 1986, with subsequent revisions
SPLP - Synthetic Precipitation Leaching Procedure

Table 4

Qualified Sample Results Due to Analyte Concentrations in the Method Blanks
Soil Characterization Sampling
HVF West, LLC
Tucson, Arizona
November 2020

Parameter	Analyte	Analysis Date (mm/dd/yyyy)	Blank Result *	Sample ID	Original Result	Qualified Result	Units
Metals(SPLP)	Lead	11/17/2021	3.53 J	DU-30-12	3.89 J	3.89 U	ug/L
				DU-31-12	5.82 J	5.82 U	ug/L

Notes:

* - Blank result adjusted for sample factors where applicable
U - Not detected at the associated reporting limit
J - Estimated concentration
SPLP - Synthetic Precipitation Leaching Procedure

Table 5

Qualified Sample Results Due to Outlying MS/MSD Results
Soil Characterization Sampling
HVF West, LLC
Tucson, Arizona
November 2020

Parameter	Sample ID	Analyte	MS % Recovery	MSD % Recovery	RPD (percent)	Control Limits % Recovery	Control Limits RPD	Qualified Result	Units
Metals	DU31	Chromium	28.6	29.5	0.52	75-125	35	126 J	mg/Kg
	DU30							132 J	mg/Kg
	DU29							148 J	mg/Kg
	DU28							219 J	mg/Kg
	DU15							251 J	mg/Kg
	DU14							524 J	mg/Kg
	DU01							28.7 J	mg/Kg
	DUP1~DU01							25.1 J	mg/Kg
	DU02							34.2 J	mg/Kg
	DU03							33 J	mg/Kg
	DU07							29.2 J	mg/Kg
	DU11							31 J	mg/Kg
	DU12							43 J	mg/Kg
	DU08							52.5 J	mg/Kg
	DU04							34.5 J	mg/Kg
	DU26							107 J	mg/Kg
	DU27							298 J	mg/Kg
	DU06							146 J	mg/Kg
	DU05							379 J	mg/Kg
	DUP2~DU05~0-6							204 J	mg/Kg
	DU09							259 J	mg/Kg
	DU25							147 J	mg/Kg
	DU13							50.7 J	mg/Kg
	DU10							150 J	mg/Kg
Metals	DU31	Mercury	1.12	93.6	34.3	75-125	35	1.25 J	mg/Kg
	DU30							0.906 J	mg/Kg
	DU29							0.586 J	mg/Kg
	DU28							1.19 J	mg/Kg
	DU15							1.22 J	mg/Kg
	DU14							0.95 J	mg/Kg
	DU01							0.847 J	mg/Kg

Table 5

Qualified Sample Results Due to Outlying MS/MSD Results
Soil Characterization Sampling
HVF West, LLC
Tucson, Arizona
November 2020

Parameter	Sample ID	Analyte	MS % Recovery	MSD % Recovery	RPD (percent)	Control Limits % Recovery	Control Limits RPD	Qualified Result	Units
Metals (Continued)	DUP1~DU01	Mercury	1.12	93.6	34.3	75-125	35	0.0597 J	mg/Kg
	DU02							0.0921 J	mg/Kg
	DU03							0.133 J	mg/Kg
	DU07							0.214 J	mg/Kg
	DU11							0.101 J	mg/Kg
	DU12							0.221 J	mg/Kg
	DU08							0.181 J	mg/Kg
	DU04							0.105 J	mg/Kg
	DU26							0.335 J	mg/Kg
	DU27							0.869 J	mg/Kg
	DU06							0.288 J	mg/Kg
	DU05							1.47 J	mg/Kg
	DUP2~DU05~0-6							1.35 J	mg/Kg
	DU09							1.1 J	mg/Kg
	DU25							0.704 J	mg/Kg
	DU13							0.211 J	mg/Kg
	DU10							0.497 J	mg/Kg

Notes:

MS - Matrix Spike
MSD - Matrix Spike Duplicate
RPD - Relative Percent Difference
J - Estimated concentration

Appendix D

Analytical Laboratory Reports

May 2021

ANALYTICAL REPORT

June 17, 2021

Revised Report

GHD - Phoenix, AZ

Sample Delivery Group:	L1356956
Samples Received:	05/22/2021
Project Number:	11224790/103
Description:	VRP Services - HVF West, LLC.
Report To:	Larry Williams 4747 North 22nd Street Suite 200 Phoenix, AZ 85016

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Entire Report Reviewed By:

Chris McCord
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

Pace Analytical National
12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

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SO-DU22-G20-0.5 L1356956-01 Solid

Collected by: Nicole Rubenstein | Collected date/time: 05/18/21 08:58 | Received date/time: 05/22/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1678664	1	05/28/21 10:38	05/28/21 10:49	KDW	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1679634	1	05/31/21 07:28	06/09/21 18:51	KMG	Mt. Juliet, TN

SO-DU22-G19-0.5 L1356956-02 Solid

Collected by: Nicole Rubenstein | Collected date/time: 05/18/21 09:19 | Received date/time: 05/22/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1678664	1	05/28/21 10:38	05/28/21 10:49	KDW	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1679634	5	05/31/21 07:28	06/09/21 21:57	KMG	Mt. Juliet, TN

SO-DU22-G8-0.5 L1356956-03 Solid

Collected by: Nicole Rubenstein | Collected date/time: 05/18/21 09:46 | Received date/time: 05/22/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1678664	1	05/28/21 10:38	05/28/21 10:49	KDW	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1679634	5	05/31/21 07:28	06/09/21 22:00	KMG	Mt. Juliet, TN

SO-DU22D-G8-0.5 L1356956-04 Solid

Collected by: Nicole Rubenstein | Collected date/time: 05/18/21 09:50 | Received date/time: 05/22/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1678664	1	05/28/21 10:38	05/28/21 10:49	KDW	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1679634	5	05/31/21 07:28	06/09/21 22:02	KMG	Mt. Juliet, TN

SO-DU22-G1-0.5 L1356956-05 Solid

Collected by: Nicole Rubenstein | Collected date/time: 05/18/21 10:02 | Received date/time: 05/22/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1678664	1	05/28/21 10:38	05/28/21 10:49	KDW	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1679634	5	05/31/21 07:28	06/09/21 22:05	KMG	Mt. Juliet, TN

SO-DU22-G24-0.5 L1356956-06 Solid

Collected by: Nicole Rubenstein | Collected date/time: 05/18/21 10:27 | Received date/time: 05/22/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1678666	1	05/29/21 10:50	05/29/21 10:59	KDW	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1679634	1	05/31/21 07:28	06/09/21 19:11	KMG	Mt. Juliet, TN

SO-DU20-G22-0.5 L1356956-07 Solid

Collected by: Nicole Rubenstein | Collected date/time: 05/18/21 12:16 | Received date/time: 05/22/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1678666	1	05/29/21 10:50	05/29/21 10:59	KDW	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1679634	1	05/31/21 07:28	06/09/21 19:14	KMG	Mt. Juliet, TN

SO-DU20-G21-0.5 L1356956-08 Solid

Collected by: Nicole Rubenstein | Collected date/time: 05/18/21 12:36 | Received date/time: 05/22/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1678666	1	05/29/21 10:50	05/29/21 10:59	KDW	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1679634	5	05/31/21 07:28	06/09/21 22:08	KMG	Mt. Juliet, TN

SO-DU20-G17-0.5 L1356956-09 Solid

Collected by: Nicole Rubenstein | Collected date/time: 05/18/21 12:55 | Received date/time: 05/22/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1678666	1	05/29/21 10:50	05/29/21 10:59	KDW	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1679634	10	05/31/21 07:28	06/09/21 22:10	KMG	Mt. Juliet, TN

SO-DU20-G11-0.5 L1356956-10 Solid

Collected by: Nicole Rubenstein | Collected date/time: 05/18/21 13:16 | Received date/time: 05/22/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1678666	1	05/29/21 10:50	05/29/21 10:59	KDW	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1679634	1	05/31/21 07:28	06/09/21 19:23	KMG	Mt. Juliet, TN

SO-DU20-G9-0.5 L1356956-11 Solid

Collected by: Nicole Rubenstein | Collected date/time: 05/18/21 13:39 | Received date/time: 05/22/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1678666	1	05/29/21 10:50	05/29/21 10:59	KDW	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1679634	1	05/31/21 07:28	06/09/21 19:26	KMG	Mt. Juliet, TN

SO-DU20-G13-0.5 L1356956-12 Solid

Collected by: Nicole Rubenstein | Collected date/time: 05/18/21 14:08 | Received date/time: 05/22/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1678666	1	05/29/21 10:50	05/29/21 10:59	KDW	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1679634	5	05/31/21 07:28	06/09/21 22:13	KMG	Mt. Juliet, TN

SO-DU29-G13-0.5 L1356956-13 Solid

Collected by: Nicole Rubenstein | Collected date/time: 05/20/21 07:43 | Received date/time: 05/22/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1678666	1	05/29/21 10:50	05/29/21 10:59	KDW	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1679634	1	05/31/21 07:28	06/09/21 19:31	KMG	Mt. Juliet, TN

SO-DU29-G11-0.5 L1356956-14 Solid

Collected by: Nicole Rubenstein | Collected date/time: 05/20/21 07:59 | Received date/time: 05/22/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1678666	1	05/29/21 10:50	05/29/21 10:59	KDW	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1679634	1	05/31/21 07:28	06/09/21 19:39	KMG	Mt. Juliet, TN

SO-DU29-G4-0.5 L1356956-15 Solid

Collected by	Collected date/time	Received date/time
Nicole Rubenstein	05/20/21 08:48	05/22/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1678666	1	05/29/21 10:50	05/29/21 10:59	KDW	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1679634	1	05/31/21 07:28	06/09/21 18:38	KMG	Mt. Juliet, TN

SO-DU29-G5-0.5 L1356956-16 Solid

Collected by	Collected date/time	Received date/time
Nicole Rubenstein	05/20/21 08:55	05/22/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1678667	1	05/29/21 10:30	05/29/21 10:43	KDW	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1679634	1	05/31/21 07:28	06/09/21 19:42	KMG	Mt. Juliet, TN

SO-DU29D-G5-0.5 L1356956-17 Solid

Collected by	Collected date/time	Received date/time
Nicole Rubenstein	05/20/21 09:00	05/22/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1678667	1	05/29/21 10:30	05/29/21 10:43	KDW	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1679634	1	05/31/21 07:28	06/09/21 19:45	KMG	Mt. Juliet, TN

SO-DU29-G1-0.5 L1356956-18 Solid

Collected by	Collected date/time	Received date/time
Nicole Rubenstein	05/20/21 09:02	05/22/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1678667	1	05/29/21 10:30	05/29/21 10:43	KDW	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1679634	1	05/31/21 07:28	06/09/21 19:48	KMG	Mt. Juliet, TN

SO-DU29-G3-0.5 L1356956-19 Solid

Collected by	Collected date/time	Received date/time
Nicole Rubenstein	05/20/21 09:08	05/22/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1678667	1	05/29/21 10:30	05/29/21 10:43	KDW	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1679634	1	05/31/21 07:28	06/09/21 19:51	KMG	Mt. Juliet, TN

SO-DU29-G7-0.5 L1356956-20 Solid

Collected by	Collected date/time	Received date/time
Nicole Rubenstein	05/20/21 09:10	05/22/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1678667	1	05/29/21 10:30	05/29/21 10:43	KDW	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1679634	1	05/31/21 07:28	06/09/21 19:54	KMG	Mt. Juliet, TN

SO-DU29-G15-0.5 L1356956-21 Solid

Collected by	Collected date/time	Received date/time
Nicole Rubenstein	05/20/21 09:17	05/22/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1678667	1	05/29/21 10:30	05/29/21 10:43	KDW	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1679635	1	06/01/21 07:25	06/02/21 17:22	CCE	Mt. Juliet, TN

SO-DU29-G17-0.5 L1356956-22 Solid

Collected by	Collected date/time	Received date/time
Nicole Rubenstein	05/20/21 09:23	05/22/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1678667	1	05/29/21 10:30	05/29/21 10:43	KDW	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1679635	1	06/01/21 07:25	06/02/21 17:08	CCE	Mt. Juliet, TN

SO-DU29-G18-0.5 L1356956-24 Solid

Collected by	Collected date/time	Received date/time
Nicole Rubenstein	05/20/21 09:30	05/22/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1678667	1	05/29/21 10:30	05/29/21 10:43	KDW	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1679635	1	06/01/21 07:25	06/02/21 17:25	CCE	Mt. Juliet, TN

SO-DU29-G10-0.5 L1356956-25 Solid

Collected by	Collected date/time	Received date/time
Nicole Rubenstein	05/20/21 09:36	05/22/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1678667	1	05/29/21 10:30	05/29/21 10:43	KDW	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1679635	1	06/01/21 07:25	06/02/21 17:28	CCE	Mt. Juliet, TN

SO-DU29-G9-0.5 L1356956-26 Solid

Collected by	Collected date/time	Received date/time
Nicole Rubenstein	05/20/21 09:39	05/22/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1678667	1	05/29/21 10:30	05/29/21 10:43	KDW	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1679635	1	06/01/21 07:25	06/02/21 17:36	CCE	Mt. Juliet, TN

SO-DU15-G19-0.5 L1356956-27 Solid

Collected by	Collected date/time	Received date/time
Nicole Rubenstein	05/20/21 09:49	05/22/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1678670	1	05/29/21 10:13	05/29/21 10:27	KDW	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1679635	1	06/01/21 07:25	06/02/21 17:40	CCE	Mt. Juliet, TN

SO-DU15-G20-0.5 L1356956-28 Solid

Collected by	Collected date/time	Received date/time
Nicole Rubenstein	05/20/21 09:52	05/22/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1678670	1	05/29/21 10:13	05/29/21 10:27	KDW	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1679635	1	06/01/21 07:25	06/02/21 17:43	CCE	Mt. Juliet, TN

SO-DU15-G18-0.5 L1356956-29 Solid

Collected by	Collected date/time	Received date/time
Nicole Rubenstein	05/20/21 09:59	05/22/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1678670	1	05/29/21 10:13	05/29/21 10:27	KDW	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1679635	1	06/01/21 07:25	06/02/21 17:45	CCE	Mt. Juliet, TN

SO-DU15-G6-0.5 L1356956-30 Solid

Collected by	Collected date/time	Received date/time
Nicole Rubenstein	05/20/21 10:11	05/22/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1678670	1	05/29/21 10:13	05/29/21 10:27	KDW	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1679635	1	06/01/21 07:25	06/02/21 17:48	CCE	Mt. Juliet, TN

SO-DU15D-G6-0.5 L1356956-31 Solid

Collected by	Collected date/time	Received date/time
Nicole Rubenstein	05/20/21 10:16	05/22/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1678670	1	05/29/21 10:13	05/29/21 10:27	KDW	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1679635	1	06/01/21 07:25	06/02/21 17:51	CCE	Mt. Juliet, TN

SO-DU15-G3-0.5 L1356956-32 Solid

Collected by	Collected date/time	Received date/time
Nicole Rubenstein	05/20/21 10:21	05/22/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1678670	1	05/29/21 10:13	05/29/21 10:27	KDW	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1679635	1	06/01/21 07:25	06/02/21 17:54	CCE	Mt. Juliet, TN

SO-DU15-G1-0.5 L1356956-33 Solid

Collected by	Collected date/time	Received date/time
Nicole Rubenstein	05/20/21 10:25	05/22/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1678670	1	05/29/21 10:13	05/29/21 10:27	KDW	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1679635	1	06/01/21 07:25	06/02/21 17:58	CCE	Mt. Juliet, TN

SO-DU15-G5-0.5 L1356956-34 Solid

Collected by	Collected date/time	Received date/time
Nicole Rubenstein	05/20/21 10:40	05/22/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1678670	1	05/29/21 10:13	05/29/21 10:27	KDW	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1679635	5	06/01/21 07:25	06/03/21 04:46	CCE	Mt. Juliet, TN

SO-DU15-G8-0.5 L1356956-35 Solid

Collected by	Collected date/time	Received date/time
Nicole Rubenstein	05/20/21 10:45	05/22/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1678670	1	05/29/21 10:13	05/29/21 10:27	KDW	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1679635	1	06/01/21 07:25	06/02/21 18:04	CCE	Mt. Juliet, TN

SO-DU15-G12-0.5 L1356956-36 Solid

Collected by	Collected date/time	Received date/time
Nicole Rubenstein	05/20/21 10:50	05/22/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1678670	1	05/29/21 10:13	05/29/21 10:27	KDW	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1679635	1	06/01/21 07:25	06/02/21 18:13	CCE	Mt. Juliet, TN

SO-DU15-G16-0.5 L1356956-37 Solid

Collected by	Collected date/time	Received date/time
Nicole Rubenstein	05/20/21 10:54	05/22/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1678679	1	05/29/21 09:59	05/29/21 10:09	KDW	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1679635	1	06/01/21 07:25	06/02/21 18:16	CCE	Mt. Juliet, TN

SO-DU15-G15-0.5 L1356956-38 Solid

Collected by	Collected date/time	Received date/time
Nicole Rubenstein	05/20/21 11:00	05/22/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1678679	1	05/29/21 09:59	05/29/21 10:09	KDW	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1679635	5	06/01/21 07:25	06/03/21 04:49	CCE	Mt. Juliet, TN

SO-DU22-G21-0.5 L1356956-39 Solid

Collected by	Collected date/time	Received date/time
Nicole Rubenstein	05/20/21 11:33	05/22/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1678679	1	05/29/21 09:59	05/29/21 10:09	KDW	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1679635	1	06/01/21 07:25	06/02/21 18:22	CCE	Mt. Juliet, TN

SO-DU22-G22-0.5 L1356956-40 Solid

Collected by	Collected date/time	Received date/time
Nicole Rubenstein	05/20/21 11:43	05/22/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1678679	1	05/29/21 09:59	05/29/21 10:09	KDW	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1679635	1	06/01/21 07:25	06/02/21 18:25	CCE	Mt. Juliet, TN

SO-DU22-G23-0.5 L1356956-41 Solid

Collected by	Collected date/time	Received date/time
Nicole Rubenstein	05/20/21 11:47	05/22/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1678679	1	05/29/21 09:59	05/29/21 10:09	KDW	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1679635	1	06/01/21 07:25	06/02/21 18:28	CCE	Mt. Juliet, TN

SO-DU22-G17-0.5 L1356956-42 Solid

Collected by	Collected date/time	Received date/time
Nicole Rubenstein	05/20/21 11:54	05/22/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1678679	1	05/29/21 09:59	05/29/21 10:09	KDW	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1679671	1	05/31/21 16:21	06/02/21 11:28	EL	Mt. Juliet, TN

SO-DU22-G18-0.5 L1356956-43 Solid

Collected by	Collected date/time	Received date/time
Nicole Rubenstein	05/20/21 11:59	05/22/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1678679	1	05/29/21 09:59	05/29/21 10:09	KDW	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1679671	1	05/31/21 16:21	06/02/21 11:31	EL	Mt. Juliet, TN

SO-DU22-G11-0.5 L1356956-44 Solid

Collected by	Collected date/time	Received date/time
Nicole Rubenstein	05/20/21 12:09	05/22/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1678679	1	05/29/21 09:59	05/29/21 10:09	KDW	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1679671	1	05/31/21 16:21	06/02/21 11:34	EL	Mt. Juliet, TN

SO-DU22-G4-0.5 L1356956-45 Solid

Collected by	Collected date/time	Received date/time
Nicole Rubenstein	05/20/21 12:19	05/22/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1678679	1	05/29/21 09:59	05/29/21 10:09	KDW	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1679671	1	05/31/21 16:21	06/02/21 11:43	EL	Mt. Juliet, TN

SO-DU22-G3-0.5 L1356956-46 Solid

Collected by	Collected date/time	Received date/time
Nicole Rubenstein	05/20/21 12:22	05/22/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1678679	1	05/29/21 09:59	05/29/21 10:09	KDW	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1679671	5	05/31/21 16:21	06/02/21 12:19	EL	Mt. Juliet, TN

SO-DU22-G14-0.5 L1356956-47 Solid

Collected by	Collected date/time	Received date/time
Nicole Rubenstein	05/20/21 12:37	05/22/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1678681	1	05/28/21 17:17	05/28/21 17:25	KDW	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1679671	1	05/31/21 16:21	06/02/21 11:49	EL	Mt. Juliet, TN

SO-DU22-G7-0.5 L1356956-48 Solid

Collected by	Collected date/time	Received date/time
Nicole Rubenstein	05/20/21 12:43	05/22/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1678681	1	05/28/21 17:17	05/28/21 17:25	KDW	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1679671	1	05/31/21 16:21	06/02/21 11:52	EL	Mt. Juliet, TN

SO-DU20-G24-0.5 L1356956-49 Solid

Collected by	Collected date/time	Received date/time
Nicole Rubenstein	05/20/21 12:47	05/22/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1678681	1	05/28/21 17:17	05/28/21 17:25	KDW	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1679671	1	05/31/21 16:21	06/02/21 11:55	EL	Mt. Juliet, TN

SO-DU20-G23-0.5 L1356956-50 Solid

Collected by	Collected date/time	Received date/time
Nicole Rubenstein	05/20/21 12:53	05/22/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1678681	1	05/28/21 17:17	05/28/21 17:25	KDW	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1679671	1	05/31/21 16:21	06/02/21 11:58	EL	Mt. Juliet, TN

SO-DU20-G8-0.5 L1356956-51 Solid

Collected by	Collected date/time	Received date/time
Nicole Rubenstein	05/20/21 13:06	05/22/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1678681	1	05/28/21 17:17	05/28/21 17:25	KDW	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1679671	1	05/31/21 16:21	06/02/21 12:01	EL	Mt. Juliet, TN

SO-DU20-G7-0.5 L1356956-52 Solid

Collected by	Collected date/time	Received date/time
Nicole Rubenstein	05/20/21 13:08	05/22/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1678681	1	05/28/21 17:17	05/28/21 17:25	KDW	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1679671	1	05/31/21 16:21	06/02/21 12:04	EL	Mt. Juliet, TN

SO-DU20-G6-0.5 L1356956-53 Solid

Collected by	Collected date/time	Received date/time
Nicole Rubenstein	05/20/21 13:13	05/22/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1678681	1	05/28/21 17:17	05/28/21 17:25	KDW	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1679671	1	05/31/21 16:21	06/02/21 12:07	EL	Mt. Juliet, TN

SO-DU20-G5-0.5 L1356956-54 Solid

Collected by	Collected date/time	Received date/time
Nicole Rubenstein	05/20/21 13:20	05/22/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1678681	1	05/28/21 17:17	05/28/21 17:25	KDW	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1679671	1	05/31/21 16:21	06/02/21 12:10	EL	Mt. Juliet, TN

SO-DU20-G1-0.5 L1356956-55 Solid

Collected by	Collected date/time	Received date/time
Nicole Rubenstein	05/20/21 13:26	05/22/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1678681	1	05/28/21 17:17	05/28/21 17:25	KDW	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1679671	1	05/31/21 16:21	06/02/21 12:22	EL	Mt. Juliet, TN

SO-DU20-G2-0.5 L1356956-56 Solid

Collected by	Collected date/time	Received date/time
Nicole Rubenstein	05/20/21 13:27	05/22/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1678681	1	05/28/21 17:17	05/28/21 17:25	KDW	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1679671	1	05/31/21 16:21	06/02/21 12:25	EL	Mt. Juliet, TN

SO-DU20-G3-0.5 L1356956-57 Solid

Collected by	Collected date/time	Received date/time
Nicole Rubenstein	05/20/21 13:33	05/22/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1678682	1	05/28/21 10:26	05/28/21 10:36	KDW	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1679671	1	05/31/21 16:21	06/02/21 11:13	EL	Mt. Juliet, TN

SO-DU20-G4-0.5 L1356956-58 Solid

Collected by: Nicole Rubenstein
Collected date/time: 05/20/21 13:36
Received date/time: 05/22/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1678682	1	05/28/21 10:26	05/28/21 10:36	KDW	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1679671	100	05/31/21 16:21	06/02/21 14:00	EL	Mt. Juliet, TN

SO-DU20D-G3-0.5 L1356956-59 Solid

Collected by: Nicole Rubenstein
Collected date/time: 05/20/21 14:01
Received date/time: 05/22/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1678682	1	05/28/21 10:26	05/28/21 10:36	KDW	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1679671	1	05/31/21 16:21	06/02/21 12:30	EL	Mt. Juliet, TN

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Chris McCord
Project Manager

Report Revision History

Level II Report - Version 1: 06/11/21 15:20

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	96.7		1	05/28/2021 10:49	WG1678664

Metals (ICP) by Method 6010D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Lead	1240		0.215	0.517	1	06/09/2021 18:51	WG1679634

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	96.8		1	05/28/2021 10:49	WG1678664

Metals (ICP) by Method 6010D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Lead	3330		1.07	2.58	5	06/09/2021 21:57	WG1679634

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	94.7		1	05/28/2021 10:49	WG1678664

Metals (ICP) by Method 6010D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Lead	970		1.10	2.64	5	06/09/2021 22:00	WG1679634

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	96.0		1	05/28/2021 10:49	WG1678664

Metals (ICP) by Method 6010D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Lead	925		1.08	2.60	5	06/09/2021 22:02	WG1679634

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	96.1		1	05/28/2021 10:49	WG1678664

Metals (ICP) by Method 6010D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Lead	1230		1.08	2.60	5	06/09/2021 22:05	WG1679634

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	96.1		1	05/29/2021 10:59	WG1678666

Metals (ICP) by Method 6010D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Lead	378		0.217	0.520	1	06/09/2021 19:11	WG1679634

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	96.9		1	05/29/2021 10:59	WG1678666

Metals (ICP) by Method 6010D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Lead	955		0.215	0.516	1	06/09/2021 19:14	WG1679634

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	98.3		1	05/29/2021 10:59	WG1678666

Metals (ICP) by Method 6010D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Lead	994		1.06	2.54	5	06/09/2021 22:08	WG1679634

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	96.2		1	05/29/2021 10:59	WG1678666

Metals (ICP) by Method 6010D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Lead	914		2.16	5.20	10	06/09/2021 22:10	WG1679634

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	95.4		1	05/29/2021 10:59	WG1678666

Metals (ICP) by Method 6010D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Lead	1310		0.218	0.524	1	06/09/2021 19:23	WG1679634

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	99.2		1	05/29/2021 10:59	WG1678666

Metals (ICP) by Method 6010D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Lead	387		0.210	0.504	1	06/09/2021 19:26	WG1679634

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	98.2		1	05/29/2021 10:59	WG1678666

Metals (ICP) by Method 6010D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Lead	1660		1.06	2.55	5	06/09/2021 22:13	WG1679634

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	98.1		1	05/29/2021 10:59	WG1678666

Metals (ICP) by Method 6010D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Lead	13.6		0.212	0.510	1	06/09/2021 19:31	WG1679634

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	97.8		1	05/29/2021 10:59	WG1678666

Metals (ICP) by Method 6010D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Lead	335		0.213	0.511	1	06/09/2021 19:39	WG1679634

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	94.4		1	05/29/2021 10:59	WG1678666

Metals (ICP) by Method 6010D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Lead	388	M1 M2	0.220	0.529	1	06/09/2021 18:38	WG1679634

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	97.5		1	05/29/2021 10:43	WG1678667

Metals (ICP) by Method 6010D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Lead	308		0.213	0.513	1	06/09/2021 19:42	WG1679634

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	97.1		1	05/29/2021 10:43	WG1678667

Metals (ICP) by Method 6010D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Lead	1990		0.214	0.515	1	06/09/2021 19:45	WG1679634

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	94.8		1	05/29/2021 10:43	WG1678667

Metals (ICP) by Method 6010D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Lead	378		0.219	0.527	1	06/09/2021 19:48	WG1679634

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	98.0		1	05/29/2021 10:43	WG1678667

Metals (ICP) by Method 6010D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Lead	302		0.212	0.510	1	06/09/2021 19:51	WG1679634

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	95.6		1	05/29/2021 10:43	WG1678667

Metals (ICP) by Method 6010D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Lead	164		0.218	0.523	1	06/09/2021 19:54	WG1679634

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	97.0		1	05/29/2021 10:43	WG1678667

Metals (ICP) by Method 6010D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Lead	49.8		0.214	0.515	1	06/02/2021 17:22	WG1679635

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	97.2		1	05/29/2021 10:43	WG1678667

Metals (ICP) by Method 6010D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Lead	36.9		0.214	0.514	1	06/02/2021 17:08	WG1679635

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	97.0		1	05/29/2021 10:43	WG1678667

Metals (ICP) by Method 6010D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Lead	124		0.214	0.515	1	06/02/2021 17:25	WG1679635

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	97.2		1	05/29/2021 10:43	WG1678667

Metals (ICP) by Method 6010D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Lead	182		0.214	0.515	1	06/02/2021 17:28	WG1679635

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	96.5		1	05/29/2021 10:43	WG1678667

Metals (ICP) by Method 6010D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Lead	84.3		0.216	0.518	1	06/02/2021 17:36	WG1679635

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	97.3		1	05/29/2021 10:27	WG1678670

Metals (ICP) by Method 6010D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Lead	999		0.214	0.514	1	06/02/2021 17:40	WG1679635

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	97.3		1	05/29/2021 10:27	WG1678670

Metals (ICP) by Method 6010D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Lead	316		0.214	0.514	1	06/02/2021 17:43	WG1679635

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	97.4		1	05/29/2021 10:27	WG1678670

Metals (ICP) by Method 6010D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Lead	79.8		0.214	0.513	1	06/02/2021 17:45	WG1679635

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	98.4		1	05/29/2021 10:27	WG1678670

Metals (ICP) by Method 6010D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Lead	128		0.211	0.508	1	06/02/2021 17:48	WG1679635

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	98.5		1	05/29/2021 10:27	WG1678670

Metals (ICP) by Method 6010D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Lead	130		0.211	0.508	1	06/02/2021 17:51	WG1679635

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	97.1		1	05/29/2021 10:27	WG1678670

Metals (ICP) by Method 6010D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Lead	671		0.214	0.515	1	06/02/2021 17:54	WG1679635

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	98.3		1	05/29/2021 10:27	WG1678670

Metals (ICP) by Method 6010D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Lead	6310		0.212	0.508	1	06/02/2021 17:58	WG1679635

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	97.3		1	05/29/2021 10:27	WG1678670

Metals (ICP) by Method 6010D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Lead	581		1.07	2.57	5	06/03/2021 04:46	WG1679635

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	96.7		1	05/29/2021 10:27	WG1678670

Metals (ICP) by Method 6010D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Lead	541		0.215	0.517	1	06/02/2021 18:04	WG1679635

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	97.0		1	05/29/2021 10:27	WG1678670

Metals (ICP) by Method 6010D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Lead	697		0.214	0.515	1	06/02/2021 18:13	WG1679635

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	97.9		1	05/29/2021 10:09	WG1678679

Metals (ICP) by Method 6010D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Lead	310		0.213	0.511	1	06/02/2021 18:16	WG1679635

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	92.2		1	05/29/2021 10:09	WG1678679

Metals (ICP) by Method 6010D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Lead	247		1.13	2.71	5	06/03/2021 04:49	WG1679635

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	99.2		1	05/29/2021 10:09	WG1678679

Metals (ICP) by Method 6010D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Lead	82.9		0.210	0.504	1	06/02/2021 18:22	WG1679635

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	95.8		1	05/29/2021 10:09	WG1678679

Metals (ICP) by Method 6010D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Lead	169		0.217	0.522	1	06/02/2021 18:25	WG1679635

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	94.9		1	05/29/2021 10:09	WG1678679

Metals (ICP) by Method 6010D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Lead	471		0.219	0.527	1	06/02/2021 18:28	WG1679635

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	98.1		1	05/29/2021 10:09	WG1678679

Metals (ICP) by Method 6010D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Lead	203		0.212	0.510	1	06/02/2021 11:28	WG1679671

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	98.3		1	05/29/2021 10:09	WG1678679

Metals (ICP) by Method 6010D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Lead	25.5		0.212	0.509	1	06/02/2021 11:31	WG1679671

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	99.1		1	05/29/2021 10:09	WG1678679

Metals (ICP) by Method 6010D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Lead	197		0.210	0.504	1	06/02/2021 11:34	WG1679671

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	98.6		1	05/29/2021 10:09	WG1678679

Metals (ICP) by Method 6010D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Lead	189		0.211	0.507	1	06/02/2021 11:43	WG1679671

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	92.2		1	05/29/2021 10:09	WG1678679

Metals (ICP) by Method 6010D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Lead	1180		1.13	2.71	5	06/02/2021 12:19	WG1679671

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	97.3		1	05/28/2021 17:25	WG1678681

Metals (ICP) by Method 6010D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Lead	151		0.214	0.514	1	06/02/2021 11:49	WG1679671

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	98.5		1	05/28/2021 17:25	WG1678681

Metals (ICP) by Method 6010D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Lead	102		0.211	0.508	1	06/02/2021 11:52	WG1679671

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	97.5		1	05/28/2021 17:25	WG1678681

Metals (ICP) by Method 6010D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Lead	49.9		0.213	0.513	1	06/02/2021 11:55	WG1679671

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	97.5		1	05/28/2021 17:25	WG1678681

Metals (ICP) by Method 6010D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Lead	71.8		0.213	0.513	1	06/02/2021 11:58	WG1679671

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	98.1		1	05/28/2021 17:25	WG1678681

Metals (ICP) by Method 6010D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Lead	44.8		0.212	0.510	1	06/02/2021 12:01	WG1679671

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	92.7		1	05/28/2021 17:25	WG1678681

Metals (ICP) by Method 6010D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Lead	37.9		0.224	0.539	1	06/02/2021 12:04	WG1679671

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	97.8		1	05/28/2021 17:25	WG1678681

Metals (ICP) by Method 6010D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Lead	104		0.213	0.511	1	06/02/2021 12:07	WG1679671

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	98.4		1	05/28/2021 17:25	WG1678681

Metals (ICP) by Method 6010D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Lead	81.5		0.211	0.508	1	06/02/2021 12:10	WG1679671

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	99.0		1	05/28/2021 17:25	WG1678681

Metals (ICP) by Method 6010D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Lead	105		0.210	0.505	1	06/02/2021 12:22	WG1679671

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	98.4		1	05/28/2021 17:25	WG1678681

Metals (ICP) by Method 6010D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Lead	11.3		0.211	0.508	1	06/02/2021 12:25	WG1679671

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	97.7		1	05/28/2021 10:36	WG1678682

Metals (ICP) by Method 6010D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Lead	383	M2	0.213	0.512	1	06/02/2021 11:13	WG1679671

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	94.0		1	05/28/2021 10:36	WG1678682

Metals (ICP) by Method 6010D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Lead	569		22.1	53.2	100	06/02/2021 14:00	WG1679671

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	96.9		1	05/28/2021 10:36	WG1678682

Metals (ICP) by Method 6010D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Lead	259		0.215	0.516	1	06/02/2021 12:30	WG1679671

QUALITY CONTROL SUMMARY

L1356956-01,02,03,04,05

Method Blank (MB)

(MB) R3660770-1 05/28/21 10:49

Analyte	MB Result %	MB Qualifier	MB MDL %	MB RDL %
Total Solids	0.000			

L1356956-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1356956-01 05/28/21 10:49 • (DUP) R3660770-3 05/28/21 10:49

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	96.7	96.7	1	0.0708		10

Laboratory Control Sample (LCS)

(LCS) R3660770-2 05/28/21 10:49

Analyte	Spike Amount %	LCS Result %	LCS Rec. %	Rec. Limits %	LCS Qualifier
Total Solids	50.0	50.0	100	85.0-115	

QUALITY CONTROL SUMMARY

L1356956-06,07,08,09,10,11,12,13,14,15

Method Blank (MB)

(MB) R3661382-1 05/29/21 10:59

Analyte	MB Result %	MB Qualifier	MB MDL %	MB RDL %
Total Solids	0.00300			

L1356956-12 Original Sample (OS) • Duplicate (DUP)

(OS) L1356956-12 05/29/21 10:59 • (DUP) R3661382-3 05/29/21 10:59

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	98.2	98.3	1	0.0626		10

Laboratory Control Sample (LCS)

(LCS) R3661382-2 05/29/21 10:59

Analyte	Spike Amount %	LCS Result %	LCS Rec. %	Rec. Limits %	LCS Qualifier
Total Solids	50.0	50.0	100	85.0-115	

QUALITY CONTROL SUMMARY

L1356956-16,17,18,19,20,21,22,24,25,26

Method Blank (MB)

(MB) R3661381-1 05/29/21 10:43

Analyte	MB Result %	MB Qualifier	MB MDL %	MB RDL %
Total Solids	0.000			

L1356956-26 Original Sample (OS) • Duplicate (DUP)

(OS) L1356956-26 05/29/21 10:43 • (DUP) R3661381-3 05/29/21 10:43

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	96.5	96.6	1	0.150		10

Laboratory Control Sample (LCS)

(LCS) R3661381-2 05/29/21 10:43

Analyte	Spike Amount %	LCS Result %	LCS Rec. %	Rec. Limits %	LCS Qualifier
Total Solids	50.0	50.0	100	85.0-115	

QUALITY CONTROL SUMMARY

L1356956-27,28,29,30,31,32,33,34,35,36

Method Blank (MB)

(MB) R3661380-1 05/29/21 10:27

Analyte	MB Result %	MB Qualifier	MB MDL %	MB RDL %
Total Solids	0.000			

L1356956-34 Original Sample (OS) • Duplicate (DUP)

(OS) L1356956-34 05/29/21 10:27 • (DUP) R3661380-3 05/29/21 10:27

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	97.3	97.1	1	0.259		10

Laboratory Control Sample (LCS)

(LCS) R3661380-2 05/29/21 10:27

Analyte	Spike Amount %	LCS Result %	LCS Rec. %	Rec. Limits %	LCS Qualifier
Total Solids	50.0	50.0	100	85.0-115	

QUALITY CONTROL SUMMARY

L1356956-37,38,39,40,41,42,43,44,45,46

Method Blank (MB)

(MB) R3661205-1 05/29/21 10:09

Analyte	MB Result %	MB Qualifier	MB MDL %	MB RDL %
Total Solids	0.000			

L1356956-45 Original Sample (OS) • Duplicate (DUP)

(OS) L1356956-45 05/29/21 10:09 • (DUP) R3661205-3 05/29/21 10:09

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	98.6	98.5	1	0.101		10

Laboratory Control Sample (LCS)

(LCS) R3661205-2 05/29/21 10:09

Analyte	Spike Amount %	LCS Result %	LCS Rec. %	Rec. Limits %	LCS Qualifier
Total Solids	50.0	50.1	100	85.0-115	

QUALITY CONTROL SUMMARY

L1356956-47,48,49,50,51,52,53,54,55,56

Method Blank (MB)

(MB) R3660806-1 05/28/21 17:25

Analyte	MB Result %	MB Qualifier	MB MDL %	MB RDL %
Total Solids	0.00100			

L1356956-56 Original Sample (OS) • Duplicate (DUP)

(OS) L1356956-56 05/28/21 17:25 • (DUP) R3660806-3 05/28/21 17:25

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	98.4	98.3	1	0.0835		10

Laboratory Control Sample (LCS)

(LCS) R3660806-2 05/28/21 17:25

Analyte	Spike Amount %	LCS Result %	LCS Rec. %	Rec. Limits %	LCS Qualifier
Total Solids	50.0	50.0	100	85.0-115	

Method Blank (MB)

(MB) R3660769-1 05/28/21 10:36

Analyte	MB Result %	MB Qualifier	MB MDL %	MB RDL %
Total Solids	0.000			

L1356960-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1356960-05 05/28/21 10:36 • (DUP) R3660769-3 05/28/21 10:36

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	79.7	80.9	1	1.46		10

Laboratory Control Sample (LCS)

(LCS) R3660769-2 05/28/21 10:36

Analyte	Spike Amount %	LCS Result %	LCS Rec. %	Rec. Limits %	LCS Qualifier
Total Solids	50.0	50.0	100	85.0-115	

QUALITY CONTROL SUMMARY

L1356956-01,02,03,04,05,06,07,08,09,10,11,12,13,14,15,16,17,18,19,20

Method Blank (MB)

(MB) R3665363-1 06/09/21 18:32

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Lead	U		0.208	0.500

Laboratory Control Sample (LCS)

(LCS) R3665363-2 06/09/21 18:34

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Lead	100	97.0	97.0	80.0-120	

L1356956-15 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1356956-15 06/09/21 18:38 • (MS) R3665363-5 06/09/21 18:46 • (MSD) R3665363-6 06/09/21 18:49

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Lead	106	388	456	553	64.9	157	1	75.0-125	M2	M1	19.2	20

QUALITY CONTROL SUMMARY

L1356956-21,22,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41

Method Blank (MB)

(MB) R3662538-1 06/02/21 17:02

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Lead	U		0.208	0.500

Laboratory Control Sample (LCS)

(LCS) R3662538-2 06/02/21 17:05

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Lead	100	89.6	89.6	80.0-120	

L1356956-22 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1356956-22 06/02/21 17:08 • (MS) R3662538-5 06/02/21 17:16 • (MSD) R3662538-6 06/02/21 17:19

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Lead	103	36.9	149	151	109	111	1	75.0-125			0.987	20

Method Blank (MB)

(MB) R3662247-1 06/02/21 11:07

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Lead	U		0.208	0.500

Laboratory Control Sample (LCS)

(LCS) R3662247-2 06/02/21 11:10

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Lead	100	95.6	95.6	80.0-120	

L1356956-57 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1356956-57 06/02/21 11:13 • (MS) R3662247-5 06/02/21 11:22 • (MSD) R3662247-6 06/02/21 11:25

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Lead	102	383	457	448	72.3	62.6	1	75.0-125	M2	M2	2.20	20

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

(dry)	Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils].
MDL	Method Detection Limit.
MDL (dry)	Method Detection Limit.
RDL	Reported Detection Limit.
RDL (dry)	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
M2	Matrix spike recovery was low, the method control sample recovery was acceptable.

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO000356
Kentucky [1 6]	KY90010	South Carolina	84004002
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas [5]	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

Company Name/Address:
GHD - Phoenix, AZ

4747 North 22nd Street
Suite 200
Phoenix. AZ 85016

Billing Information:
Attn: Jen Devonshire
2055 Niagara Falls Blvd.
Niagara Falls, NY 14304

Pres Chk

Report to:
Larry Williams

Email To:
larry.williams@ghd.com;sheri.finn@ghd.com;m

Project Description:
VRP Services - HVF West, LLC.

City/State Collected: Tucson, AZ

Please Circle: PT MT CT ET

Phone: **602-216-7200**

Client Project #
11224790/103

Lab Project #
GHDPAZ-11224790

Collected by (print): Nicole Rubenstein

Site/Facility ID # ~~11224790~~ NA

P.O. #

Collected by (signature): Nicole R

Immediately Packed on Ice N X Y ___

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Date Results Needed: Standard

Quote #

Analysis / Container / Preservative

Chain of Custody Page 1 of 1

Pace Analytical®

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Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

SDG # L1306956

Tabl L-091

Acctnum: **GHDPAZ**
Template: **T186551**
Prelogin: **P844249**
PM: **526 - Chris McCord**
PB:
Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Lead - 6010 4ozClr-NoPres									Remarks	Sample # (lab only)
SO-DU22-G20-0.5	Grab	SS	0.5'	5/18/21	0858	1	X										-01
SO-DU22-G19-0.5		SS			0919	1	X										-02
SO-DU22-G8-0.5		SS			0946	1	X										-03
SO-DU22D-G8-0.5		SS			0950	1	X										-04
SO-DU22-G1-0.5		SS			1002	1	X										-05
SO-DU22-G24-0.5		SS			1027	1	X										-06
~~SO-DU22-G15-0.5~~		SS			~~1054~~	~~1~~	~~X~~ NR										
~~SO-DU22M-G15-0.5~~		SS			~~1059~~	~~1~~ 2	~~X~~ NR										
SO-DU20-G22-0.5		SS			1216	1	X										-07
SO-DU20-G21-0.5		SS			1236	1	X										-08

* Matrix:
SS - Soil **AIR** - Air **F** - Filter
GW - Groundwater **B** - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: __NP ✓Y __N
COC Signed/Accurate: ✓Y __N
Bottles arrive intact: ✓Y __N
Correct bottles used: ✓Y __N
Sufficient volume sent: ✓Y __N
If Applicable
VOA Zero Headspace: __Y __N
Preservation Correct/Checked: ✓Y __N
RAD Screen <0.5 mR/hr: ✓Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR	
Nicole R	5/21/21	1130	[signature]		
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: 23.5+0=23.5 °C Bottles Received: 62	If preservation required by Login: Date/Time
[signature]	5/21/21	1800	SWA		
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 5/22/21 Time: 1030	Hold: / Condition: NCF / OK
			[signature]		

PNDAZ

Company Name/Address:
GHD - Phoenix, AZ

4747 North 22nd Street
Suite 200
Phoenix. AZ 85016

Billing Information:
Attn: Jen Devonshire
2055 Niagara Falls Blvd.
Niagara Falls, NY 14304

Pres Chk

Analysis / Container / Preservative

Chain of Custody Page 2 of 7

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Report to:
Larry Williams

Email To:
larry.williams@ghd.com;sheri.finn@ghd.com;m

Project Description:
VRP Services - HVF West, LLC.

City/State Collected: Tucson, AZ

Please Circle: PT MT CT ET

Phone: **602-216-7200**

Client Project #
11224790/103

Lab Project #
GHDPAZ-11224790

SDG # L1356956

Table #

Collected by (print): Nicole Rubenstein

Site/Facility ID #

P.O. #

Acctnum: **GHDPAZ**

Template: **T186551**

Prelogin: **P844249**

PM: **526 - Chris McCord**

PB:

Collected by (signature): Nicole R

Immediately Packed on Ice N X Y ___

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Date Results Needed: Standard

Quote #

Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Lead - 6010 4ozClr-NoPres	Remarks	Sample # (lab only)
SO-DU20-G17-0.5	Grab	SS	0.5'	5/18/21	1255	1	X		-09
~~SO-DU20-G12-0.5~~		SS			~~1305~~	~~1~~	~~X~~		
~~SO-DU200-G12-0.5~~		SS			~~1310~~	~~1~~	~~X~~		
SO-DU20-G11-0.5		SS			1316	1	X		-10
SO-DU20-G9-0.5		SS			1339	1	X		-11
SO-DU20-G13-0.5		SS			1408	1	X		-12
SO-DU29-G13-0.5		SS		5/20/21	0743	1	X		-13
SO-DU29-G11-0.5		SS			0759	1	X		-14
SO-DU29-G4-0.5		SS			0848	1	X		-15
SO-DU29-G5-0.5		SS			0855	1	X		-16

* Matrix:
SS - Soil **AIR** - Air **F** - Filter
GW - Groundwater **B** - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: __NP __Y __N
COC Signed/Accurate: __Y __N
Bottles arrive intact: __Y __N
Correct bottles used: __Y __N
Sufficient volume sent: __Y __N
If Applicable
VOA Zero Headspace: __Y __N
Preservation Correct/Checked: __Y __N
RAD Screen <0.5 mR/hr: __Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR
Nicole R	5/21/21	1130	[illegible]	
Relinquished by : (Signature)	**Date:**	**Time:**	**Received by: (Signature)**	**Temp: °C Bottles Received:**
[illegible]	5/21/21	1800	SWA	23, 5+02 23.5 62
Relinquished by : (Signature)	**Date:**	**Time:**	**Received for lab by: (Signature)**	**Date: Time:**
			[illegible]	5/22/21 1030

If preservation required by Login: Date/Time

Hold:

Condition: NCF OK

PNPAZ

Company Name/Address:
GHD - Phoenix, AZ

4747 North 22nd Street
Suite 200
Phoenix. AZ 85016

Billing Information:
Attn: Jen Devonshire
2055 Niagara Falls Blvd.
Niagara Falls, NY 14304

Pres Chk

Report to:
Larry Williams

Email To:
larry.williams@ghd.com;sheri.finn@ghd.com;m

Project Description:
VRP Services - HVF West, LLC.

City/State Collected: Tucson, AZ

Please Circle: PT MT CT ET

Phone: **602-216-7200**

Client Project # **11224790/103**

Lab Project # **GHDPAZ-11224790**

Collected by (print): Nicole Rubenstein

Site/Facility ID #

P.O. #

Collected by (signature): Nicole R

Immediately Packed on Ice N X Y ___

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed: Standard

Analysis / Container / Preservative

Chain of Custody Page 3 of 7

Pace Analytical®

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SDG # L1356956

Table #

Acctnum: **GHDPAZ**

Template: **T186551**

Prelogin: **P844249**

PM: **526 - Chris McCord**

PB:

Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Lead - 6010 4ozClr-NoPres									Remarks	Sample # (lab only)
SO-DU29D-G5-0.5	Grab	SS	0.5'	5/20/21	0900	1	X										-17
SO-DU29-G1-0.5		SS			0902	1	X										-18
SO-DU29-G3-0.5		SS			0908	1	X										-19
SO-DU29-G7-0.5		SS			0910	1	X										-20
SO-DU29-G15-0.5		SS			0917	1	X										-21
SO-DU29-G17-0.5		SS			0923	1	X										-22
SO-DU29M-G17-0.5		SS			0928	~~1~~ 2	X										-23
SO-DU29-G18-0.5		SS			0930	1	X										-24
SO-DU29-G10-0.5		SS			0936	1	X										-25
SO-DU29-G9-0.5		SS			0939	1	X										-26

* Matrix:
SS - Soil **AIR** - Air **F** - Filter
GW - Groundwater **B** - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: __NP ✓Y __N
COC Signed/Accurate: ✓Y __N
Bottles arrive intact: ✓Y __N
Correct bottles used: ✓Y __N
Sufficient volume sent: ✓Y __N
If Applicable
VOA Zero Headspace: __Y __N
Preservation Correct/Checked: ✓Y __N
RAD Screen <0.5 mR/hr: ✓Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR
Nicole R	5/21/21	1130	[illegible]	

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C	Bottles Received:	If preservation required by Login: Date/Time
[illegible]	5/21/21	1800	SWA	23.5+0z23.5	02	

Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date:	Time:	Hold:	Condition: NCF / OK
			[illegible]	5/22/21	1030		

PNPAZ

Company Name/Address:
GHD - Phoenix, AZ
4747 North 22nd Street
Suite 200
Phoenix. AZ 85016

Billing Information:
Attn: Jen Devonshire
2055 Niagara Falls Blvd.
Niagara Falls, NY 14304

Pres Chk

Analysis / Container / Preservative

Chain of Custody Page 4 of 7

Pace Analytical®

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Report to:
Larry Williams

Email To:
larry.williams@ghd.com;sheri.finn@ghd.com;m

Project Description:
VRP Services - HVF West, LLC.

City/State Collected: Tucson, AZ

Please Circle: PT MT CT ET

Phone: **602-216-7200**

Client Project #
11224790/103

Lab Project #
GHDPAZ-11224790

SDG # U356956

Table #

Collected by (print): Nicole Rubenstein

Site/Facility ID #

P.O. #

Acctnum: **GHDPAZ**

Template: **T186551**

Prelogin: **P844249**

PM: **526 - Chris McCord**

PB:

Collected by (signature): Nicole R

Immediately Packed on Ice N X Y ___

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed: Standard

Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Lead - 6010 4ozClr-NoPres									Remarks	Sample # (lab only)
SO-DU15-G19-0.5	Grab	SS	0.5'	5/20/21	0949	1	X										-27
SO-DU15-G20-0.5		SS			0952	1	X										-28
SO-DU15-G18-0.5		SS			0959	1	X										-29
SO-DU15-G6-0.5		SS			1011	1	X										-30
SO-DU15D-G6-0.5		SS			1016	1	X										-31
SO-DU15-G3-0.5		SS			1021	1	X										-32
SO-DU15-G1-0.5		SS			1025	1	X										-33
SO-DU15-G5-0.5		SS			1040	1	X										-34
SO-DU15-G8-0.5		SS			1045	1	X										-35
SO-DU15-G12-0.5		SS			1050	1	X										-36

* Matrix:
SS - Soil **AIR** - Air **F** - Filter
GW - Groundwater **B** - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: __NP ✓Y __N
COC Signed/Accurate: ✓Y __N
Bottles arrive intact: ✓Y __N
Correct bottles used: ✓Y __N
Sufficient volume sent: ✓Y __N
If Applicable
VOA Zero Headspace: __Y __N
Preservation Correct/Checked: __Y ✓N
RAD Screen <0.5 mR/hr: ✓Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR	If preservation required by Login: Date/Time
Nicole R	5/21/21	1130	[illegible]		
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received:	
[illegible]	5/21/21	1800	[illegible]	23.5+0.2=23.5 62	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: Time:	Hold: / Condition: NCF / OK
			[illegible]	5/22/21 1030	

PNPAZ

Company Name/Address:
GHD - Phoenix, AZ

4747 North 22nd Street
Suite 200
Phoenix. AZ 85016

Billing Information:
Attn: Jen Devonshire
2055 Niagara Falls Blvd.
Niagara Falls, NY 14304

Pres Chk

Analysis / Container / Preservative

Chain of Custody Page 5 of 7

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Report to:
Larry Williams

Email To:
larry.williams@ghd.com;sheri.finn@ghd.com;m

Project Description:
VRP Services - HVF West, LLC.

City/State Collected: Tucson, AZ

Please Circle: PT MT CT ET

Phone: **602-216-7200**

Client Project #
11224790/103

Lab Project #
GHDPAZ-11224790

SDG # L1356956

Table #

Collected by (print):
Nicole Rubenstein

Site/Facility ID #

P.O. #

Acctnum: **GHDPAZ**

Template: **T186551**

Prelogin: **P844249**

PM: **526 - Chris McCord**

PB:

Collected by (signature):
Nicole R

Immediately Packed on Ice N X Y ___

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed
Standard

Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Lead - 6010 4ozClr-NoPres									Remarks	Sample # (lab only)
SO-DU15-G16-0.5	Grab	SS	0.5'	5/20/21	1054	1	X										-37
SO-DU15-G15-0.5		SS			1100	1	X										-38
SO-DU22-G21-0.5		SS			1133	1	X										-39
SO-DU22-G22-0.5		SS			1143	1	X										-40
SO-DU22-G23-0.5		SS			1147	1	X										-41
SO-DU22-G17-0.5		SS			1154	1	X										-42
SO-DU22-G18-0.5		SS			1159	1	X										-43
SO-DU22-G11-0.5		SS			1209	1	X										-44
SO-DU22-G4-0.5		SS			1219	1	X										-45
SO-DU22-G3-0.5		SS			1222	1	X										-46

* Matrix:
SS - Soil **AIR** - Air **F** - Filter
GW - Groundwater **B** - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: __NP ✓Y __N
COC Signed/Accurate: ✓Y __N
Bottles arrive intact: ✓Y __N
Correct bottles used: ✓Y __N
Sufficient volume sent: ✓Y __N
If Applicable
VOA Zero Headspace: __Y __N
Preservation Correct/Checked: ✓Y __N
RAD Screen <0.5 mR/hr: ✓Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR	
Nicole R	5/21/21	1130	[illegible]		
Relinquished by : (Signature)	**Date:**	**Time:**	**Received by: (Signature)**	**Temp: °C**	**Bottles Received:**
[illegible]	5/21/21	1800	SWA	23.5+0.2 23.3	62
Relinquished by : (Signature)	**Date:**	**Time:**	**Received for lab by: (Signature)**	**Date:**	**Time:**
			[illegible]	5/22/21	1030

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

PNPAZ

Company Name/Address:
GHD - Phoenix, AZ

4747 North 22nd Street
Suite 200
Phoenix. AZ 85016

Billing Information:
Attn: Jen Devonshire
2055 Niagara Falls Blvd.
Niagara Falls, NY 14304

Pres Chk

Analysis / Container / Preservative

Chain of Custody Page 6 of 7

Pace Analytical®

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Report to:
Larry Williams

Email To:
larry.williams@ghd.com;sheri.finn@ghd.com;m

Project Description:
VRP Services - HVF West, LLC.

City/State Collected: TUCSON, AZ

Please Circle: PT MT CT ET

Phone: **602-216-7200**

Client Project #
11224790/103

Lab Project #
GHDPAZ-11224790

SDG # L1356956

Table #

Collected by (print):
Nicole Rubenstein

Site/Facility ID #

P.O. #

Acctnum: **GHDPAZ**

Template: **T186551**

Prelogin: **P844249**

PM: **526 - Chris McCord**

PB:

Collected by (signature):
Nicole R

Immediately Packed on Ice N X Y ___

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed
Standard

Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Lead - 6010 4ozClr-NoPres	Remarks	Sample # (lab only)
SO-DU22-G14-0.5	Grab	SS	0.5'	5/20/21	1237	1	X		-47
SO-DU22-G7-0.5		SS			1243	1	X		-48
SO-DU20-G24-0.5		SS			1247	1	X		-49
SO-DU20-G23-0.5		SS			1253	1	X		-50
SO-DU20-G8-0.5		SS			1306	1	X		-51
SO-DU20-G7-0.5		SS			1308	1	X		-52
SO-DU20-G6-0.5		SS			1313	1	X		-53
SO-DU20-G5-0.5		SS			1320	1	X		-54
SO-DU20-G1-0.5		SS			1326	1	X		-55
SO-DU20-G2-0.5		SS			1327	1	X		-56

* Matrix:
SS - Soil **AIR** - Air **F** - Filter
GW - Groundwater **B** - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: __NP ✓Y __N
COC Signed/Accurate: ✓Y __N
Bottles arrive intact: ✓Y __N
Correct bottles used: ✓Y __N
Sufficient volume sent: ✓Y __N
If Applicable
VOA Zero Headspace: __Y __N
Preservation Correct/Checked: ✓Y __N
RAD Screen <0.5 mR/hr: __Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR	If preservation required by Login: Date/Time
Nicole R	5/21/21	1130	[illegible]		
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received:	
[illegible]	5/21/21	1800	[illegible]	23.5+0=23.5 62	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: Time:	Hold: / Condition: NCF / OK
			[illegible]	5/22/21 1030	

PNPAZ

Company Name/Address:
GHD - Phoenix, AZ

4747 North 22nd Street
Suite 200
Phoenix. AZ 85016

Billing Information:
Attn: Jen Devonshire
2055 Niagara Falls Blvd.
Niagara Falls, NY 14304

Pres Chk

Analysis / Container / Preservative

Chain of Custody Page 7 of 7

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Report to:
Larry Williams

Email To:
larry.williams@ghd.com;sheri.finn@ghd.com;m

Project Description:
VRP Services - HVF West, LLC.

City/State Collected: TUCSON, AZ

Please Circle: MT CT ET

SDG # L1351956

Phone: **602-216-7200**

Client Project #
11224790/103

Lab Project #
GHDPAZ-11224790

Table #

Collected by (print):
Nicole Rubenstein

Site/Facility ID #

P.O. #

Acctnum: **GHDPAZ**

Template: **T186551**

Prelogin: **P844249**

PM: **526 - Chris McCord**

PB:

Collected by (signature):
Nicole R

Immediately Packed on Ice N X Y ___

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed
Standard

Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Lead - 6010 4ozClr-NoPres								Remarks	Sample # (lab only)
SO-DU20-G3-0.5	Grab	SS	0.5'	5/20/21	1333	1	X									-57
SO-DU20-G4-0.5	↓	SS	↓	↓	1336	1	X									-58
SO-DU20D-G3-0.5		SS			1401	1	X									-59
SO-DU20M-G3-0.5		SS			1406	~~1~~ 2	X									-60
		SS				1	X									
		SS		5/21/21		1	X									
			NR													

* Matrix:
SS - Soil **AIR** - Air **F** - Filter
GW - Groundwater **B** - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: __NP __Y __N
COC Signed/Accurate: __Y __N
Bottles arrive intact: __Y __N
Correct bottles used: __Y __N
Sufficient volume sent: __Y __N
If Applicable
VOA Zero Headspace: __Y __N
Preservation Correct/Checked: __Y __N
RAD Screen <0.5 mR/hr: __Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL/MeoH TBR	If preservation required by Login: Date/Time
Nicole R	5/21/21	1130	[signature]		
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp 2 °C Bottles Received: 23.5+0.23.3 62	
[signature]	5/21/21	1800	SWA		
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 5/22/21 Time: 1030	Hold: / Condition: NCF / OK
			[signature]		

PNPAZ

ANALYTICAL REPORT

June 11, 2021

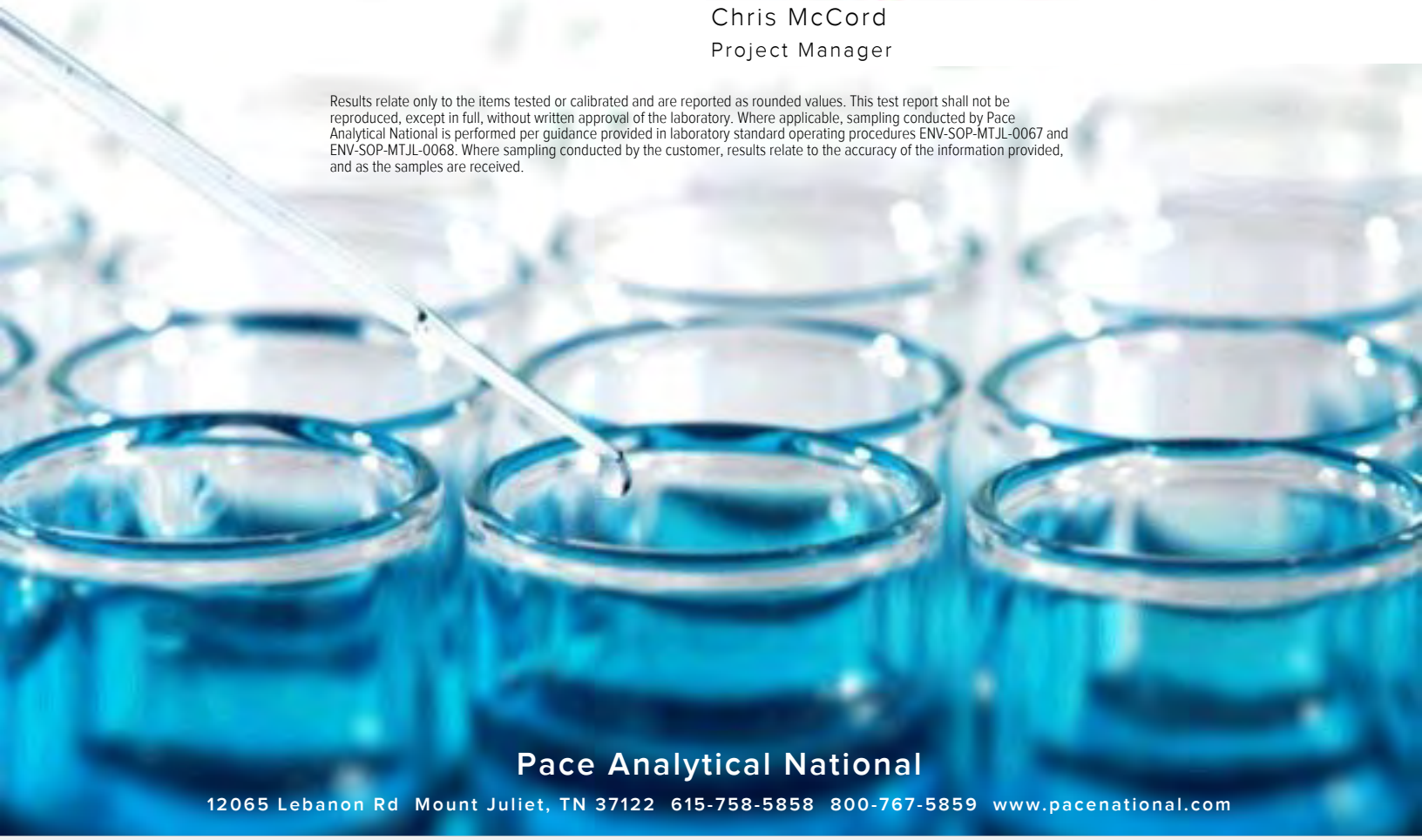
GHD - Phoenix, AZ

Sample Delivery Group:	L1356962
Samples Received:	05/22/2021
Project Number:	11224790/103
Description:	VRP Services - HVF West, LLC.
Report To:	Larry Williams 4747 North 22nd Street Suite 200 Phoenix, AZ 85016

Entire Report Reviewed By:

Chris McCord
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.



Pace Analytical National
12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

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EB-DU20B-G13-0.5 L1356962-01 GW

Collected by	Collected date/time	Received date/time
Nicole Rubenstein	05/18/21 14:56	05/22/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICP) by Method 6010D	WG1685037	1	06/09/21 18:06	06/10/21 03:14	EL	Mt. Juliet, TN

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Chris McCord
Project Manager

Metals (ICP) by Method 6010D

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Lead	0.00869		0.00299	0.00600	1	06/10/2021 03:14	WG1685037

QUALITY CONTROL SUMMARY

L1356962-01

Method Blank (MB)

(MB) R3665547-1 06/10/21 02:34

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Lead	U		0.00299	0.00600

Laboratory Control Sample (LCS)

(LCS) R3665547-2 06/10/21 02:37

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Lead	1.00	0.974	97.4	80.0-120	

L1356869-08 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1356869-08 06/10/21 02:40 • (MS) R3665547-4 06/10/21 02:46 • (MSD) R3665547-5 06/10/21 02:48

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Lead	1.00	U	0.991	0.987	99.1	98.7	1	75.0-125			0.393	20

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDL	Method Detection Limit.
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
	The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO000356
Kentucky [1 6]	KY90010	South Carolina	84004002
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas [5]	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

Company Name/Address:
GHD - Phoenix, AZ

4747 North 22nd Street
Suite 200
Phoenix. AZ 85016

Billing Information:
Attn: Jen Devonshire
2055 Niagara Falls Blvd.
Niagara Falls, NY 14304

Pres Chk

Report to:
Larry Williams

Email To:
larry.williams@ghd.com;sheri.finn@ghd.com;m

Project Description:
VRP Services - HVF West, LLC.

City/State Collected: TUCSON, AZ

Please Circle: PT MT CT ET

Phone: **602-216-7200**

Client Project #
11224790/103

Lab Project #
GHDPAZ-11224790

Collected by (print): Nicole Rubenstein

Site/Facility ID #

P.O. #

Collected by (signature): Nicole R

Immediately Packed on Ice N X Y ____

Rush? (Lab MUST Be Notified)
____ Same Day ____ Five Day
____ Next Day ____ 5 Day (Rad Only)
____ Two Day ____ 10 Day (Rad Only)
____ Three Day

Quote #

Date Results Needed: standard

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Lead - 6010 250mlHDPE-HNO3	Remarks	Sample # (lab only)
GW - DU20 B-613-0.5	Grab	GW	-	5/18/21	1456	1	X		-01
		GW				1	X		
		GW				1	X		
					5/21/21				
				NR					

Chain of Custody Page 1 of 1

Pace Analytical®

12065 Lebanon Rd Mount Juliet, TN 37122
Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

SDG # L1356962

Ta **L-090**

Acctnum: **GHDPAZ**
Template: **T186552**
Prelogin: **P844254**
PM: **526 - Chris McCord**
PB:
Shipped Via:

* Matrix:
SS - Soil **AIR** - Air **F** - Filter
GW - Groundwater **B** - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: __NP ✓Y __N
COC Signed/Accurate: ✓Y __N
Bottles arrive intact: ✓Y __N
Correct bottles used: ✓Y __N
Sufficient volume sent: ✓Y __N
If Applicable
VOA Zero Headspace: __Y __N
Preservation Correct/Checked: ✓Y __N
RAD Screen <0.5 mR/hr: ✓Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR	
Nicole R	5/21/21	1130	[illegible]		
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: 22.m °C Bottles Received: 23.5 to 23.5	If preservation required by Login: Date/Time
[illegible]	5/21/21	1800	SwA		
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 5/22/21 Time: 1030	Hold: / Condition: NCF / OK
			[illegible]		

PNPAZ

Appendix E

Validation Memo May 2021

Memorandum

June 28, 2021

To:	Larry Williams	Ref. No.:	11224790
From:	Sheri Finn/ro/1-NF	Tel:	716-205-1977
CC:			

Subject: **Analytical Results and Reduced Validation**
Soil Characterization Sampling
HVF West, LLC
Tucson, Arizona
May 2021

1. Introduction

This document details a reduced validation of analytical results for soil samples collected in support of the soil characterization sampling at the HVF West, LLC site during May 2021. Samples were submitted to Pace Analytical National Laboratory, located in Mount Juliet, Tennessee. A sample collection and analysis summary is presented in Table 1. The validated analytical results are summarized in Table 2. A summary of the analytical methodology is presented in Table 3.

Standard GHD report deliverables were submitted by the laboratory. The final results and supporting quality assurance/quality control (QA/QC) data were assessed. Evaluation of the data was based on information obtained from the chain of custody forms, finished report forms, method blank data, recovery data from laboratory control samples (LCS)/matrix spikes/matrix spike duplicate (MS/MSD) and field QA/QC.

The QA/QC criteria by which these data have been assessed are outlined in the analytical method referenced in Table 3 and applicable guidance from the document entitled:

i) "USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review", USEPA 540-R-2017-001

item i) will subsequently be referred to as the "Guidelines" in this Memorandum.

2. Sample Holding Time and Preservation

The sample holding time criterion for the analysis is summarized in Table 3. Sample chain of custody documents and analytical reports were used to determine sample holding times. All samples were prepared and analyzed within the required holding time.

All samples were properly preserved, delivered on ice, and stored by the laboratory at the required temperature (0-6°C) (4 +/- 2°C).

3. Laboratory Method Blank Analyses

Method blanks are prepared from a purified matrix and analyzed with investigative samples to determine the existence and magnitude of sample contamination introduced during the analytical procedures.

For this study, laboratory method blanks were analyzed at a minimum frequency of 1 per 20 investigative samples and/or 1 per analytical batch.

All method blank results were non-detect, indicating that laboratory contamination was not a factor for this investigation.

4. Laboratory Control Sample Analyses

LCS are prepared and analyzed as samples to assess the analytical efficiencies of the methods employed, independent of sample matrix effects.

For this study, LCS were analyzed at a minimum frequency of 1 per 20 investigative samples and/or 1 per analytical batch.

The LCS contained the analyte of interest. LCS recoveries were assessed per the "Guidelines". All LCS recoveries were within the control limits, demonstrating acceptable analytical accuracy.

5. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Analyses

To evaluate the effects of sample matrices on the distillation process, measurement procedures, and accuracy of a particular analysis, samples are spiked with a known concentration of the analyte of concern and analyzed as MS/MSD samples. The RPD between the MS and MSD is used to assess analytical precision. If the original sample concentration is significantly greater than the spike concentration, the recovery is not assessed.

MS/MSD analyses were performed internally by the laboratory.

The MS/MSD samples were spiked with the analyte of interest, and the results were evaluated using the "Guidelines". Percent recoveries and RPD values were within the control limits, demonstrating acceptable analytical accuracy and precision with the exception of the samples qualified in Table 4.

6. Field QA/QC Samples

The field QA/QC consisted of one equipment blank sample, and four field duplicate sample sets.

Equipment Blank Sample Analysis

To assess field decontamination procedures, ambient conditions at the site, and cleanliness of sample containers, an equipment blank was submitted for analysis, as identified in Table 1. Lead was detected in the equipment blank. The associated sample results were considerably greater than the concentration found in the equipment blank and no qualification was necessary.

Field Duplicate Sample Analysis

To assess the analytical and sampling protocol precision, four field duplicate samples were collected and submitted "blind" to the laboratory, as specified in Table 1. The RPDs associated with these duplicate samples must be less than 100 percent for soil samples. If the reported concentration in either the investigative sample or its duplicate is less than five times the reporting limit (RL), the evaluation criteria is two times the RL value for soil samples.

All field duplicate results were within acceptable agreement, demonstrating acceptable sampling and analytical precision with the exception of one duplicate pair that showed some variability. The associated sample results were qualified as estimated (see Table 5).

7. Analyte Reporting

The laboratory reported detected results down to the laboratory's method detection limit (MDL) for each analyte.

All soil results were reported on a dry weight basis.

8. Conclusion

Based on the assessment detailed in the foregoing, the data summarized in Table 2 are acceptable with the qualifications noted.

Table 1

Sample Collection and Analysis Summary
Soil Characterization Sampling
HVF West, LLC
Tucson, Arizona
May 2021

Sample Identification	Location	Matrix	Collection Date (mm/dd/yyyy)	Collection Time (hr:min)	Parameters: Lead	Comments
SO-DU15-G1-0.5	DU 15,Grid 1	Soil	05/20/2021	10:25	X	
SO-DU15-G3-0.5	DU 15,Grid 3	Soil	05/20/2021	10:21	X	
SO-DU15-G5-0.5	DU 15,Grid 5	Soil	05/20/2021	10:40	X	
SO-DU15-G6-0.5	DU 15,Grid 6	Soil	05/20/2021	10:11	X	
SO-DU15D-G6-0.5	DU 15,Grid 6	Soil	05/20/2021	10:16	X	Field Duplicate of SO-DU15-G6-0.5
SO-DU15-G8-0.5	DU 15,Grid 8	Soil	05/20/2021	10:45	X	
SO-DU15-G12-0.5	DU 15,Grid 12	Soil	05/20/2021	10:50	X	
SO-DU15-G15-0.5	DU 15,Grid 15	Soil	05/20/2021	11:00	X	
SO-DU15-G16-0.5	DU 15,Grid 16	Soil	05/20/2021	10:54	X	
SO-DU15-G18-0.5	DU 15,Grid 18	Soil	05/20/2021	09:59	X	
SO-DU15-G19-0.5	DU 15,Grid 19	Soil	05/20/2021	09:49	X	
SO-DU15-G20-0.5	DU 15,Grid 20	Soil	05/20/2021	09:52	X	
SO-DU20-G1-0.5	DU 20,Grid 1	Soil	05/20/2021	13:26	X	
SO-DU20-G2-0.5	DU 20,Grid 2	Soil	05/20/2021	13:27	X	
SO-DU20-G3-0.5	DU 20,Grid 3	Soil	05/20/2021	13:33	X	
SO-DU20D-G3-0.5	DU 20,Grid 3	Soil	05/20/2021	14:01	X	Field Duplicate of SO-DU20-G3-0.5
SO-DU20-G4-0.5	DU 20,Grid 4	Soil	05/20/2021	13:36	X	
SO-DU20-G5-0.5	DU 20,Grid 5	Soil	05/20/2021	13:20	X	
SO-DU20-G6-0.5	DU 20,Grid 6	Soil	05/20/2021	13:13	X	
SO-DU20-G7-0.5	DU 20,Grid 7	Soil	05/20/2021	13:08	X	
SO-DU20-G8-0.5	DU 20,Grid 8	Soil	05/20/2021	13:06	X	
SO-DU20-G9-0.5	DU 20,Grid 9	Soil	05/18/2021	13:39	X	
SO-DU20-G11-0.5	DU 20,Grid 11	Soil	05/18/2021	13:16	X	
SO-DU20-G13-0.5	DU 20,Grid 13	Soil	05/18/2021	14:08	X	
SO-DU20-G17-0.5	DU 20,Grid 17	Soil	05/18/2021	12:55	X	
SO-DU20-G21-0.5	DU 20,Grid 21	Soil	05/18/2021	12:36	X	
SO-DU20-G22-0.5	DU 20,Grid 22	Soil	05/18/2021	12:16	X	
SO-DU20-G23-0.5	DU 20,Grid 23	Soil	05/20/2021	12:53	X	
SO-DU20-G24-0.5	DU 20,Grid 24	Soil	05/20/2021	12:47	X	
SO-DU22-G1-0.5	DU 22,Grid 1	Soil	05/18/2021	10:02	X	
SO-DU22-G3-0.5	DU 22,Grid 3	Soil	05/20/2021	12:22	X	

Table 1

Sample Collection and Analysis Summary
Soil Characterization Sampling
HVF West, LLC
Tucson, Arizona
May 2021

Sample Identification	Location	Matrix	Collection Date (mm/dd/yyyy)	Collection Time (hr:min)	Parameters: Lead	Comments
SO-DU22-G4-0.5	DU 22,Grid 4	Soil	05/20/2021	12:19	X	
SO-DU22-G7-0.5	DU 22,Grid 7	Soil	05/20/2021	12:43	X	
SO-DU22-G8-0.5	DU 22,Grid 8	Soil	05/18/2021	09:46	X	
SO-DU22D-G8-0.5	DU 22,Grid 8	Soil	05/18/2021	09:50	X	Field Duplicate of SO-DU22-G8-0.5
SO-DU22-G11-0.5	DU 22,Grid 11	Soil	05/20/2021	12:09	X	
SO-DU22-G14-0.5	DU 22,Grid 14	Soil	05/20/2021	12:37	X	
SO-DU22-G17-0.5	DU 22,Grid 17	Soil	05/20/2021	11:54	X	
SO-DU22-G18-0.5	DU 22,Grid 18	Soil	05/20/2021	11:59	X	
SO-DU22-G19-0.5	DU 22,Grid 19	Soil	05/18/2021	09:19	X	
SO-DU22-G20-0.5	DU 22,Grid 20	Soil	05/18/2021	08:58	X	
SO-DU22-G21-0.5	DU 22,Grid 21	Soil	05/20/2021	11:33	X	
SO-DU22-G22-0.5	DU 22,Grid 22	Soil	05/20/2021	11:43	X	
SO-DU22-G23-0.5	DU 22,Grid 23	Soil	05/20/2021	11:47	X	
SO-DU22-G24-0.5	DU 22,Grid 24	Soil	05/18/2021	10:27	X	
SO-DU29-G1-0.5	DU 29,Grid 1	Soil	05/20/2021	09:02	X	
SO-DU29-G3-0.5	DU 29,Grid 3	Soil	05/20/2021	09:08	X	
SO-DU29-G4-0.5	DU 29,Grid 4	Soil	05/20/2021	08:48	X	
SO-DU29-G5-0.5	DU 29,Grid 5	Soil	05/20/2021	08:55	X	
SO-DU29D-G5-0.5	DU 29,Grid 5	Soil	05/20/2021	09:00	X	Field Duplicate of SO-DU29-G5-0.5
SO-DU29-G7-0.5	DU 29,Grid 7	Soil	05/20/2021	09:10	X	
SO-DU29-G9-0.5	DU 29,Grid 9	Soil	05/20/2021	09:39	X	
SO-DU29-G10-0.5	DU 29,Grid 10	Soil	05/20/2021	09:36	X	
SO-DU29-G11-0.5	DU 29,Grid 11	Soil	05/20/2021	07:59	X	
SO-DU29-G13-0.5	DU 29,Grid 13	Soil	05/20/2021	07:43	X	
SO-DU29-G15-0.5	DU 29,Grid 15	Soil	05/20/2021	09:17	X	
SO-DU29-G17-0.5	DU 29,Grid 17	Soil	05/20/2021	09:23	X	
SO-DU29-G18-0.5	DU 29,Grid 18	Soil	05/20/2021	09:30	X	
EB-DU20B-G13-0.5	Equipment Blank	Water	05/18/2021	14:56	X	

Notes:

Table 2

Analytical Results Summary
Soil Characterization Sampling
HVF West, LLC
Tucson, Arizona
May 2021

Location ID:		**DU 15,Grid 1**	**DU 15,Grid 3**	**DU 15,Grid 5**	**DU 15,Grid 6**	**DU 15,Grid 6**	**DU 15,Grid 8**
Sample Name:		**SO-DU15-G1-0.5**	**SO-DU15-G3-0.5**	**SO-DU15-G5-0.5**	**SO-DU15-G6-0.5**	**SO-DU15D-G6-0.5**	**SO-DU15-G8-0.5**
Sample Date:		**05/20/2021**	**05/20/2021**	**05/20/2021**	**05/20/2021**	**05/20/2021**	**05/20/2021**
Depth:		**0.5 ft BGS**	**0.5 ft BGS**	**0.5 ft BGS**	**0.5 ft BGS**	**0.5 ft BGS**	**0.5 ft BGS**
						Duplicate	
Parameters	**Unit**						
Metals							
Lead	mg/kg	6310	671	581	128	130	541
General Chemistry							
Total solids	%	98.3	97.1	97.3	98.4	98.5	96.7

Table 2

Analytical Results Summary
Soil Characterization Sampling
HVF West, LLC
Tucson, Arizona
May 2021

Location ID:		**DU 15,Grid 12**	**DU 15,Grid 15**	**DU 15,Grid 16**	**DU 15,Grid 18**	**DU 15,Grid 19**	**DU 15,Grid 20**
Sample Name:		**SO-DU15-G12-0.5**	**SO-DU15-G15-0.5**	**SO-DU15-G16-0.5**	**SO-DU15-G18-0.5**	**SO-DU15-G19-0.5**	**SO-DU15-G20-0.5**
Sample Date:		**05/20/2021**	**05/20/2021**	**05/20/2021**	**05/20/2021**	**05/20/2021**	**05/20/2021**
Depth:		**0.5 ft BGS**	**0.5 ft BGS**	**0.5 ft BGS**	**0.5 ft BGS**	**0.5 ft BGS**	**0.5 ft BGS**
Parameters	**Unit**						
Metals							
Lead	mg/kg	697	247	310	79.8	999	316
General Chemistry							
Total solids	%	97.0	92.2	97.9	97.4	97.3	97.3

Table 2

Analytical Results Summary
Soil Characterization Sampling
HVF West, LLC
Tucson, Arizona
May 2021

Location ID:		**DU 20,Grid 1**	**DU 20,Grid 2**	**DU 20,Grid 3**	**DU 20,Grid 3**	**DU 20,Grid 4**	**DU 20,Grid 5**
Sample Name:		**SO-DU20-G1-0.5**	**SO-DU20-G2-0.5**	**SO-DU20-G3-0.5**	**SO-DU20D-G3-0.5**	**SO-DU20-G4-0.5**	**SO-DU20-G5-0.5**
Sample Date:		**05/20/2021**	**05/20/2021**	**05/20/2021**	**05/20/2021**	**05/20/2021**	**05/20/2021**
Depth:		**0.5 ft BGS**	**0.5 ft BGS**	**0.5 ft BGS**	**0.5 ft BGS**	**0.5 ft BGS**	**0.5 ft BGS**
					Duplicate		
Parameters	**Unit**						
Metals							
Lead	mg/kg	105	11.3	383 J	259	569	81.5
General Chemistry							
Total solids	%	99.0	98.4	97.7	96.9	94.0	98.4

Table 2

Analytical Results Summary
Soil Characterization Sampling
HVF West, LLC
Tucson, Arizona
May 2021

Location ID:		**DU 20,Grid 6**	**DU 20,Grid 7**	**DU 20,Grid 8**	**DU 20,Grid 9**	**DU 20,Grid 11**	**DU 20,Grid 13**
Sample Name:		**SO-DU20-G6-0.5**	**SO-DU20-G7-0.5**	**SO-DU20-G8-0.5**	**SO-DU20-G9-0.5**	**SO-DU20-G11-0.5**	**SO-DU20-G13-0.5**
Sample Date:		**05/20/2021**	**05/20/2021**	**05/20/2021**	**05/18/2021**	**05/18/2021**	**05/18/2021**
Depth:		**0.5 ft BGS**	**0.5 ft BGS**	**0.5 ft BGS**	**0.5 ft BGS**	**0.5 ft BGS**	**0.5 ft BGS**
Parameters	**Unit**						
Metals							
Lead	mg/kg	104	37.9	44.8	387	1310	1660
General Chemistry							
Total solids	%	97.8	92.7	98.1	99.2	95.4	98.2

Table 2

Analytical Results Summary
Soil Characterization Sampling
HVF West, LLC
Tucson, Arizona
May 2021

Location ID:		**DU 20,Grid 17**	**DU 20,Grid 21**	**DU 20,Grid 22**	**DU 20,Grid 23**	**DU 20,Grid 24**	**DU 22,Grid 1**
Sample Name:		**SO-DU20-G17-0.5**	**SO-DU20-G21-0.5**	**SO-DU20-G22-0.5**	**SO-DU20-G23-0.5**	**SO-DU20-G24-0.5**	**SO-DU22-G1-0.5**
Sample Date:		**05/18/2021**	**05/18/2021**	**05/18/2021**	**05/20/2021**	**05/20/2021**	**05/18/2021**
Depth:		**0.5 ft BGS**	**0.5 ft BGS**	**0.5 ft BGS**	**0.5 ft BGS**	**0.5 ft BGS**	**0.5 ft BGS**
Parameters	**Unit**						
Metals							
Lead	mg/kg	914	994	955	71.8	49.9	1230
General Chemistry							
Total solids	%	96.2	98.3	96.9	97.5	97.5	96.1

Table 2

Analytical Results Summary
Soil Characterization Sampling
HVF West, LLC
Tucson, Arizona
May 2021

Location ID:		**DU 22,Grid 3**	**DU 22,Grid 4**	**DU 22,Grid 7**	**DU 22,Grid 8**	**DU 22,Grid 8**	**DU 22,Grid 11**
Sample Name:		**SO-DU22-G3-0.5**	**SO-DU22-G4-0.5**	**SO-DU22-G7-0.5**	**SO-DU22-G8-0.5**	**SO-DU22D-G8-0.5**	**SO-DU22-G11-0.5**
Sample Date:		**05/20/2021**	**05/20/2021**	**05/20/2021**	**05/18/2021**	**05/18/2021**	**05/20/2021**
Depth:		**0.5 ft BGS**	**0.5 ft BGS**	**0.5 ft BGS**	**0.5 ft BGS**	**0.5 ft BGS**	**0.5 ft BGS**
						Duplicate	
Parameters	**Unit**						
Metals							
Lead	mg/kg	1180	189	102	970	925	197
General Chemistry							
Total solids	%	92.2	98.6	98.5	94.7	96.0	99.1

Table 2

Analytical Results Summary
Soil Characterization Sampling
HVF West, LLC
Tucson, Arizona
May 2021

Location ID:		**DU 22,Grid 14**	**DU 22,Grid 17**	**DU 22,Grid 18**	**DU 22,Grid 19**	**DU 22,Grid 20**	**DU 22,Grid 21**
Sample Name:		**SO-DU22-G14-0.5**	**SO-DU22-G17-0.5**	**SO-DU22-G18-0.5**	**SO-DU22-G19-0.5**	**SO-DU22-G20-0.5**	**SO-DU22-G21-0.5**
Sample Date:		**05/20/2021**	**05/20/2021**	**05/20/2021**	**05/18/2021**	**05/18/2021**	**05/20/2021**
Depth:		**0.5 ft BGS**	**0.5 ft BGS**	**0.5 ft BGS**	**0.5 ft BGS**	**0.5 ft BGS**	**0.5 ft BGS**
Parameters	**Unit**						
Metals							
Lead	mg/kg	151	203	25.5	3330	1240	82.9
General Chemistry							
Total solids	%	97.3	98.1	98.3	96.8	96.7	99.2

Table 2

Analytical Results Summary
Soil Characterization Sampling
HVF West, LLC
Tucson, Arizona
May 2021

Location ID:		**DU 22,Grid 22**	**DU 22,Grid 23**	**DU 22,Grid 24**	**DU 29,Grid 1**	**DU 29,Grid 3**	**DU 29,Grid 4**
Sample Name:		**SO-DU22-G22-0.5**	**SO-DU22-G23-0.5**	**SO-DU22-G24-0.5**	**SO-DU29-G1-0.5**	**SO-DU29-G3-0.5**	**SO-DU29-G4-0.5**
Sample Date:		**05/20/2021**	**05/20/2021**	**05/18/2021**	**05/20/2021**	**05/20/2021**	**05/20/2021**
Depth:		**0.5 ft BGS**	**0.5 ft BGS**	**0.5 ft BGS**	**0.5 ft BGS**	**0.5 ft BGS**	**0.5 ft BGS**
Parameters	**Unit**						
Metals							
Lead	mg/kg	169	471	378	378	302	388 J
General Chemistry							
Total solids	%	95.8	94.9	96.1	94.8	98.0	94.4

Table 2

Analytical Results Summary
Soil Characterization Sampling
HVF West, LLC
Tucson, Arizona
May 2021

Location ID:		**DU 29,Grid 5**	**DU 29,Grid 5**	**DU 29,Grid 7**	**DU 29,Grid 9**	**DU 29,Grid 10**	**DU 29,Grid 11**
Sample Name:		**SO-DU29-G5-0.5**	**SO-DU29D-G5-0.5**	**SO-DU29-G7-0.5**	**SO-DU29-G9-0.5**	**SO-DU29-G10-0.5**	**SO-DU29-G11-0.5**
Sample Date:		**05/20/2021**	**05/20/2021**	**05/20/2021**	**05/20/2021**	**05/20/2021**	**05/20/2021**
Depth:		**0.5 ft BGS**	**0.5 ft BGS**	**0.5 ft BGS**	**0.5 ft BGS**	**0.5 ft BGS**	**0.5 ft BGS**
			Duplicate				
Parameters	**Unit**						
Metals							
Lead	mg/kg	308 J	1990 J	164	84.3	182	335
General Chemistry							
Total solids	%	97.5	97.1	95.6	96.5	97.2	97.8

Table 2

Analytical Results Summary
Soil Characterization Sampling
HVF West, LLC
Tucson, Arizona
May 2021

Location ID:		**DU 29,Grid 13**	**DU 29,Grid 15**	**DU 29,Grid 17**	**DU 29,Grid 18**
Sample Name:		**SO-DU29-G13-0.5**	**SO-DU29-G15-0.5**	**SO-DU29-G17-0.5**	**SO-DU29-G18-0.5**
Sample Date:		**05/20/2021**	**05/20/2021**	**05/20/2021**	**05/20/2021**
Depth:		**0.5 ft BGS**	**0.5 ft BGS**	**0.5 ft BGS**	**0.5 ft BGS**
Parameters	**Unit**				
Metals					
Lead	mg/kg	13.6	49.8	36.9	124
General Chemistry					
Total solids	%	98.1	97.0	97.2	97.0

Notes:

J -Estimated concentration

Table 3

Analytical Methods
Soil Characterization Sampling
HVF West, LLC
Tucson, Arizona
May 2021

Parameter	Method	Matrix	Holding Time Collection to Analysis (Days)
Metals	SW-846 6010D	Soil	180

Notes:

Method References:

SW-846 - "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", SW-846, Third Edition, 1986, with subsequent revisions

Table 4

Qualified Sample Results Due to Outlying MS/MSD Results
Soil Characterization Sampling
HVF West, LLC
Tucson, Arizona
May 2021

Parameter	Sample ID	Analyte	MS % Recovery	MSD % Recovery	RPD (percent)	Control Limits % Recovery	Control Limits RPD	Qualified Result	Units
Metals	SO-DU29-G4-0.5	Lead	64.9	167	19.2	75-125	35	388 J	mg/Kg
	SO-DU20-G3-0.5	Lead	72.3	62.6	2.2	75-125	35	383 J	mg/Kg

Notes:

MS - Matrix Spike
MSD - Matrix Spike Duplicate
RPD - Relative Percent Difference
J - Estimated concentration

Table 5

Qualified Sample Data Due to Variability in Field Duplicate Results
Soil Characterization Sampling
HVF West, LLC
Tucson, Arizona
May 2021

Parameter	Analyte	RPD/Diff		Sample ID	Qualified Result	Field Duplicate Sample ID	Qualified Result	Units
Metals	Lead	146	-	SO-DU29-G5-0.5	308 J	SO-DU29D-G5-0.5	1990 J	mg/Kg

Notes:

Diff - Difference (i.e., >1X RL for waters or >2XRL for soils)
RPD - Relative Percent Difference
J - Estimated concentration

Appendix F

Example Signage

Public Notice of Remedial Action

HVF West, LLC

HVF West LLC is conducting remediation activities associated with metals-impacted material resulting from previous operations. The project is being performed under the guidance of the Arizona Department of Environmental Quality Voluntary Remediation Program (VRP).

Anticipated duration of activities:

Month/Day/Year through Month/Day/Year

For information, please contact

Brian Stonebrink
Project Manager
ADEQ VRP
602-771-4197

OR

Sam Amer
Environmental Manager
HVF West, LLC
734-362-3228

ADEQ
Arizona Department of Environmental Quality

Company Logo

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→ The Power of Commitment