317 E. Main Street
Ventura, CA 93001
Tel: (805) 585-2110
Fax: (805) 585-2111

TECHNICAL MEMORANDUM

Date: December 22, 2015

Prepared For: Charles Grant, Technical Representative, US FWS
Jerry Hill, Deputy Manager, US FWS Tetlin National Wildlife Refuge

Prepared By: Patrick Devericks, P.E., Oneida Total Integrated Enterprises
GSA Contract: GS-00F-0006L
Order Number: F15PD02018

Re: **Initial Site Assessment Summary**
Former Small Arms Range
Tetlin National Wildlife Refuge, Alcan Border, Alaska

1.0 INTRODUCTION

Oneida Total Integrated Enterprises, LLC (OTIE) has prepared this Technical Memorandum to summarize the Initial Site Assessment (ISA) phase of work for the former small arms range (SAR) located near the northeastern boundary of the Tetlin National Wildlife Refuge (TNWR) along the Alaska Highway in Alaska (Site) (Figure 1). The work was conducted by direction of the United States Fish and Wildlife Services (FWS) under General Services Administration Contract Number GS-00F-0006L, Order Number F15PD02018, in accordance with the Alaska Department of Environmental Conservation (ADEC), Division of Spill Prevention and Contaminated Sites Program.

The *Work Plan for Initial Site Assessment, HHRA/ERA, and Remedial Evaluation* (Work Plan) was submitted on September 16, 2015 to ADEC and was approved on September 17, 2015. This technical memorandum summarizes the results of the ISA field work, including site observations and field and laboratory data collected, within each of the three Decision Units (DUs): DU-1 (Background), DU-2 (Impact Berm) and DU-3 (Range Floor).

ISA field work was completed between September 22 and September 25, 2015, in coordination with regional FWS staff. The completed field work was in compliance with the approved Work Plan.

The screening level Human Health Risk Assessment and Ecological Risk Assessment (HHRA/ERA) and Remedial Evaluation discussed in the Work Plan can be completed upon award of those tasks. A complete and concise summary and analysis of the ISA, HHRA/ERA, and Remedial Evaluation will be summarized in a Final Report, as stated in the Work Plan.

2.0 INITIAL SITE ASSESSMENT SUMMARY

Between September 22 and 25, 2015, OTIE personnel mobilized to the Site and completed delineation and sampling of the SAR. The objective of the ISA was to collect data and delineate the SAR by:

1) Visual observations for evidence of the SAR, including berms, shell casings, makeshift targets, and lead slugs/fragments;

2) Field measurements of metals contaminants with X–Ray Fluorescence Spectrometer (XRF) to establish background data to define the peripheral extent of the range floor and the magnitude of impact to the range floor and berm. Results of XRF field screening are summarized in the attached Tables 1 through 3;

3) Collection of soil samples and analysis of the samples at an off-site laboratory (ALS in Kelso, Washington) for lead, with a limited number of samples analyzed for antimony, arsenic, copper, and zinc, to confirm XRF screening and to assist in completing the HHRA/ERA and the remedial evaluation. Laboratory analytical results are summarized in the attached Tables 1 through 3. Laboratory analytical reports are provided in Appendix A;

4) GPS survey of all site features, including sampling/screening locations and grid patterns, were surveyed using a GPS Trimble device and are reflected in the attached Figures 1 through 3; and

5) Record all field data, including field observations, field notes, and photos, and appropriately document. Appendix B provides a photo log of the ISA field work.

The ISA summary is organized by DUs and provided in Sections 2.1, 2.2, and 2.3 below.

2.1. Background Sampling (DU-1)

Based on Site observations, two undisturbed background areas were identified to the southwest (BG-1 through BG-5) and to the northeast (BG-6 through BG-10) of the Site (Figure 1). Five discrete samples were collected at approximately 6 inches below grade within each area for a total of ten sample locations. The samples were first screened using XRF, then packaged for offsite laboratory analysis by Environmental Protection Agency (EPA) Method 6010C. Ten samples were analyzed for lead and five samples were analyzed for additional compounds antimony, arsenic, copper, and zinc. Below is a brief summary of the lead results:

- Field screening for lead ranged from 8U ppm (U-value, less than the detectable limit) (BG2-6) to 10U ppm (BG7-6, BG9-6, BG10-6); and
- Laboratory analytical results for lead ranged from 7.7 milligrams per kilogram (mg/kg) (BG8-6) to 10.8 mg/kg (BG1-6).

Results of XRF field screening and analytical laboratory results are provided in Table 1. Laboratory Analytical reports are provided in Appendix B.

The background results, along with visual observations, were used to define the peripheral extent and magnitude of contamination within the impact berm (DU-2) and range floor (DU-3).

2.2. Impact Berm Sampling (DU-2)

Site observations indicated an impact berm at the SAR varying between 3 and 9 feet tall at approximately 170 linear feet (Figure 2). There was noticeable evidence of lead slugs on the impact berm surface, along with spent casings and makeshift targets in front of the impact berm on the range floor (Figure 3). Based on these visual observations, seventeen 10-foot wide sampling units (SUs) were

established with three transects. Soil samples were collected at 6, 12, and 24 inches into the berm (transects 1, 2, and 3), and consolidated at each horizontal level.

A total of 51 composite samples and 3 duplicate samples were collected and analyzed for lead by EPA Method 6010C, with 10 samples for additional compounds antimony, arsenic, copper, and zinc by the same EPA method. In addition, nine samples were collected to evaluate for waste characterization using toxicity characteristic leaching procedure (TCLP) method and analyzed using EPA Method 6010C. Below is a brief summary of the lead results:

- Field screening for lead ranged from 3U ppm (G2-T1-6) to 904 ppm (G6-T1-6);
- Laboratory analytical results for lead by ranged from 11J milligrams per kilogram (mg/kg) (J-flag value, estimated value) (G6-T3-24) to 15,200J mg/kg (G8-T1-6); and
- Laboratory analytical results for lead by TCLP ranged from 0.05U milligrams per liter (mg/L) (G13-T1-6) to 41.1 mg/L (G6-T1-6x, field duplicate).

Results of XRF field screening and analytical laboratory results are provided in Table 2. Laboratory Analytical reports are provided in Appendix B.

2.3. Range Floor Sampling (DU-3)

Utilizing the site observations of makeshift targets, spent casings, lead slugs, and other site features, a 25 foot by 25 foot grid pattern was established on the range floor. There was evidence of two firing lines based on the observed amount of spent casings on the range floor and arrangement of the impact berm and observed makeshift targets. Figure 3 illustrates the key site features relevant to the SAR, including the sampling grids, sampling locations, makeshift targets, observed shell casings and lead slugs, and the two inferred filing line locations (primary and secondary).

Within each selected 25 foot by 25 foot grid, composite samples were collected and first screened using XRF, then packaged for offsite laboratory analysis. Two sample locations, C5 and E3, were sampled at 6, 12, and 24 inches below grade. All other composite samples were collected at approximately 6 inches. The exterior boundary of the range floor was delineated using the background XRF results and confirmed with approximate 10-foot step out samples.

A total of 17 composite samples and 4 duplicate samples were collected and analyzed for lead by EPA Method 6010C, with 7 samples for additional compounds antimony, arsenic, copper, and zinc by the same EPA method. Seven step-out samples were collected to confirm the range floor boundary. In addition, nine samples were collected for toxicity characteristic leaching procedure (TCLP) to evaluate for waste characterization. Below is a brief summary of the lead results:

- Field screening for lead ranged from 9U ppm (BDYE1-6) to 43 ppm (E3-12); and
- Laboratory analytical results for lead by ranged from 9.0 mg/kg (BDYE1-6) to 58.1 mg/kg (E3-12).

Results of XRF field screening and analytical laboratory results are provided in Table 3. Laboratory Analytical reports are provided in Appendix A.

3.0 CONCLUSIONS AND RECOMMENDATIONS

Based on the results of the ISA event, the SAR has been delineated to the extent possible pursuant to the approved scope of work and the approved Work Plan.

The following are key observations from the ISA event:

- The SAR has been delineated to the extent of the approved scope of work;
- Lead was observed above background levels at both the impact berm (DU-2) and the range floor (DU-3);
- Concentrated lead slugs were observed within the impact berm behind the makeshift targets, and confirmed with elevated lead soil results;
- Evidence of two inferred firing lines were observed based on field observations of spent casings; and
- Waste characterization TCLP results indicate one result (G6-T1-6) above the 5 mg/L threshold.

OTIE recommends completing the HHRA/ERA to establish remedial goals and complete remedial evaluation to determine the ideal path forward for remediation (if necessary).

ENCLOSURES

FIGURES

Figure 1 - Site Vicinity Map and Background Sampling Locations

Figure 2 - Initial Site Assessment Sampling Locations

Figure 3 - Site Observations

TABLES

Table 1 - Field Screening and Soil Analytical Results of Background Samples (DU-1)

Table 2 - Field Screening and Soil Analytical Results of Impact Berm Samples (DU-2

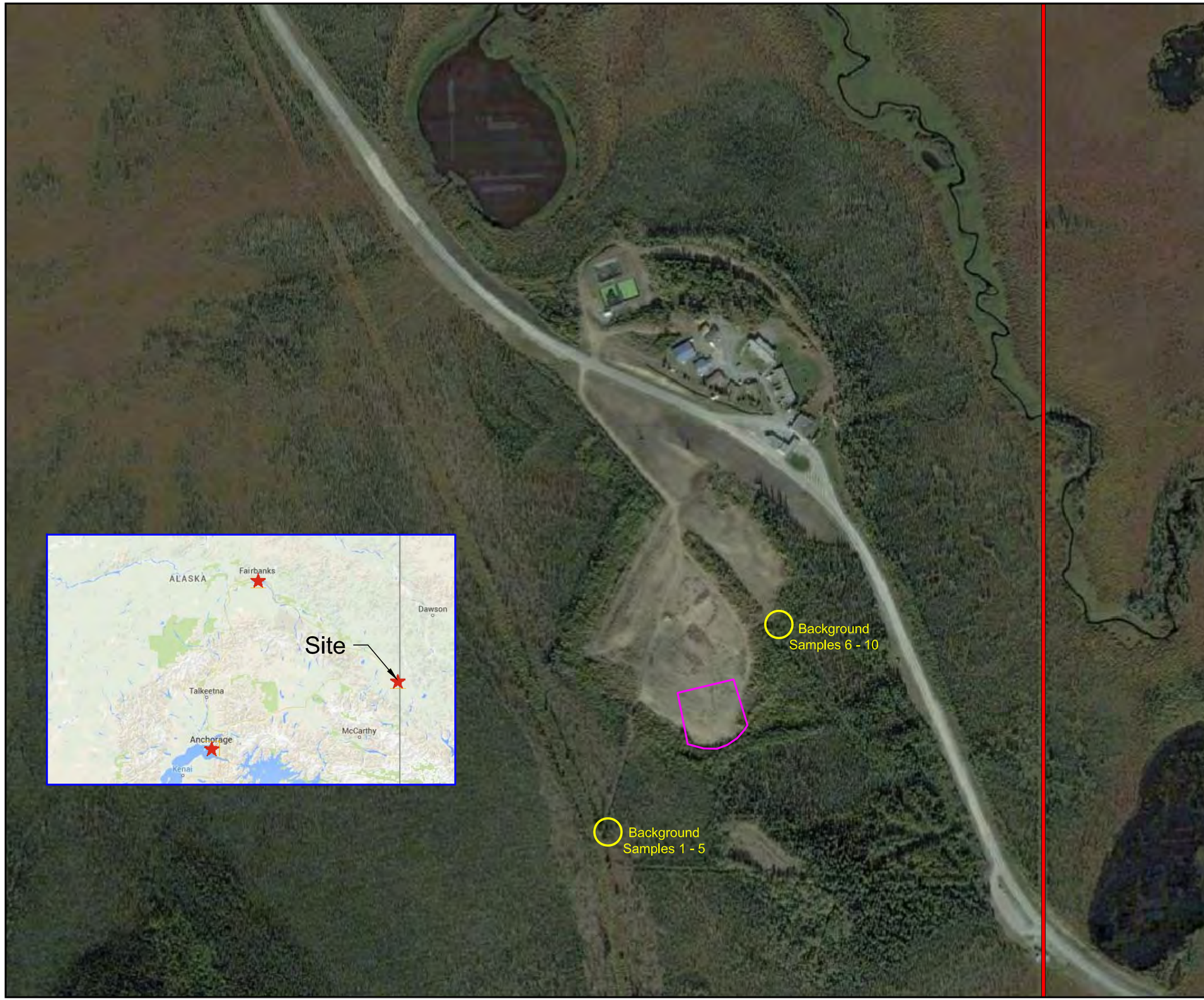
Table 3 - Field Screening and Soil Analytical Results of Range Floor Samples (DU-3)

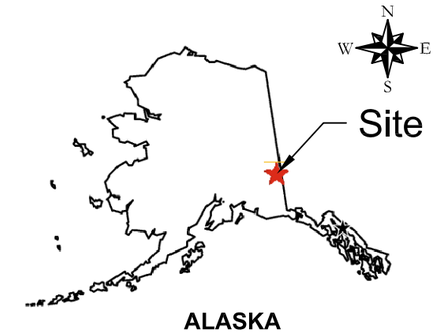
APPENDICES

Appendix A – Laboratory Analytical Data

Appendix B – Site Photo Log

FIGURES





- Approximate Site Location
- Regional Map
- U.S. and Canada International Border
- Background Sample Locations

Notes

1. A total of 10 background samples were collected at undisturbed locations and screened using XRF from 0-6 inches bgs.
2. A total of 10 background soil samples were analyzed offsite for lead, with 6 samples for antimony, arsenic, copper, & zinc.
3. See Table 1 for a summary of results.

Acronyms:
BGS = Below Ground Surface
XRF = X-Ray Fluorescence

Approximate Scale in Feet

0 400 800

Reference: Google 2015; Image: DigitalGlobe 2006

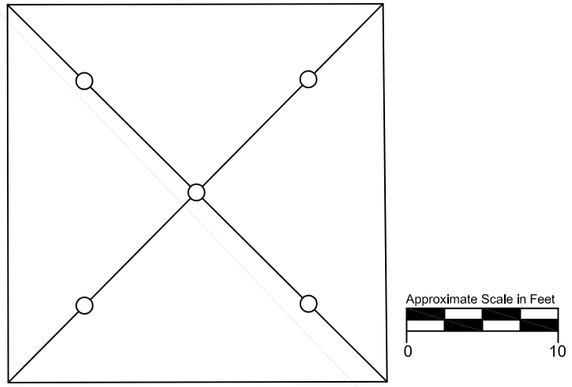
FIGURE 1
Site Vicinity Map and
Background Sampling Locations

Tetlin National Wildlife Refuge
Former Small Arms Range
Alcan Border, Alaska

OTIE
Oneida Total Integrated Enterprises

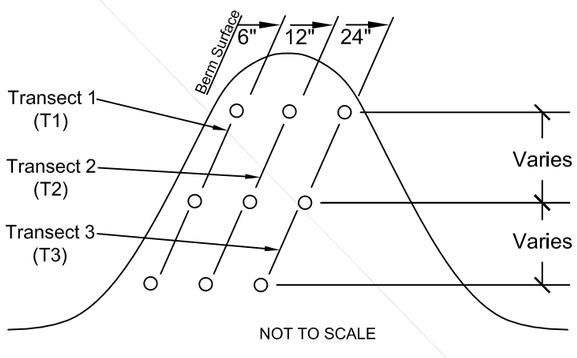
Date: December 10, 2015
File: Tetlin Results_Figures 1-2.dwg

Detail A - Range Floor Grid Sampling Unit (Typical)

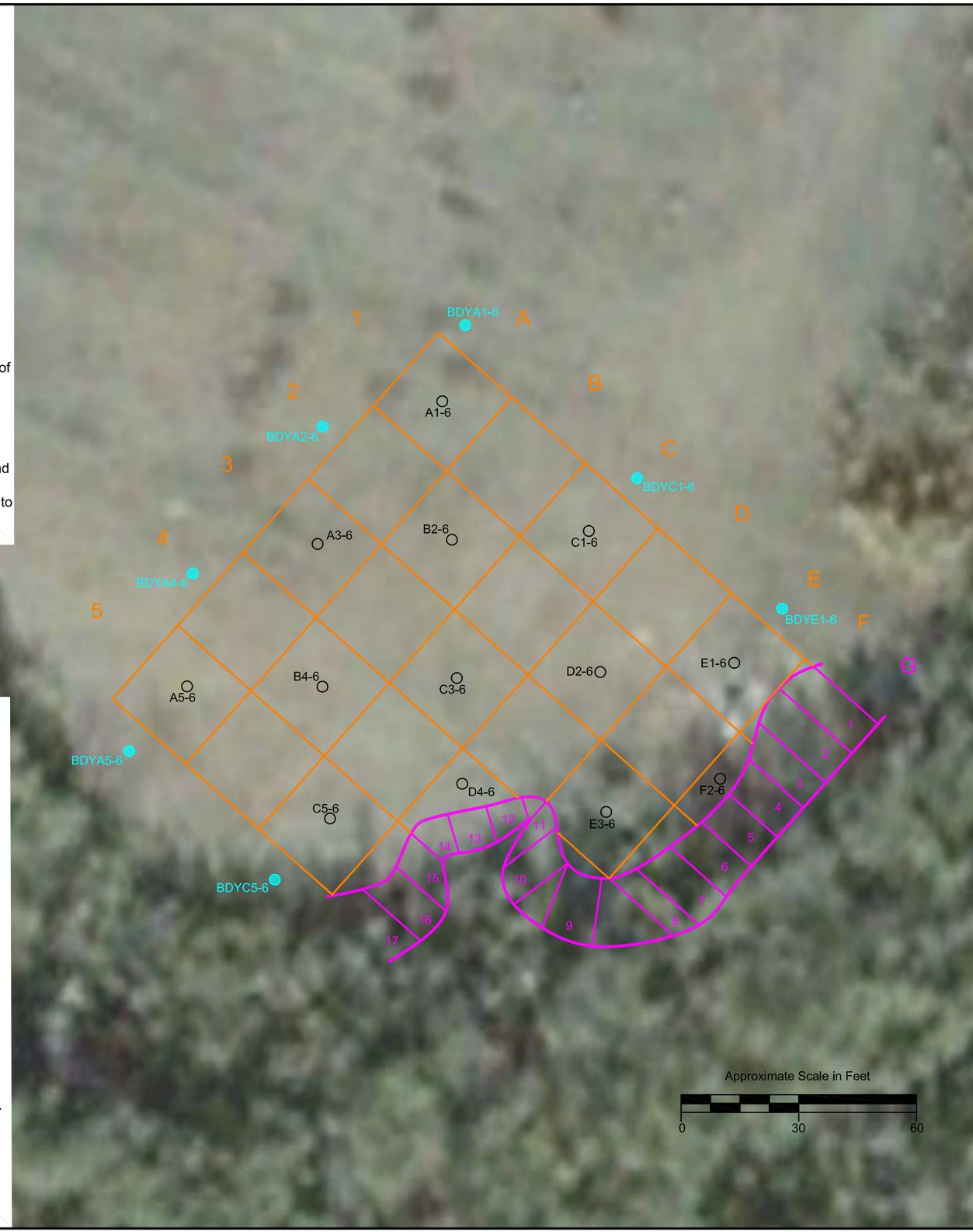


- A grid dimension of 25 feet by 25 feet was selected based on field observation of the estimated size of the range floor.
- Composite samples were collected at 0-6 inches bgs at each selected SU and screened using XRF.
- SU's C5 and E3 were selected for vertical delineation; Composite samples at 6-12 and 12-24 inches bgs were collected and screened using XRF.
- A total of 17 composite soil samples and 4 duplicate samples were collected and analyzed offsite for lead, with 7 samples for antimony, arsenic, copper, & zinc.
- A total of seven 10-foot step-out confirmation screening location were sampled to delineate the SAR boundary.
- See Table 3 for a summary of results.

Detail B - Impact Berm Transect Sampling Unit (Typical)



- The impact berm height varies between 2 and 9 feet.
- Each SU (total of 17) is 10 feet wide with three transects, per ADEC guidance.
- Composite samples were collected at each transect and screened using XRF.
- A total of 51 soil samples and three duplicate samples from 17 SU's were collected and analyzed offsite for lead, with 10 samples for antimony, arsenic, copper, & zinc.
- See Table 2 for a summary of results.



Legend

- Typical Range Floor Sampling Unit (25 feet by 25 feet)
- Typical Impact Berm Sampling Unit(10 foot sections)
- Composite Sample Location
- Discrete Boundary Confirmation Sample Location

Notes

1. Refer to Detail A and B for Sampling Unit details.
2. Typical sample nomenclature:

   Background (DU-1): *B1 - Depth*
   Impact Berm (DU-2): *I1 - T1 - Depth*
   Range Floor (DU-3): *A1 - Depth*

3. Sampling/screening locations to be surveyed with GPS Trimble© device.

Acronyms:
ADEC = Alaska Department of Environmental Conservation
BGS = Below Ground Surface
DU = Decision Unit
SAR = Small Arms Range
SU = Sampling Unit
XRF = X-Ray Fluorescence

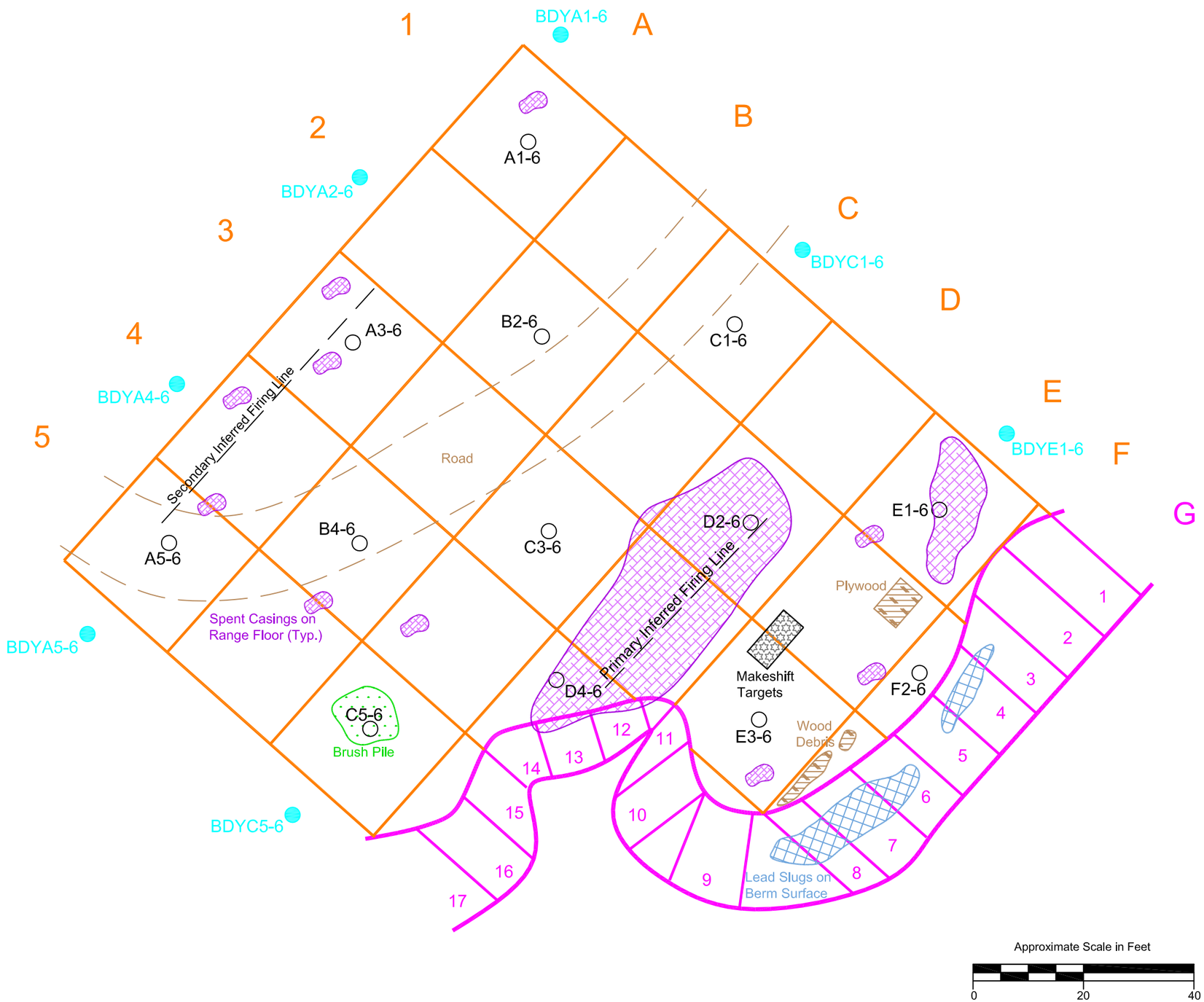
Reference: Google 2015; Image: DigitalGlobe 2006

FIGURE 2
Initial Site Assessment Sampling Locations

Tetlin National Wildlife Refuge
Former Small Arms Range
Alcan Border, Alaska

OTIE
Oneida Total Integrated Enterprises

Date: December 10, 2015
File: Tetlin Results_Figures 1-2.dwg



Legend

- Typical Range Floor Sampling Unit (25 feet by 25 feet)
- Typical Impact Berm Sampling Unit(10 foot sections)
- Composite Sample Location
- Discrete Boundary Confirmation Sample Location
- Dirt Road
- Inferred Firing Line
- Makeshift Targets
- Wood Debris
- Brush Pile
- Spent Casings
- Lead Slugs

Reference: Google 2015; Image: DigitalGlobe 2006

FIGURE 3
Site Observations

Tetlin National Wildlife Refuge
Former Small Arms Range
Alcan Border, Alaska

OTIE
Oneida Total Integrated Enterprises

Date: December 10, 2015

File: Tetlin Results_Figures 1-2.dwg

TABLES

Table 1
Field Screening and Soil Analytical Results of Background Samples (DU-1)
Former Small Arms Range
Tetlin National Wildlife Refuge, AK

Sample Location	Sample ID No.	Sample Date	Sample Description	Depth (in bgs)	Field Screening Results 9/23/2015					Analytical Laboratory Results				
					XRF (ppm)					Metals by Method 6010c (mg/kg)				
					Lead	Antimony	Arsenic	Copper	Zinc	Lead	Antimony	Arsenic	Copper	Zinc
BG1	BG1-6	9/22/2015	NW Background Area (Trail)	0 - 6	9U	58U	**8**	**28**	**37**	**10.8**	4.7U	**12.4**	**60.2**	**52.1**
BG2	BG2-6	9/22/2015	NW Background Area (Trail)	0 - 6	8U	56U	**10**	**34**	**48**	**10.0**	--	--	--	--
BG3	BG3-6	9/22/2015	NW Background Area (Trail)	0 - 6	9U	56U	**10**	**42**	**37**	**9.4**	4.2U	**9.4**	**46.2**	**44.4**
BG3	BG3-6X	9/22/2015	Field Duplicate	0 - 6	--	--	--	--	--	**8.6**	4.3U	**9.0**	**47.0**	**46.6**
BG4	BG4-6	9/22/2015	NW Background Area (Trail)	0 - 6	9U	54U	**11**	**23**	**54**	**9.9**	--	--	--	--
BG5	BG5-6	9/22/2015	NW Background Area (Trail)	0 - 6	9U	60U	**17**	**31**	**54**	**9.7**	4.3U	**9.9**	**50.5**	**64.1**
BG6	BG6-6	9/22/2015	NE Background Area (Slope)	0 - 6	9U	62U	8U	**27**	**43**	**9.0**	--	--	--	--
BG7	BG7-6	9/22/2015	NE Background Area (Slope)	0 - 6	10U	65U	**10**	21U	**54**	**8.0**	4.1U	**8.5**	**48.4**	**58.9**
BG8	BG8-6	9/22/2015	NE Background Area (Slope)	0 - 6	9U	57U	**15**	**25**	**39**	**7.7**	--	--	--	--
BG9	BG9-6	9/22/2015	NE Background Area (Slope)	0 - 6	10U	60U	8 U	**30**	**43**	**7.6**	4.3U	**9.5**	**46.4**	**54.3**
BG10	BG10-6	9/22/2015	NE Background Area (Slope)	0 - 6	10U	62U	**11**	**25**	**39**	**7.9**	--	--	--	--

Notes:

1) See Figure 1 for Background Sample Locations

2) Sample "BG1-6" = background sample location 1 - sample depth in inches

3) **Bold** indicates a sample detection

4) Acronyms and abbreviations:

-- = Not analyzed
bgs = below ground surface
DU = Decision Unit
in = inches
ID = identification
mg/kg = milligrams per kilogram
na = not applicable or not available
No. = number
ppm = parts per million
U = Not detected above indicated detection limit
x = duplicate sample
XRF = X-Ray Fluorescence

Table 2
Field Screening and Soil Analytical Results of Impact Berm (DU-2)
Former Small Arms Range
Tetlin National Wildlife Refuge, AK

Sample Grid Location	Transect	Sample ID	Sample Date	Sample Description	Depth (in bgs)	Field Screening Results					Analytical Laboratory Results									
						XRF (ppm)					Metals by EPA Method 6010c (mg/kg)					TCLP by EPA Method EPA 6010c (mg/L)				
						Lead	Antimony	Arsenic	Copper	Zinc	Lead	Antimony	Arsenic	Copper	Zinc	Lead	Antimony	Arsenic	Copper	Zinc
G1	T1	G1-T1-6	9/24/2015	Composite of 3 locations on face of berm (0 - 6")	0 - 6	11 U	71 U	13	37	77	--	--	--	--	--	--	--	--	--	--
G2	T1	G2-T1-6	9/24/2015	Composite of 3 locations on face of berm (0 - 6")	0 - 6	3 U	68 U	16	56	75	--	--	--	--	--	--	--	--	--	--
G3	T1	G3-T1-6	9/24/2015	Composite of 3 locations on face of berm (0 - 6")	0 - 6	31	66 U	9 U	34	72	27.6J	--	--	--	--	--	--	--	--	--
G4	T1	G4-T1-6	9/24/2015	Composite of 3 locations on face of berm (0 - 6")	0 - 6	100	63 U	17	40	81	176J	3.8 U	9.5	45.9	61.7	1.02	0.10 U	0.05 U	0.10 U	1.0 U
G5	T1	G5-T1-6	9/24/2015	Composite of 3 locations on face of berm (0 - 6")	0 - 6	63	63 U	14	32	67	480J	--	--	--	--	--	--	--	--	--
G6	T1	G6-T1-6	9/24/2015	Composite of 3 locations on face of berm (0 - 6")	0 - 6	904	65 U	47	64	76	702J	4.7J	7.7	60.8	73.0	32.0	0.21	0.05 U	0.10 U	1.0 U
G6	T1	G6-T1-6x	9/24/2015	Field Duplicate	0 - 6	--	--	--	--	--	878J	7.5J	7.4	59.1	72.5	41.1	0.13	0.05 U	0.14	1.0 U
G7	T1	G7-T1-6	9/24/2015	Composite of 3 locations on face of berm (0 - 6")	0 - 6	333	65 U	38	49	75	447J	3.8 U	8.8	62.5	63.3	0.85	0.10 U	0.05 U	0.10 U	1.0 U
G7	T1	G7-T1-6x	9/24/2015	Field Duplicate	0 - 6	--	--	--	--	--	430J	--	--	--	--	--	--	--	--	--
G8	T1	G8-T1-6	9/24/2015	Composite of 3 locations on face of berm (0 - 6")	0 - 6	228	67 U	19 U	63	67	15,200J	291J	12.1	133.0	66.1	2.96	0.10 U	0.05 U	0.10 U	1.0 U
G9	T1	G9-T1-6	9/24/2015	Composite of 3 locations on face of berm (0 - 6")	0 - 6	69	64 U	11 U	31	77	1,220J	5.3J	8.8	50.6	71.0	0.53	0.10 U	0.05 U	0.10 U	1.0 U
G10	T1	G10-T1-6	9/24/2015	Composite of 3 locations on face of berm (0 - 6")	0 - 6	304	65 U	21 U	32	73	92.7J	3.8 U	8.2	36.6	66.4	0.42	0.10 U	0.05 U	0.10 U	1.0 U
G11	T1	G11-T1-6	9/24/2015	Composite of 3 locations on face of berm (0 - 6")	0 - 6	24	67 U	12	37	49	--	--	--	--	--	--	--	--	--	--
G12	T1	G12-T1-6	9/24/2015	Composite of 3 locations on face of berm (0 - 6")	0 - 6	19	72 U	24	22 U	108	--	--	--	--	--	--	--	--	--	--
G13	T1	G13-T1-6	9/24/2015	Composite of 3 locations on face of berm (0 - 6")	0 - 6	74	66 U	12 U	24	73	25.9J	3.8 U	8.2	38.8	70.0	0.05 U	0.10 U	0.05 U	0.10 U	1.0 U
G14	T1	G14-T1-6	9/24/2015	Composite of 3 locations on face of berm (0 - 6")	0 - 6	17	67 U	9 U	28	66	--	--	--	--	--	--	--	--	--	--
G15	T1	G15-T1-6	9/24/2015	Composite of 3 locations on face of berm (0 - 6")	0 - 6	14	65 U	9	19	72	--	--	--	--	--	--	--	--	--	--
G16	T1	G16-T1-6	9/24/2015	Composite of 3 locations on face of berm (0 - 6")	0 - 6	16	64 U	8 U	18 U	53	--	--	--	--	--	--	--	--	--	--
G17	T1	G17-T1-6	9/24/2015	Composite of 3 locations on face of berm (0 - 6")	0 - 6	54	71 U	32	25	77	26.8J	--	--	--	--	--	--	--	--	--
G1	T2	G1-T2-12	9/24/2015	Composite of 3 locations in berm at 6-12"	6 - 12	10 U	65 U	16	35	78	--	--	--	--	--	--	--	--	--	--
G2	T2	G2-T2-12	9/24/2015	Composite of 3 locations in berm at 6-12"	6 - 12	10 U	64 U	9	46	68	--	--	--	--	--	--	--	--	--	--
G3	T2	G3-T2-12	9/24/2015	Composite of 3 locations in berm at 6-12"	6 - 12	11 U	68 U	9 U	39	64	--	--	--	--	--	--	--	--	--	--
G4	T2	G4-T2-12	9/24/2015	Composite of 3 locations in berm at 6-12"	6 - 12	108	69 U	14 U	21 U	77	196J	3.8 U	9.3	38.8J	50.8	--	--	--	--	--
G4	T2	G4-T2-12x	9/24/2015	Field Duplicate	6 - 12	--	--	--	--	--	912J	--	--	--	--	--	--	--	--	--
G5	T2	G5-T2-12	9/24/2015	Composite of 3 locations in berm at 6-12"	6 - 12	20	72 U	10 U	45	92	20.4J	--	--	--	--	--	--	--	--	--
G6	T2	G6-T2-12	9/24/2015	Composite of 3 locations in berm at 6-12"	6 - 12	13	68 U	9	21 U	75	--	--	--	--	--	--	--	--	--	--
G7	T2	G7-T2-12	9/24/2015	Composite of 3 locations in berm at 6-12"	6 - 12	10 U	66 U	12	39	71	--	--	--	--	--	--	--	--	--	--
G8	T2	G8-T2-12	9/24/2015	Composite of 3 locations in berm at 6-12"	6 - 12	13	65 U	11	35	71	102J	--	--	--	--	--	--	--	--	--
G9	T2	G9-T2-12	9/24/2015	Composite of 3 locations in berm at 6-12"	6 - 12	10 U	64 U	16	19 U	70	--	--	--	--	--	--	--	--	--	--
G10	T2	G10-T2-12	9/24/2015	Composite of 3 locations in berm at 6-12"	6 - 12	11	67 U	11	29	67	16.8J	--	--	--	--	--	--	--	--	--
G11	T2	G11-T2-12	9/24/2015	Composite of 3 locations in berm at 6-12"	6 - 12	11 U	69 U	9 U	28	57	--	--	--	--	--	--	--	--	--	--
G12	T2	G12-T2-12	9/24/2015	Composite of 3 locations in berm at 6-12"	6 - 12	12 U	75 U	19	30	74	--	--	--	--	--	--	--	--	--	--
G13	T2	G13-T2-12	9/24/2015	Composite of 3 locations in berm at 6-12"	6 - 12	25	70 U	9 U	21 U	65	26.6J	--	--	--	--	--	--	--	--	--
G14	T2	G14-T2-12	9/24/2015	Composite of 3 locations in berm at 6-12"	6 - 12	11 U	71 U	9 U	20 U	62	--	--	--	--	--	--	--	--	--	--
G15	T2	G15-T2-12	9/24/2015	Composite of 3 locations in berm at 6-12"	6 - 12	28	66 U	9 U	20 U	70	19.4J	--	--	--	--	--	--	--	--	--
G16	T2	G16-T2-12	9/24/2015	Composite of 3 locations in berm at 6-12"	6 - 12	10 U	66 U	9	19 U	94	--	--	--	--	--	--	--	--	--	--
G17	T2	G17-T2-12	9/24/2015	Composite of 3 locations in berm at 6-12"	6 - 12	10 U	67 U	8 U	36	73	--	--	--	--	--	--	--	--	--	--
G1	T3	G1-T3-24	9/24/2015	Composite of 3 locations in berm at 12-24"	12 - 24	12 U	71 U	14	27	68	--	--	--	--	--	--	--	--	--	--
G2	T3	G2-T3-24	9/24/2015	Composite of 3 locations in berm at 12-24"	12 - 24	11 U	67 U	14	31	102	--	--	--	--	--	--	--	--	--	--
G3	T3	G3-T3-24	9/24/2015	Composite of 3 locations in berm at 12-24"	12 - 24	10 U	68 U	10	41	44	--	--	--	--	--	--	--	--	--	--
G4	T3	G4-T3-24	9/24/2015	Composite of 3 locations in berm at 12-24"	12 - 24	65	66 U	12 U	21	58	705J	5.4J	9.0	39.1J	62.2	0.05 U	0.10 U	0.05 U	0.10 U	1.0 U
G5	T3	G5-T3-24	9/24/2015	Composite of 3 locations in berm at 12-24"	12 - 24	9 U	64 U	10	53	53	--	--	--	--	--	--	--	--	--	--
G6	T3	G6-T3-24	9/24/2015	Composite of 3 locations in berm at 12-24"	12 - 24	15	66 U	11	21	55	11J	--	--	--	--	--	--	--	--	--
G7	T3	G7-T3-24	9/24/2015	Composite of 3 locations in berm at 12-24"	12 - 24	17	68 U	9 U	41	77	13J	--	--	--	--	--	--	--	--	--
G8	T3	G8-T3-24	9/24/2015	Composite of 3 locations in berm at 12-24"	12 - 24	28	69 U	10 U	35	58	28.2J	--	--	--	--	--	--	--	--	--
G9	T3	G9-T3-24	9/24/2015	Composite of 3 locations in berm at 12-24"	12 - 24	12	65 U	11	34	76	--	--	--	--	--	--	--	--	--	--
G10	T3	G10-T3-24	9/24/2015	Composite of 3 locations in berm at 12-24"	12 - 24	18	65 U	9 U	21	66	11.2J	--	--	--	--	--	--	--	--	--
G11	T3	G11-T3-24	9/24/2015	Composite of 3 locations in berm at 12-24"	12 - 24	11 U	76 U	17	22 U	121	--	--	--	--	--	--	--	--	--	--
G12	T3	G12-T3-24	9/24/2015	Composite of 3 locations in berm at 12-24"	12 - 24	12 U	64 U	11	43	58	--	--	--	--	--	--	--	--	--	--

Table 2
Field Screening and Soil Analytical Results of Impact Berm (DU-2)
Former Small Arms Range
Tetlin National Wildlife Refuge, AK

Sample Grid Location	Transect	Sample ID	Sample Date	Sample Description	Depth (in bgs)	Field Screening Results					Analytical Laboratory Results									
						XRF (ppm)					Metals by EPA Method 6010c (mg/kg)					TCLP by EPA Method EPA 6010c (mg/L)				
						Lead	Antimony	Arsenic	Copper	Zinc	Lead	Antimony	Arsenic	Copper	Zinc	Lead	Antimony	Arsenic	Copper	Zinc
G13	T3	G13-T3-24	9/24/2015	Composite of 3 locations in berm at 12-24"	12 - 24	11 U	71 U	**13**	**36**	**51**	--	--	--	--	--	--	--	--	--	--
G14	T3	G14-T3-24	9/24/2015	Composite of 3 locations in berm at 12-24"	12 - 24	**19**	65 U	9 U	**27**	**67**	**32.8J**	--	--	--	--	--	--	--	--	--
G15	T3	G15-T3-24	9/24/2015	Composite of 3 locations in berm at 12-24"	12 - 24	**13**	69 U	9 U	20 U	**82**	--	--	--	--	--	--	--	--	--	--
G16	T3	G16-T3-24	9/24/2015	Composite of 3 locations in berm at 12-24"	12 - 24	**12**	63 U	8 U	18 U	**58**	--	--	--	--	--	--	--	--	--	--
G17	T3	G17-T3-24	9/24/2015	Composite of 3 locations in berm at 12-24"	12 - 24	**13**	67 U	8 U	**37**	**69**	--	--	--	--	--	--	--	--	--	--

Notes:

1) See Figure 2 for Impact Berm Sample Locations

2) Sample "G1-T1-6" = grid location - transect number - sample depth in inches

3) **Bold** indicates a sample detection

4) Acronyms and abbreviations:

-- = Not analyzed
bgs = below ground surface
DU = Decision Unit
EPA = environmental protection agency
in = inches
ID = identification
J = estimated value
mg/kg = milligrams per kilogram
na = not applicable or not available
No. = number
ppm = parts per million
TCLP = toxicity characteristic leaching procedure
U = Not detected above indicated detection limit
x = duplicate sample
XRF = X-Ray Fluorescence

Table 3
Field Screening and Soil Analytical Results of Range Floor Samples (DU-3)
Former Small Arms Range
Tetlin National Wildlife Refuge, AK

Sample Grid Location	Sample ID No.	Sample Date	Sample Description	Depth (in bgs)	Field Screening Results					Analytical Laboratory Results				
					XRF (ppm)					Metals by EPA Method 6010c (mg/kg)				
					Lead	Antimony	Arsenic	Copper	Zinc	Lead	Antimony	Arsenic	Copper	Zinc
A1	A1-6	9/23/2015	Composite of 5 locations in grid	0 - 6	15U	90U	12 U	29U	**51**	**16**	3.7U	**12.7**	**53.8**	**71.3**
A3	A3-6	9/23/2015	Composite of 5 locations in grid	0 - 6	**17**	64U	**14**	**266**	**52**	**18.9**	3.9U	**8.8**	**72.4**	**82.5**
A5	A5-6	9/23/2015	Composite of 5 locations in grid	0 - 6	10U	66U	8 U	20U	**50**	**9.7**	--	--	--	--
B2	B2-6	9/23/2015	Composite of 5 locations in grid	0 - 6	11U	68U	9 U	**38**	**49**	**17.1**	--	--	--	--
B4	B4-6	9/23/2015	Composite of 5 locations in grid	0 - 6	**12**	69U	**12**	**31**	**51**	**22.4**	--	--	--	--
C1	C1-6	9/23/2015	Composite of 5 locations in grid	0 - 6	11U	69U	**10**	**37**	**44**	**14.5**	--	--	--	--
C3	C3-6	9/23/2015	Composite of 5 locations in grid	0 - 6	11U	70U	**13**	**27**	**66**	**17.1**	--	--	--	--
C5	C5-6	9/23/2015	Composite of 5 locations in grid	0 - 6	**40**	65U	**12**	**32**	**66**	**27.2**	3.6U	**7.5**	**37.2**	**73.8**
C5	C5-6x	9/23/2015	Field Duplicate	0 - 6	--	--	--	--	--	**17.6**	3.6U	**8.4**	**26.7**	**71.5**
D2	D2-6	9/23/2015	Composite of 5 locations in grid	0 - 6	10U	65U	**12**	**22**	**63**	**11.7**	3.8U	**9.2**	**47.7**	**67.1**
D4	D4-6	9/23/2015	Composite of 5 locations in grid	0 - 6	10U	65U	**14**	**39**	**43**	**--**	--	--	--	--
E1	E1-6	9/23/2015	Composite of 5 locations in grid	0 - 6	10U	65U	**13**	**37**	**51**	**11.4**	--	--	--	--
E3	E3-6	9/23/2015	Composite of 5 locations in grid	0 - 6	**24**	68U	10 U	**22**	**55**	**20.9**	3.6U	**7.3**	**40.3**	**78.0**
E3	E3-6X	9/23/2015	Field Duplicate	0 - 6	--	--	--	--	--	**25.6**	--	--	--	--
F2	F2-6	9/23/2015	Composite of 5 locations in grid	0 - 6	**19**	65U	8U	**47**	**41**	**49.2**	4U	**11.5**	**45.5**	**75.5**
C5	C5-12	9/23/2015	Composite of 5 locations in grid	6 - 12	10U	73U	8U	21U	**39**	**11.7**	--	--	--	--
E3	E3-12	9/23/2015	Composite of 5 locations in grid	6 - 12	**43**	65U	10U	20U	**64**	**58.1**	3.7U	**7.5**	**39.5**	**106**
E3	E3-12x	9/23/2015	Field Duplicate	6 - 12	--	--	--	--	--	**40.6**	3.7U	**7.2**	**36**	**108**
C5	C5-24	9/23/2015	Composite of 5 locations in grid	12 - 24	10U	67U	8U	**26**	**52**	**15.3**	3.5U	3.5U	**36.9**	**86.4**
E3	E3-24	9/23/2015	Composite of 5 locations in grid	12 - 24	15U	87U	**29**	27U	**89**	**20.6**	--	--	--	--
E3	E3-24x	9/23/2015	Field Duplicate	12 - 24	--	--	--	--	--	**23.8**	3.7U	**6.8**	**42.8**	**72.7**
A1	BDYA1-6	9/23/2015	East Boundary Confirmation Samples	0 - 6	11U	68U	**23**	**50**	**76**	**12.5**	--	--	--	--
A2	BDYA2-6	9/23/2015	North Boundary Confirmation Samples	0 - 6	11U	68U	**11**	**51**	**82**	**19.9**	--	--	--	--
A4	BDYA4-6	9/23/2015	North Boundary Confirmation Samples	0 - 6	11U	**348**	34U	**117**	**108**	**33.1**	--	--	--	--
A5	BDYA5-6	9/23/2015	West Boundary Confirmation Samples	0 - 6	42U	**402**	34U	**164**	**129**	**11.5**	--	--	--	--
C1	BDYC1-6	9/23/2015	East Boundary Confirmation Samples	0 - 6	10U	65U	**10**	**35**	**66**	--	--	--	--	--
C5	BDYC5-6	9/23/2015	West Boundary Confirmation Samples	0 - 6	45U	**349**	34U	100U	**128**	**27.9**	--	--	--	--
E1	BDYE1-6	9/23/2015	East Boundary Confirmation Samples	0 - 6	9U	61U	**10**	**48**	**61**	**9.0**	--	--	--	--

Notes:

1) See Figure 2 for Range Floor Sample Locations

2) Sample "A1-6" = sample grid location - sample depth in inches

3) **Bold** indicates a sample detection

4) Acronyms and abbreviations:

-- = Not analyzed
bgs = below ground surface
DU = Decision Unit
in = inches
ID = identification
mg/kg = milligrams per kilogram
na = not applicable or not available
No. = number
ppm = parts per million
U = Not detected above indicated detection limit
x = duplicate sample
XRF = X-Ray Fluorescence

APPENDIX A

Laboratory Analytical Data

ALS Environmental
ALS Group USA, Corp
1317 South 13th Avenue
Kelso, WA 98626
T : +1 360 577 7222
F : +1 360 636 1068
www.alsglobal.com

October 29, 2015

Analytical Report for Service Request No: K1510796

Orval Osborne
Oneida Total Integrated Enterprises (OTIE)
317 E. Main St.
Ventura, CA 93001

RE: Tetlin NWR Former Small Arms Range / 2015270

Dear Orval,

Enclosed are the results of the sample(s) submitted to our laboratory September 28, 2015
For your reference, these analyses have been assigned our service request number **K1510796.**

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3376. You may also contact me via email at gregory.salata@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Gregory Salata, Ph.D.
Client Services
Manager

ALS Environmental
ALS Group USA, Corp
1317 South 13th Avenue
Kelso, WA 98626
T : +1 360 577 7222
F : +1 360 636 1068
www.alsglobal.com

Table of Contents

Acronyms
Qualifiers
State Certifications, Accreditations, And Licenses
Case Narrative
Chain of Custody
Total Solids
Metals

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
E	The result is an estimate amount because the value exceeded the instrument calibration range.
J	The result is an estimated value.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.
H	The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

#	The control limit criteria is not applicable. See case narrative.
J	The result is an estimated value.
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
M	The duplicate injection precision was not met.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
S	The reported value was determined by the Method of Standard Additions (MSA).
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
+	The correlation coefficient for the MSA is less than 0.995.
Q	See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
A	A tentatively identified compound, a suspected aldol-condensation product.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
C	The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
D	The reported result is from a dilution.
E	The result is an estimated value.
J	The result is an estimated value.
N	The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
P	The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
Y	The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
Z	The chromatographic fingerprint does not resemble a petroleum product.

ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses

Agency	Web Site	Number
Alaska DEC UST	http://dec.alaska.gov/applications/eh/ehllabreports/USTLabs.aspx	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L14-51
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	Not available	-
Idaho DHW	http://www.healthandwelfare.idaho.gov/Health/Labs/CertificationDrinkingWaterLabs/tabid/1833/Default.aspx	-
ISO 17025	http://www.pjlabs.com/	L14-50
Louisiana DEQ	http://www.deq.louisiana.gov/portal/DIVISIONS/PublicParticipationandPermitSupport/LouisianaLaboratoryAccreditationProgram.aspx	03016
Maine DHS	Not available	WA01276
Michigan DEQ	http://www.michigan.gov/deq/0,1607,7-135-3307_4131_4156---,00.html	9949
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Montana DPHHS	http://www.dphhs.mt.gov/publichealth/	CERT0047
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/oqa/	WA005
North Carolina DWQ	http://www.dwqlab.org/	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/envserv/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wisconsin DNR	http://dnr.wi.gov/	998386840
Wyoming (EPA Region 8)	http://www.epa.gov/region8/water/dwhome/wyomingdi.html	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.

Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/anlayte is offered by that state.

Case Narrative

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

ALS ENVIRONMENTAL

Client:	Oneida Total Integrated Enterprises (OTIE)	**Service Request No.:**	K1510796
Project:	Tetlin NWR SAR/ 2015270	**Date Received:**	09/28/15
Sample Matrix:	Soil		

Case Narrative

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier III deliverables including summary forms for each of the analyses. When appropriate to the method, method blank results have been reported with each analytical test.

Sample Receipt

Fifteen soil samples were received for analysis at ALS Environmental on 09/28/15. The samples were received in good condition and consistent with the accompanying chain of custody form. The samples were stored in a refrigerator at 4ºC upon receipt at the laboratory.

Metals

Matrix Spike Recovery Exceptions:
Antimony recoveries are generally low for soil and sediment samples when digested using EPA Method 3050B. Despite anticipated low recoveries, the method is still generally prescribed because of its versatility for general metals analysis. Antimony results (in conjunction with the matrix spike recovery) from this procedure should only be used as indicators to estimate concentrations. The matrix spike recovery of Antimony for sample D2-6 was below the ALS control criterion. Since low recoveries resulted from a method defect and were possibly magnified by certain matrix components, no corrective action was appropriate. Alternative procedures that specifically target Antimony are available but were not specified for this project. The associated QA/QC results (e.g. control sample, calibration standards, etc.) indicated the analysis was in control.

No other anomalies associated with the analysis of these samples were observed.

Approved by_____

Chain of Custody

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Chain of Custody

K1510796

Shaded Areas For Internal Use Only — 1 of 2

OTIE
Oneida Total Integrated Enterprises

OTIE
317 East Main Street
Ventura, CA 93001
Phone: (805) 585-2110
Fax: (805) 585-2111

Report To:
Contact: Orval Osborne
Company: OTIE
Address: 317 East Main Street
Ventura, CA 93001
Phone: (805) 585-4313
E-Mail: oosborne@otie.com

Bill To:
Contact: Beth Weinfurt
Company: OTIE
Address: 1033 N. Mayfair Road, Suite 200
Milwaukee, WI 53226
Phone: (414) 607-6785
Fax: (414) 257-2492
PO#: _____
Quote: _____

Lab Lot #

Package Sealed Yes No	Samples Sealed Yes No
Received on Ice Yes No	Samples Intact Yes No
Temperature °C of Cooler	
Within Hold Time Yes No	Preserv. indicated Yes No NA
pH Check ok Yes No NA	Res. Cl_2 Check ok Yes No NA
Sample Labels and COC Agree Yes No COC not present	

Sampler Name: Mark Wanek
Signature: [signature]
Project Name: Tetlin NWR SAR
Project Number: 2015270
Lab: ALS, 1317 S. 13th Avenue Kelso, WA 98626
Lab PM: Greg Salata, 360-501-3376 Gregory.Salata@alsglobal.com
Date Required: NTAT

Laboratory ID	MS MSD	Client Sample ID	Sampling Date	Sampling Time	Mtx	Grab	Lead (total)	Sb, As, Cu, Pb, Zn (total)	Lead, TCLP	Sb, As, Cu, Pb, Zn (TCLP)							Additional Analyses / Remarks
		D2-6	9/23/15	1150	S		X	X									
		~~D4-6~~	~~9/23/15~~	~~1200~~	~~S~~		~~X~~										
		E1-6	9/23/15	1210	S		X										
		E3-6	9/23/15	1220	S		X	X									
		E3-12	9/23/15	1230	S		X	X									
		E3-24	9/23/15	1240	S		X										
		E3-6X	9/23/15	1250	S		X										
		E3-12X	9/23/15	1300	S		X	X									
		E3-24X	9/23/15	1310	S		X	X									
		F2-6	9/23/15	1320	S		X	X									
		BDYA1-6	9/23/15	0830	S		X										

RELINQUISHED BY	COMPANY	DATE	TIME	RECEIVED BY	COMPANY	DATE	TIME
[signature]	OTIE	9/26/15		Kelly Reed	ALS	9/28/15	09:00
RELINQUISHED BY	COMPANY	DATE	TIME	RECEIVED BY	COMPANY	DATE	TIME

Matrix Key
S = Soil
SE = Sediment
SL = Sludge
SO = Solid
MS = Miscellaneous
WW = Wastewater
OL = Oil
W = Water
A = Air

Container Key
1. Plastic
2. VOA Vial
3. Amber Glass
4. Widemouth Glass
5. Other

Preservative Key
1. HCl, Cool to 4°
2. H2SO4, Cool to 4°
3. HNO3, Cool to 4°
4. Cool to 4°
5. None

COMMENTS: Hold samples after analysis.
Do not dispose of samples until client notifies lab.
Sb=Antimony. As=Arsenic. Cu=Copper. Pb=Lead.
Zn = Zinc

Date Received / /
Courier: Hand Delivered ☐
Bill of Lading:

Chain of Custody

OTIE
Oneida Total Integrated Enterprises

OTIE
317 East Main Street
Ventura, CA 93001
Phone: (805) 585-2110
Fax: (805) 585-2111

Report To:
Contact: Orval Osborne
Company: OTIE
Address: 317 East Main Street
Ventura, CA 93001
Phone: (805) 585-4313
E-Mail: oosborne@otie.com

Bill To: K510796
Contact: Beth Weinfurt
Company: OTIE
Address: 1033 N. Mayfair Road, Suite 200
Milwaukee, WI 53226
Phone: (414) 607-6785
Fax: (414) 257-2492
PO#: _____
Quote: _____

Shaded Areas For Internal Use Only 1 of 3

Lab Lot #

Package Sealed Yes No	Samples Sealed Yes No
Received on Ice Yes No	Samples Intact Yes No
Temperature °C of Cooler	
Within Hold Time Yes No	Preserv. indicated Yes No NA
pH Check ok Yes No NA	Res. Cl_2 Check ok Yes No NA
Sample Labels and COC Agree Yes No COC not present	

Sampler Name: Mark Wanek
Signature: Mark Wanek
Project Name: Tetlin NWR SAR
Project Number: 2015270
Lab: ALS, 1317 S. 13th Avenue Kelso, WA 98626
Lab PM: Greg Salata, 360-501-3376 Gregory.Salata@alsglobal.com
Date Required: NTAT

Laboratory ID	MS MSD	Client Sample ID	Sampling Date	Sampling Time	Mtx	Grab	Lead (total)	Sb, As, Cu, Pb, Zn (total)	Lead, TCLP	Sb, As, Cu, Pb, Zn (TCLP)							Additional Analyses / Remarks
		BDYE1-6	9/23/15	0840	S		X										
		BDYA2-6	9/23/15	0850	S		X										
		BDYA4-6	9/23/15	0900	S		X										
		BDYA5-6	9/23/15	0910	S		X										
		BDYC5-6	9/23/15	0920	S		X										

RELINQUISHED BY	COMPANY	DATE	TIME	RECEIVED BY	COMPANY	DATE	TIME
Mark Wanek	OTIE	9/26/15		Kelly Reed	ALS	9/28/15	09:00
RELINQUISHED BY	COMPANY	DATE	TIME	RECEIVED BY	COMPANY	DATE	TIME

Matrix Key
S = Soil
SL = Sludge
MS = Miscellaneous
OL = Oil
A = Air
SE = Sediment
SO = Solid
WW = Wastewater
W = Water

Container Key
1. Plastic
2. VOA Vial
3. Amber Glass
4. Widemouth Glass
5. Other

Preservative Key
1. HCl, Cool to 4°
2. H2SO4, Cool to 4°
3. HNO3, Cool to 4°
4. Cool to 4°
5. None

COMMENTS: Hold samples after analysis.
Do not dispose of samples until client notifies lab.
Sb=Antimony. As=Arsenic. Cu=Copper. Pb=Lead.
Zn = Zinc

Date Received / /
Courier: Hand Delivered ☐
Bill of Lading:

PC Greg

Cooler Receipt and Preservation Form

Client / Project: OTIE Service Request K15 10796

Received: 9/28/15 Opened: 9/28/15 By: KR Unloaded: 9/28/15 By: KR

1. Samples were received via? *Mail* *Fed Ex* *UPS* *DHL* *PDX* *Courier* *Hand Delivered*
2. Samples were received in: (circle) *Cooler* *Box* *Envelope* *Other*_____ *NA*
3. Were custody seals on coolers? NA Y N If yes, how many and where?_____

   If present, were custody seals intact? Y N If present, were they signed and dated? Y N

Raw Cooler Temp	Corrected Cooler Temp	Raw Temp Blank	Corrected Temp Blank	Corr. Factor	Thermometer ID	Cooler/COC ID NA	Tracking Number NA	Filed
15.6	15.7	—	—	+0.1	357	1 of 4	781403862069	
14.5	14.7	—	—	+0.2	371	2 of	781403862058	
15.0	15.1	—	—	+0.1	365	3 of 4	781403862070	
15.4	15.3	—	—	-0.1	354	4 of 4	808626357441	

4. Packing material: *Inserts* *Baggies* *Bubble Wrap* *Gel Packs* *Wet Ice* *Dry Ice* *Sleeves* large plastic bag
5. Were custody papers properly filled out (ink, signed, etc.)? NA Y N
6. Did all bottles arrive in good condition (unbroken)? *Indicate in the table below.* NA Y N
7. Were all sample labels complete (i.e analysis, preservation, etc.)? NA Y N
8. Did all sample labels and tags agree with custody papers? *Indicate major discrepancies in the table on page 2.* NA Y N
9. Were appropriate bottles/containers and volumes received for the tests indicated? NA Y N
10. Were the pH-preserved bottles (*see SMO GEN SOP*) received at the appropriate pH? *Indicate in the table below* NA Y N
11. Were VOA vials received without headspace? *Indicate in the table below.* NA Y N
12. Was C12/Res negative? NA Y N

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count Bottle Type	Out of Temp	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, & Resolutions:_____

***Page*_____*of*_____**

Total Solids

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	Oneida Total Integrated Enterprises (OTIE)	**Service Request:**	K1510796
Project:	Tetlin NWR Former Small Arms Range/2015270	**Date Collected:**	09/23/15
Sample Matrix:	Soil	**Date Received:**	09/28/15
Analysis Method:	160.3 Modified	**Units:**	Percent
Prep Method:	None	**Basis:**	As Received

Solids, Total

Sample Name	Lab Code	Result	MRL	Dil.	Date Analyzed	Q
D2-6	K1510796-001	**87.1**	-	1	10/06/15 19:10	
E1-6	K1510796-002	**84.0**	-	1	10/06/15 19:10	
E3-6	K1510796-003	**87.1**	-	1	10/06/15 19:10	
E3-12	K1510796-004	**90.4**	-	1	10/06/15 19:10	
E3-24	K1510796-005	**92.0**	-	1	10/06/15 19:10	
E3-6X	K1510796-006	**86.7**	-	1	10/06/15 19:10	
E3-12X	K1510796-007	**90.4**	-	1	10/06/15 19:10	
E3-24X	K1510796-008	**91.9**	-	1	10/06/15 19:10	
F2-6	K1510796-009	**82.8**	-	1	10/06/15 19:10	
BDYA1-6	K1510796-010	**90.1**	-	1	10/06/15 19:10	
BDYE1-6	K1510796-011	**82.1**	-	1	10/06/15 19:10	
BDYA2-6	K1510796-012	**89.0**	-	1	10/06/15 19:10	
BDYA4-6	K1510796-013	**86.2**	-	1	10/06/15 19:10	
BDYA5-6	K1510796-014	**86.5**	-	1	10/06/15 19:10	
BDYC5-6	K1510796-015	**89.4**	-	1	10/06/15 19:10	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	Oneida Total Integrated Enterprises (OTIE)	**Service Request:**	K1510796
Project	Tetlin NWR Former Small Arms Range/2015270	**Date Collected:**	09/23/15
Sample Matrix:	Soil	**Date Received:**	09/28/15
		Date Analyzed:	10/06/15

Replicate Sample Summary
General Chemistry Parameters

Sample Name:	F2-6	**Units:**	Percent
Lab Code:	K1510796-009	**Basis:**	As Received

Analyte Name	Analysis Method	MRL	Sample Result	Duplicate Sample K1510796-009DUP Result	Average	RPD	RPD Limit
Solids, Total	160.3 Modified	-	82.8	82.6	82.7	<1	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Metals

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Metals
- 1 -
INORGANIC ANALYSIS DATA PACKAGE

Client: Oneida Total Integrated Enterpri
Service Request: K1510796
Project No.: 2015270
Date Collected: 9/23/2015
Project Name: Tetlin NWR Former Small Arms Ran
Date Received: 9/28/2015
Matrix: SOIL
Units: mg/Kg
Basis: DRY

Sample Name: D2-6
Lab Code: K1510796-001

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	6010C	3.8	2.0	10/22/15	10/26/15	3.8	U	N
Arsenic	6010C	3.8	2.0	10/22/15	10/26/15	9.2		
Copper	6010C	0.8	2.0	10/22/15	10/26/15	47.7		
Lead	6010C	1.9	2.0	10/22/15	10/26/15	11.7		
Zinc	6010C	0.96	2.0	10/22/15	10/26/15	67.1		

% Solids: 87.1

Comments:

Metals
- 1 -
INORGANIC ANALYSIS DATA PACKAGE

Client:	Oneida Total Integrated Enterpri	**Service Request:**	K1510796
Project No.:	2015270	**Date Collected:**	9/23/2015
Project Name:	Tetlin NWR Former Small Arms Ran	**Date Received:**	9/28/2015
Matrix:	SOIL	**Units:**	mg/Kg
		Basis:	DRY

Sample Name: E1-6 **Lab Code:** K1510796-002

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Lead	6010C	2.0	2.0	10/22/15	10/26/15	11.4		

% Solids: 84.0

Comments:

Metals
- 1 -
INORGANIC ANALYSIS DATA PACKAGE

Client:	Oneida Total Integrated Enterpri	**Service Request:**	K1510796
Project No.:	2015270	**Date Collected:**	9/23/2015
Project Name:	Tetlin NWR Former Small Arms Ran	**Date Received:**	9/28/2015
Matrix:	SOIL	**Units:**	mg/Kg
		Basis:	DRY

Sample Name: E3-6 **Lab Code:** K1510796-003

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	6010C	3.6	2.0	10/22/15	10/26/15	3.6	U	N
Arsenic	6010C	3.6	2.0	10/22/15	10/26/15	7.3		
Copper	6010C	0.7	2.0	10/22/15	10/26/15	40.3		
Lead	6010C	1.8	2.0	10/22/15	10/26/15	20.9		
Zinc	6010C	0.90	2.0	10/22/15	10/26/15	78.0		

% Solids: 87.1

Comments:

Metals
- 1 -
INORGANIC ANALYSIS DATA PACKAGE

Client:	Oneida Total Integrated Enterpri	**Service Request:**	K1510796
Project No.:	2015270	**Date Collected:**	9/23/2015
Project Name:	Tetlin NWR Former Small Arms Ran	**Date Received:**	9/28/2015
Matrix:	SOIL	**Units:**	mg/Kg
		Basis:	DRY

Sample Name: E3-12 **Lab Code:** K1510796-004

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	6010C	3.7	2.0	10/22/15	10/26/15	3.7	U	N
Arsenic	6010C	3.7	2.0	10/22/15	10/26/15	7.5		
Copper	6010C	0.7	2.0	10/22/15	10/26/15	39.5		
Lead	6010C	1.8	2.0	10/22/15	10/26/15	58.1		
Zinc	6010C	0.91	2.0	10/22/15	10/26/15	106		

% Solids: 90.4

Comments:

Metals
- 1 -
INORGANIC ANALYSIS DATA PACKAGE

Client:	Oneida Total Integrated Enterpri	**Service Request:**	K1510796
Project No.:	2015270	**Date Collected:**	9/23/2015
Project Name:	Tetlin NWR Former Small Arms Ran	**Date Received:**	9/28/2015
Matrix:	SOIL	**Units:**	mg/Kg
		Basis:	DRY

Sample Name: E3-24 **Lab Code:** K1510796-005

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Lead	6010C	1.7	2.0	10/22/15	10/26/15	20.6		

% Solids: 92.0

Comments:

Metals
- 1 -
INORGANIC ANALYSIS DATA PACKAGE

Client:	Oneida Total Integrated Enterpri	**Service Request:**	K1510796
Project No.:	2015270	**Date Collected:**	9/23/2015
Project Name:	Tetlin NWR Former Small Arms Ran	**Date Received:**	9/28/2015
Matrix:	SOIL	**Units:**	mg/Kg
		Basis:	DRY

Sample Name: E3-6X **Lab Code:** K1510796-006

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Lead	6010C	1.9	2.0	10/22/15	10/26/15	25.6		

% Solids: 86.7

Comments:

Metals
- 1 -
INORGANIC ANALYSIS DATA PACKAGE

Client:	Oneida Total Integrated Enterpri	**Service Request:**	K1510796
Project No.:	2015270	**Date Collected:**	9/23/2015
Project Name:	Tetlin NWR Former Small Arms Ran	**Date Received:**	9/28/2015
Matrix:	SOIL	**Units:**	mg/Kg
		Basis:	DRY

Sample Name: E3-12X **Lab Code:** K1510796-007

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	6010C	3.7	2.0	10/22/15	10/26/15	3.7	U	N
Arsenic	6010C	3.7	2.0	10/22/15	10/26/15	7.2		
Copper	6010C	0.7	2.0	10/22/15	10/26/15	36.0		
Lead	6010C	1.9	2.0	10/22/15	10/26/15	40.6		
Zinc	6010C	0.93	2.0	10/22/15	10/26/15	108		

% Solids: 90.4

Comments:

Metals
- 1 -
INORGANIC ANALYSIS DATA PACKAGE

Client:	Oneida Total Integrated Enterpri	**Service Request:**	K1510796
Project No.:	2015270	**Date Collected:**	9/23/2015
Project Name:	Tetlin NWR Former Small Arms Ran	**Date Received:**	9/28/2015
Matrix:	SOIL	**Units:**	mg/Kg
		Basis:	DRY

Sample Name: E3-24X **Lab Code:** K1510796-008

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	6010C	3.7	2.0	10/22/15	10/26/15	3.7	U	N
Arsenic	6010C	3.7	2.0	10/22/15	10/26/15	6.8		
Copper	6010C	0.7	2.0	10/22/15	10/26/15	42.8		
Lead	6010C	1.8	2.0	10/22/15	10/26/15	23.8		
Zinc	6010C	0.91	2.0	10/22/15	10/26/15	72.7		

% Solids: 91.9

Comments:

Metals
- 1 -
INORGANIC ANALYSIS DATA PACKAGE

Client:	Oneida Total Integrated Enterpri	**Service Request:**	K1510796
Project No.:	2015270	**Date Collected:**	9/23/2015
Project Name:	Tetlin NWR Former Small Arms Ran	**Date Received:**	9/28/2015
Matrix:	SOIL	**Units:**	mg/Kg
		Basis:	DRY

Sample Name: F2-6 **Lab Code:** K1510796-009

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	6010C	4.0	2.0	10/22/15	10/26/15	4.0	U	N
Arsenic	6010C	4.0	2.0	10/22/15	10/26/15	11.5		
Copper	6010C	0.8	2.0	10/22/15	10/26/15	45.5		
Lead	6010C	2.0	2.0	10/22/15	10/26/15	49.2		
Zinc	6010C	1.0	2.0	10/22/15	10/26/15	75.5		

% Solids: 82.8

Comments:

Metals
- 1 -
INORGANIC ANALYSIS DATA PACKAGE

Client:	Oneida Total Integrated Enterpri	**Service Request:**	K1510796
Project No.:	2015270	**Date Collected:**	9/23/2015
Project Name:	Tetlin NWR Former Small Arms Ran	**Date Received:**	9/28/2015
Matrix:	SOIL	**Units:**	mg/Kg
		Basis:	DRY

Sample Name: BDYA1-6 **Lab Code:** K1510796-010

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Lead	6010C	1.9	2.0	10/22/15	10/26/15	12.5		

% Solids: 90.1

Comments:

Metals
- 1 -
INORGANIC ANALYSIS DATA PACKAGE

Client:	Oneida Total Integrated Enterpri	**Service Request:**	K1510796
Project No.:	2015270	**Date Collected:**	9/23/2015
Project Name:	Tetlin NWR Former Small Arms Ran	**Date Received:**	9/28/2015
Matrix:	SOIL	**Units:**	mg/Kg
		Basis:	DRY

Sample Name: BDYE1-6 **Lab Code:** K1510796-011

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Lead	6010C	2.0	2.0	10/22/15	10/26/15	9.0		

% Solids: 82.1

Comments:

Metals
- 1 -
INORGANIC ANALYSIS DATA PACKAGE

Client:	Oneida Total Integrated Enterpri	**Service Request:**	K1510796
Project No.:	2015270	**Date Collected:**	9/23/2015
Project Name:	Tetlin NWR Former Small Arms Ran	**Date Received:**	9/28/2015
Matrix:	SOIL	**Units:**	mg/Kg
		Basis:	DRY

Sample Name: BDYA2-6 **Lab Code:** K1510796-012

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Lead	6010C	1.8	2.0	10/22/15	10/26/15	19.9		

% Solids: 89.0

Comments:

Metals
- 1 -
INORGANIC ANALYSIS DATA PACKAGE

Client:	Oneida Total Integrated Enterpri	**Service Request:**	K1510796
Project No.:	2015270	**Date Collected:**	9/23/2015
Project Name:	Tetlin NWR Former Small Arms Ran	**Date Received:**	9/28/2015
Matrix:	SOIL	**Units:**	mg/Kg
		Basis:	DRY

Sample Name: BDYA4-6 **Lab Code:** K1510796-013

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Lead	6010C	1.8	2.0	10/22/15	10/26/15	33.1		

% Solids: 86.2

Comments:

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client:	Oneida Total Integrated Enterpri	**Service Request:**	K1510796
Project No.:	2015270	**Date Collected:**	9/23/2015
Project Name:	Tetlin NWR Former Small Arms Ran	**Date Received:**	9/28/2015
Matrix:	SOIL	**Units:**	mg/Kg
		Basis:	DRY

Sample Name: BDYA5-6 **Lab Code:** K1510796-014

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Lead	6010C	1.9	2.0	10/22/15	10/26/15	11.5		

% Solids: 86.5

Comments:

Metals
- 1 -
INORGANIC ANALYSIS DATA PACKAGE

Client:	Oneida Total Integrated Enterpri	**Service Request:**	K1510796
Project No.:	2015270	**Date Collected:**	9/23/2015
Project Name:	Tetlin NWR Former Small Arms Ran	**Date Received:**	9/28/2015
Matrix:	SOIL	**Units:**	mg/Kg
		Basis:	DRY

Sample Name: BDYC5-6 **Lab Code:** K1510796-015

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Lead	6010C	1.8	2.0	10/22/15	10/26/15	27.9		

% Solids: 89.4

Comments:

Metals
- 1 -
INORGANIC ANALYSIS DATA PACKAGE

Client: Oneida Total Integrated Enterpri
Service Request: K1510796
Project No.: 2015270
Date Collected:
Project Name: Tetlin NWR Former Small Arms Ran
Date Received:
Matrix: SOIL
Units: mg/Kg
Basis: DRY

Sample Name: Method Blank
Lab Code: KQ1512177-01

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	6010C	4.0	2.0	10/22/15	10/26/15	4.0	U	N
Arsenic	6010C	4.0	2.0	10/22/15	10/26/15	4.0	U	
Copper	6010C	0.8	2.0	10/22/15	10/26/15	0.8	U	
Lead	6010C	2.0	2.0	10/22/15	10/26/15	2.0	U	
Zinc	6010C	1.0	2.0	10/22/15	10/26/15	1.0	U	

% Solids: 100.0

Comments:

Metals
- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Oneida Total Integrated Enterpri **Service Request:** K1510796

Project No.: 2015270

Project Name: Tetlin NWR Former Small Arms Ran

ICV Source: Inorganic Ventures **CCV Source:** ALS MIXED

Concentration Units: ug/L

	Initial Calibration			Continuing Calibration					
Analyte	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	Method
Antimony	2500	2398	96	250	251	100	251	100	6010C
Arsenic	2500	2498	100	1000	1007	101	1013	101	6010C
Copper	625	590	94	250	253	101	252	101	6010C
Lead	2500	2408	96	250	251	100	252	101	6010C
Zinc	1250	1218	97	250	251	100	252	101	6010C

Metals
- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Oneida Total Integrated Enterpri **Service Request:** K1510796

Project No.: 2015270

Project Name: Tetlin NWR Former Small Arms Ran

ICV Source: Inorganic Ventures **CCV Source:** ALS MIXED

Concentration Units: ug/L

	Initial Calibration			Continuing Calibration					
Analyte	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	Method
Antimony				250	252	101	254	102	6010C
Arsenic				1000	1013	101	1017	102	6010C
Copper				250	251	100	253	101	6010C
Lead				250	251	100	250	100	6010C
Zinc				250	253	101	253	101	6010C

Metals
- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Oneida Total Integrated Enterpri **Service Request:** K1510796

Project No.: 2015270

Project Name: Tetlin NWR Former Small Arms Ran

ICV Source: Inorganic Ventures **CCV Source:** ALS MIXED

Concentration Units: ug/L

	Initial Calibration			Continuing Calibration					
Analyte	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	Method
Antimony				250	250	100	249	100	6010C
Arsenic				1000	1003	100	1006	101	6010C
Copper				250	250	100	250	100	6010C
Lead				250	250	100	248	99	6010C
Zinc				250	254	102	253	101	6010C

Metals
- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Oneida Total Integrated Enterpri **Service Request:** K1510796

Project No.: 2015270

Project Name: Tetlin NWR Former Small Arms Ran

ICV Source: Inorganic Ventures **CCV Source:** ALS MIXED

Concentration Units: ug/L

	Initial Calibration			Continuing Calibration					
Analyte	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	Method
Antimony				250	250	100			6010C
Arsenic				1000	1012	101			6010C
Copper				250	248	99			6010C
Lead				250	251	100			6010C
Zinc				250	252	101			6010C

Metals

- 2a -

LOW LEVEL INITIAL CALIBRATION AND LOW LEVEL CONTINUING CALIBRATION VERIFICATION

Client: Oneida Total Integrated Enterprises (OTIE) **SDG No.:** K1510796

Contract: 2015270 **Lab Code:** ALSK **Case No.:** **SAS No.:**

Initial Calibration Source: Inorganic Ventures

Continuing Calibration Source: ALS MIXED

Sample ID	Analyte	Result ug/L	True Value ug/L	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
LLICV1									
	Antimony	19.8	20.0	99	70.0 - 130.0	P	10/26/2015	09:15	102615AICP
	Arsenic	8.6	10.0	86	70.0 - 130.0	P	10/26/2015	09:15	102615AICP
	Copper	4.60	4.0	115	70.0 - 130.0	P	10/26/2015	09:15	102615AICP
	Lead	10.5	10.0	105	70.0 - 130.0	P	10/26/2015	09:15	102615AICP
	Zinc	4.2	4.0	105	70.0 - 130.0	P	10/26/2015	09:15	102615AICP
LLCCV1									
	Antimony	19.9	20.0	100	70.0 - 130.0	P	10/26/2015	10:29	102615AICP
	Arsenic	10.9	10.0	109	70.0 - 130.0	P	10/26/2015	10:29	102615AICP
	Copper	4.60	4.0	115	70.0 - 130.0	P	10/26/2015	10:29	102615AICP
	Lead	11.1	10.0	111	70.0 - 130.0	P	10/26/2015	10:29	102615AICP
	Zinc	4.2	4.0	105	70.0 - 130.0	P	10/26/2015	10:29	102615AICP
LLCCV2									
	Antimony	20.7	20.0	104	70.0 - 130.0	P	10/26/2015	11:09	102615AICP
	Arsenic	10.4	10.0	104	70.0 - 130.0	P	10/26/2015	11:09	102615AICP
	Copper	4.90	4.0	122	70.0 - 130.0	P	10/26/2015	11:09	102615AICP
	Lead	10.0	10.0	100	70.0 - 130.0	P	10/26/2015	11:09	102615AICP
	Zinc	4.3	4.0	108	70.0 - 130.0	P	10/26/2015	11:09	102615AICP
LLCCV3									
	Antimony	18.2	20.0	91	70.0 - 130.0	P	10/26/2015	13:13	102615AICP
	Arsenic	11.0	10.0	110	70.0 - 130.0	P	10/26/2015	13:13	102615AICP
	Copper	4.20	4.0	105	70.0 - 130.0	P	10/26/2015	13:13	102615AICP
	Lead	11.9	10.0	119	70.0 - 130.0	P	10/26/2015	13:13	102615AICP
	Zinc	4.5	4.0	112	70.0 - 130.0	P	10/26/2015	13:13	102615AICP

Metals

- 3 -

BLANKS

Client: Oneida Total Integrated Enterpri **Service Request:** K1510796

Project No.: 2015270

Project Name: Tetlin NWR Former Small Arms Ran

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): ug/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Method
Antimony	20.0	U	20.0	U	20.0	U	20.0	U	6010C
Arsenic	20.0	U	20.0	U	20.0	U	20.0	U	6010C
Copper	4.0	U	4.0	U	4.0	U	4.0	U	6010C
Lead	10.0	U	10.0	U	10.0	U	10.0	U	6010C
Zinc	5.00	U	5.00	U	5.00	U	5.00	U	6010C

Metals

- 3 -

BLANKS

Client: Oneida Total Integrated Enterpri **Service Request:** K1510796

Project No.: 2015270

Project Name: Tetlin NWR Former Small Arms Ran

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): ug/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Method
Antimony			20.0	U	20.0	U	20.0	U	6010C
Arsenic			20.0	U	20.0	U	20.0	U	6010C
Copper			4.0	U	4.0	U	4.0	U	6010C
Lead			10.0	U	10.0	U	10.0	U	6010C
Zinc			5.00	U	5.00	U	5.00	U	6010C

Metals

- 3 -

BLANKS

Client: Oneida Total Integrated Enterpri **Service Request:** K1510796

Project No.: 2015270

Project Name: Tetlin NWR Former Small Arms Ran

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): ug/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Method
Antimony			20.0	U					6010C
Arsenic			20.0	U					6010C
Copper			4.0	U					6010C
Lead			10.0	U					6010C
Zinc			5.00	U					6010C

Metals

- 4 -

ICP INTERFERENCE CHECK SAMPLE

Client: Oneida Total Integrated Enterpri **Service Request:** K1510796

Project No.: 2015270

Project Name: Tetlin NWR Former Small Arms Ran

ICP ID Number: K-ICP-AES-03 **ICS Source:** Inorganic Ventures

Concentration Units): ug/L

Analyte	True		Initial Found			Final Found		
	Sol.A	Sol.AB	Sol.A	Sol.AB	%R	Sol.A	Sol.AB	%R
Antimony		1000	12	842	84			
Arsenic			3	-2				
Copper		500	-1	436	87			
Lead		1000	-11	827	83			
Zinc		1000	1	877	88			

Metals

- 5A -

SPIKE SAMPLE RECOVERY

Client: Oneida Total Integrated Enterpri **Service Request:** K1510796

Project No.: 2015270 **Units:** MG/KG

Project Name: Tetlin NWR Former Small Arms Ran **Basis:** DRY

Matrix: SOIL **% Solids:** 87.1

Sample Name: D2-6S **Lab Code:** K1510796-001S

Analyte	Control Limit %R	Spike Result	C	Sample Result	C	Spike Added	%R	Q	Method
Antimony	75 - 125	42.0		3.8	U	97.21	43	N	6010C
Arsenic	75 - 125	101		9.2		97.21	94		6010C
Copper	75 - 125	94.2		47.7		48.61	96		6010C
Lead	75 - 125	96.2		11.7		97.21	87		6010C
Zinc	75 - 125	154		67.1		97.21	89		6010C

An empty field in the Control Limit column indicates the control limit is not applicable

Metals

- 5B -
POST SPIKE SAMPLE RECOVERY

Client: Oneida Total Integrated Enterpri **Service Request:** K1510796

Project No.: 2015270 **Units:** UG/L

Project Name: Tetlin NWR Former Small Arms Ran **Basis:** DRY

Matrix: WATER

Sample Name: D2-6A **Lab Code:** K1510796-001A

Analyte	Control Limit %R	Spike Result	C	Sample Result	C	Spike Added	%R	Q	Method
Antimony	80 - 120	4437.0		20.0		5000	89		6010C
Arsenic	80 - 120	2388.0		48.3		2500	94		6010C
Copper	80 - 120	840.8		249.1		625	95		6010C
Lead	80 - 120	2191.0		60.9		2500	85		6010C
Zinc	80 - 120	1461.00		350.90		1250	89		6010C

Metals

- 6 -

DUPLICATES

Client: Oneida Total Integrated Enterpri **Service Request:** K1510796

Project No.: 2015270 **Units:** MG/KG

Project Name: Tetlin NWR Former Small Arms Ran **Basis:** DRY

Matrix: SOIL **% Solids:** 87.1

Sample Name: D2-6D **Lab Code:** K1510796-001D

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	Method
Antimony		3.8	U	3.7	U			6010C
Arsenic		9.2		8.8		4.4		6010C
Copper	20	47.7		49.8		4.3		6010C
Lead	20	11.7		12.2		4.2		6010C
Zinc	20	67.1		75.0		11.1		6010C

An empty field in the Control Limit column indicates the control limit is not applicable.

Metals

- 7 -

LABORATORY CONTROL SAMPLE

Client: Oneida Total Integrated Enterpri **Service Request:** K1510796

Project No.: 2015270

Project Name: Tetlin NWR Former Small Arms Ran

Aqueous LCS Source: **Solid LCS Source:** **ERA D080-540**

Analyte	Aqueous (ug/L) True	Aqueous (ug/L) Found	Aqueous (ug/L) %R	Solid (mg/kg) True	Solid (mg/kg) Found	Solid (mg/kg) C Limits		Solid (mg/kg) %R
Antimony				88.8	78.2	22	259	88
Arsenic				139	142	70	140	102
Copper				168	174	76	125	104
Lead				133	131	73	128	98
Zinc				189	191	70	131	101

Metals

- 9 -

ICP SERIAL DILUTIONS

Client: Oneida Total Integrated Enterpri **Service Request:** K1510796

Project No.: 2015270 **Units:** UG/L

Project Name: Tetlin NWR Former Small Arms Ran

Sample Name: D2-6L **Lab Code:** K1510796-001L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Differ-ence	Q	M
Antimony	20.0	U	100.0	U			P
Arsenic	48.3		100.0	U	100.0		P
Copper	249.1		262.0		5.2		P
Lead	60.9		72.0		18.2		P
Zinc	350.90		378.50		7.9		P

Metals

- 10 -

DETECTION LIMITS

Client: Oneida Total Integrated Enterpri **Service Request:** K1510796

Project No.: 2015270

Project Name: Tetlin NWR Former Small Arms Ran

ICP/ICP-MS ID #:

GFAA ID #: **AA ID #:**

Analyte	Wave-length (nm)	Back-ground	MRL ug/L	MDL ug/L	M
Antimony	206.8		20.0	20.0	P
Arsenic	189.0		20.0	20.0	P
Copper	327.3		4.0	4.0	P
Lead	220.3		10.0	10.0	P
Zinc	206.2		5.00	5.00	P

Comments:

Metals

- 11A -

ICP INTERELEMENT CORRECTION FACTORS

Client: Oneida Total Integrated Enterpri **Service Request:** K1510796

Project No.: 2015270

Project Name: Tetlin NWR Former Small Arms Ran

ICP ID Number: **K-ICP-AES-03**

Analyte	Wave-length (nm)	Interelement Correction Factors for: Al	Ca	Fe	Mg	B
Aluminum	394.401	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Antimony	217.581	0.0000000	0.0000000	-0.0009010	0.0000000	0.0000000
Arsenic	189.042	0.0000330	0.0000000	0.0000000	0.0000000	0.0000000
Barium	455.403	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	234.861	0.0000000	0.0000000	0.0000080	0.0000000	0.0000000
Boron	249.678	0.0000000	0.0000000	-0.0006800	0.0000000	0.0000000
Cadmium	226.502	0.0000000	0.0000000	0.0001570	0.0000000	0.0000000
Calcium	393.366	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.716	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cobalt	228.616	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Copper	327.396	0.0000000	0.0000160	0.0000000	0.0000000	0.0000000
Iron	259.94	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Lead	220.353	-0.0000780	0.0000000	0.0000590	0.0000000	0.0000000
Lithium	670.784	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Magnesium	285.213	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	257.61	0.0000000	0.0000000	0.0000120	0.0000370	0.0000000
Molybdenum	202.03	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.604	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Phosphorus	214.914	-0.0007840	0.0000000	0.0006520	0.0000000	0.0000000
Potassium	766.491	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.0	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silicon	251.611	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silver	328.068	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Sodium	589.592	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Strontium	407.771	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.856	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Tin	189.989	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Titanium	336.121	0.0000000	0.0000110	0.0000000	0.0000440	0.0000000
Vanadium	292.402	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000

Comments:

Metals

- 11A -

ICP INTERELEMENT CORRECTION FACTORS

Client: Oneida Total Integrated Enterpri **Service Request:** K1510796

Project No.: 2015270

Project Name: Tetlin NWR Former Small Arms Ran

ICP ID Number: **K-ICP-AES-03**

Zinc	213.856	0.0000000	0.0000000	0.0001170	0.0000000	0.0000000

Comments:

Metals

- 11B -

ICP INTERELEMENT CORRECTION FACTORS

Client: Oneida Total Integrated Enterpri **Service Request:** K1510796

Project No.: 2015270

Project Name: Tetlin NWR Former Small Arms Ran

ICP ID Number: **K-ICP-AES-03**

Analyte	Wave-length (nm)	Interelement Correction Factors for: Ba	Cd	Co	Cr	Cu
Aluminum	394.401	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Antimony	217.581	0.0000000	0.0000000	0.0000000	0.0004650	-0.0009350
Arsenic	189.042	0.0000000	0.0000000	0.0000000	0.0005140	0.0000000
Barium	455.403	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	234.861	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Boron	249.678	0.0000000	0.0000000	0.0025890	0.0003110	0.0000000
Cadmium	226.502	0.0000000	0.0000000	-0.0000110	0.0000330	0.0000000
Calcium	393.366	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.716	0.0000000	-0.0001480	0.0000000	0.0000000	0.0000000
Cobalt	228.616	-0.0001220	0.0000000	0.0000000	0.0000000	0.0000000
Copper	327.396	0.0000000	0.0000000	0.0002590	0.0000000	0.0000000
Iron	259.94	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Lead	220.353	0.0000000	0.0000000	0.0001270	0.0000000	0.0003500
Lithium	670.784	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Magnesium	285.213	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	257.61	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Molybdenum	202.03	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.604	0.0000000	0.0000000	-0.0001870	0.0000000	0.0000000
Phosphorus	214.914	0.0000000	-0.0015740	0.0000000	0.0000000	0.0052080
Potassium	766.491	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.0	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silicon	251.611	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silver	328.068	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Sodium	589.592	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Strontium	407.771	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.856	0.0000000	0.0000000	0.0031300	0.0003080	0.0000000
Tin	189.989	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Titanium	336.121	0.0000000	0.0000000	0.0000270	0.0000000	0.0000000
Vanadium	292.402	0.0000000	0.0000000	0.0000000	-0.0058770	0.0000000

Comments:

Metals

- 11B -

ICP INTERELEMENT CORRECTION FACTORS

Client: Oneida Total Integrated Enterpri **Service Request:** K1510796

Project No.: 2015270

Project Name: Tetlin NWR Former Small Arms Ran

ICP ID Number: **K-ICP-AES-03**

Zinc	213.856	0.0000000	0.0000000	0.0000000	0.0000000	0.0010410

Comments:

Metals

- 11B -

ICP INTERELEMENT CORRECTION FACTORS

Client: Oneida Total Integrated Enterpri **Service Request:** K1510796

Project No.: 2015270

Project Name: Tetlin NWR Former Small Arms Ran

ICP ID Number: **K-ICP-AES-03**

Analyte	Wave-length (nm)	Interelement Correction Factors for: Mn	Mo	Ni	Sb	Si
Aluminum	394.401	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Antimony	217.581	-0.0007640	0.0000000	0.0000000	0.0000000	0.0000000
Arsenic	189.042	-0.0002720	0.0015570	0.0000000	0.0000000	0.0000000
Barium	455.403	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	234.861	-0.0000630	-0.0004470	-0.0000170	0.0000000	0.0000000
Boron	249.678	0.0000000	-0.0019240	0.0000000	0.0000000	0.0000000
Cadmium	226.502	0.0000000	-0.0000110	-0.0000150	0.0000000	0.0000000
Calcium	393.366	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.716	0.0000000	0.0000620	0.0000000	0.0000000	0.0000000
Cobalt	228.616	0.0000000	-0.0012500	0.0001140	0.0000000	0.0000000
Copper	327.396	0.0000000	-0.0002610	0.0000000	0.0000000	0.0000000
Iron	259.94	0.0000000	-0.0002450	0.0000000	0.0000000	0.0000000
Lead	220.353	0.0000000	-0.0007250	0.0002650	0.0000000	0.0000000
Lithium	670.784	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Magnesium	285.213	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	257.61	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Molybdenum	202.03	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.604	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Phosphorus	214.914	-0.0006320	0.0105360	0.0000000	0.0000000	0.0000000
Potassium	766.491	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.0	0.0004420	0.0000000	0.0000000	0.0000000	0.0000000
Silicon	251.611	0.0000000	0.0731890	0.0000000	0.0000000	0.0000000
Silver	328.068	0.0001350	0.0001470	0.0000000	0.0000000	0.0000000
Sodium	589.592	0.0000000	0.0023580	0.0000000	0.0000000	0.0000000
Strontium	407.771	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.856	0.0006530	0.0000000	0.0000000	0.0000000	0.0000000
Tin	189.989	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Titanium	336.121	0.0000000	0.0000400	0.0001110	0.0000000	0.0000000
Vanadium	292.402	-0.0011210	-0.0000900	0.0000000	0.0000000	0.0000000

Comments:

Metals

- 11B -

ICP INTERELEMENT CORRECTION FACTORS

Client: Oneida Total Integrated Enterpri **Service Request:** K1510796

Project No.: 2015270

Project Name: Tetlin NWR Former Small Arms Ran

ICP ID Number: **K-ICP-AES-03**

Zinc	213.856	0.0000000	0.0000000	0.0056230	0.0000000	0.0000000

Comments:

Metals

- 11B -

ICP INTERELEMENT CORRECTION FACTORS

Client: Oneida Total Integrated Enterpri **Service Request:** K1510796

Project No.: 2015270

Project Name: Tetlin NWR Former Small Arms Ran

ICP ID Number: **K-ICP-AES-03**

Analyte	Wave-length (nm)	Interelement Correction Factors for: Ti	V			
Aluminum	394.401	0.0000000	0.0000000			
Antimony	217.581	0.0000000	0.0021710			
Arsenic	189.042	0.0000000	0.0001150			
Barium	455.403	0.0000000	0.0000000			
Beryllium	234.861	0.0000000	0.0000000			
Boron	249.678	0.0000000	-0.0005070			
Cadmium	226.502	0.0001270	0.0000000			
Calcium	393.366	0.0000000	0.0000000			
Chromium	267.716	0.0000000	-0.0000640			
Cobalt	228.616	0.0024440	0.0000000			
Copper	327.396	0.0001170	-0.0000910			
Iron	259.94	0.0000000	0.0000000			
Lead	220.353	0.0000000	0.0000000			
Lithium	670.784	0.0000000	0.0000000			
Magnesium	285.213	0.0000000	0.0000000			
Manganese	257.61	0.0000000	0.0000000			
Molybdenum	202.03	0.0000000	0.0000000			
Nickel	231.604	0.0000000	0.0000000			
Phosphorus	214.914	0.0000000	-0.0020860			
Potassium	766.491	0.0000000	0.0000000			
Selenium	196.0	0.0000000	0.0000000			
Silicon	251.611	0.0000000	0.0000000			
Silver	328.068	0.0000000	0.0000780			
Sodium	589.592	0.0000000	0.0000000			
Strontium	407.771	0.0000000	0.0000000			
Thallium	190.856	-0.0005060	0.0002630			
Tin	189.989	0.0000000	0.0000000			
Titanium	336.121	0.0000000	0.0000000			
Vanadium	292.402	0.0004260	0.0000000			

Comments:

Metals

- 11B -

ICP INTERELEMENT CORRECTION FACTORS

Client: Oneida Total Integrated Enterpri **Service Request:** K1510796

Project No.: 2015270

Project Name: Tetlin NWR Former Small Arms Ran

ICP ID Number: **K-ICP-AES-03**

Zinc	213.856	0.0000000	0.0000000			

Comments:

Metals
-12-
ICP LINEAR RANGES (QUARTERLY)

Client: Oneida Total Integrated Enterpri **Service Request:** K1510796

Project No.: 2015270

Project Name: Tetlin NWR Former Small Arms Ran

ICP ID Number: **K-ICP-AES-03**

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Antimony	15.000	90000	6010C
Arsenic	15.000	90000	6010C
Copper	15.000	90000	6010C
Lead	15.000	22500	6010C
Zinc	15.000	18000	6010C

Comments:

Metals
-13-
PREPARATION LOG

Client: Oneida Total Integrated Enterpri **Service Request:** K1510796

Project No.: 2015270

Project Name: Tetlin NWR Former Small Arms Ran

Method: P

Sample ID	Preparation Date	Initial Weight (g)	Final Volume(mL)
K1510796-001	10/22/2015	1.20	100.0
K1510796-001D	10/22/2015	1.23	100.0
K1510796-001S	10/22/2015	1.18	100.0
K1510796-002	10/22/2015	1.21	100.0
K1510796-003	10/22/2015	1.27	100.0
K1510796-004	10/22/2015	1.21	100.0
K1510796-005	10/22/2015	1.25	100.0
K1510796-006	10/22/2015	1.24	100.0
K1510796-007	10/22/2015	1.19	100.0
K1510796-008	10/22/2015	1.19	100.0
K1510796-009	10/22/2015	1.20	100.0
K1510796-010	10/22/2015	1.20	100.0
K1510796-011	10/22/2015	1.22	100.0
K1510796-012	10/22/2015	1.24	100.0
K1510796-013	10/22/2015	1.29	100.0
K1510796-014	10/22/2015	1.25	100.0
K1510796-015	10/22/2015	1.22	100.0
KQ1512177-01	10/22/2015	1.00	100.0
KQ1512177-02	10/22/2015	1.01	100.0

Metals
- 14 -

ANALYSIS RUN LOG

Client: Oneida Total Integrated Enterpri **Service Request:** K1510796

Project No.: 2015270 **Run Number:** 102615AICP03

Project Name: Tetlin NWR Former Small Arms Ran

Instrument ID Number: K-ICP-AES-03 **Method:** P

Start Date: 10/26/2015 **End Date:** 10/26/2015

Sample No.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
BLK	1.0	08:54			X	X							X		X											X	
STD A	1.0	08:56			X								X		X											X	
STD B	1.0	08:58				X																					
ICV1	1.0	09:01																									
ZZZZZZ	1.0	09:03																									
ICV1	1.0	09:07			X	X							X		X											X	
ICB1	1.0	09:09			X	X							X		X											X	
ZZZZZZ	1.0	09:13																									
LLICV1	1.0	09:15			X	X							X		X											X	
ZZZZZZ	1.0	09:18																									
ZZZZZZ	1.0	09:20																									
CCV1	1.0	09:23				X																					
CCV1	1.0	09:29			X								X		X											X	
CCB1	1.0	09:34			X	X							X		X											X	
ICS-A1	1.0	09:37			X	X							X		X											X	
ICS-AB1	1.0	09:39			X	X							X		X											X	
ZZZZZZ	1.0	09:42																									
CCV2	1.0	09:45				X																					
CCV2	1.0	09:47			X								X		X											X	
CCB2	1.0	09:50			X	X							X		X											X	
ZZZZZZ	1.0	09:56																									
ZZZZZZ	1.0	09:58																									
ZZZZZZ	1.0	10:00																									
ZZZZZZ	5.0	10:03																									
ZZZZZZ	1.0	10:06																									
ZZZZZZ	1.0	10:08																									
ZZZZZZ	1.0	10:11																									
ZZZZZZ	1.0	10:13																									
ZZZZZZ	1.0	10:16																									
ZZZZZZ	1.0	10:19																									
CCV3	1.0	10:21				X																					
CCV3	1.0	10:24			X								X		X											X	

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

Metals
- 14 -
ANALYSIS RUN LOG

Client: Oneida Total Integrated Enterpri **Service Request:** K1510796

Project No.: 2015270 **Run Number:** 102615AICP03

Project Name: Tetlin NWR Former Small Arms Ran

Instrument ID Number: K-ICP-AES-03 **Method:** P

Start Date: 10/26/2015 **End Date:** 10/26/2015

Sample No.	D/F	Time	% R	Analytes																							
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
CCB3	1.0	10:26			X	X							X		X											X	
LLCCV1	1.0	10:29			X	X							X		X											X	
ZZZZZZ	1.0	10:33																									
ZZZZZZ	1.0	10:36																									
ZZZZZZ	1.0	10:38																									
ZZZZZZ	5.0	10:40																									
ZZZZZZ	1.0	10:43																									
ZZZZZZ	1.0	10:46																									
ZZZZZZ	1.0	10:48																									
ZZZZZZ	1.0	10:51																									
ZZZZZZ	1.0	10:53																									
ZZZZZZ	1.0	10:58																									
CCV4	1.0	11:00				X																					
CCV4	1.0	11:03			X								X		X											X	
CCB4	1.0	11:05			X	X							X		X											X	
LLCCV2	1.0	11:09			X	X							X		X											X	
ZZZZZZ	1.0	11:15																									
ZZZZZZ	1.0	11:29																									
ZZZZZZ	5.0	11:32																									
ZZZZZZ	1.0	11:36																									
KQ1512177-01	2.0	11:42			X	X							X		X											X	
KQ1512177-02	2.0	11:44			X	X							X		X											X	
K1510796-001	2.0	11:47			X	X							X		X											X	
ZZZZZZ	10.0	11:49																									
K1510796-001D	2.0	11:51			X	X							X		X											X	
K1510796-001S	2.0	11:54			X	X							X		X											X	
K1510796-001A	2.0	11:56			X	X							X		X											X	
ZZZZZZ	10.0	12:00																									
CCV5	1.0	12:03				X																					
CCV5	1.0	12:06			X								X		X											X	
CCB5	1.0	12:08			X	X							X		X											X	
K1510796-001L	10.0	12:11			X	X							X		X											X	

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

Metals
- 14 -

ANALYSIS RUN LOG

Client: Oneida Total Integrated Enterpri **Service Request:** K1510796

Project No.: 2015270 **Run Number:** 102615AICP03

Project Name: Tetlin NWR Former Small Arms Ran

Instrument ID Number: K-ICP-AES-03 **Method:** P

Start Date: 10/26/2015 **End Date:** 10/26/2015

Sample No.	D/F	Time	% R	Analytes																							
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
K1510796-002	2.0	12:13													X												
K1510796-003	2.0	12:16			X	X							X		X											X	
K1510796-004	2.0	12:18			X	X							X		X											X	
K1510796-005	2.0	12:20													X												
K1510796-006	2.0	12:23													X												
K1510796-007	2.0	12:25			X	X							X		X											X	
K1510796-008	2.0	12:27			X	X							X		X											X	
K1510796-009	2.0	12:29			X	X							X		X											X	
K1510796-010	2.0	12:32													X												
CCV6	1.0	12:34				X																					
CCV6	1.0	12:37			X								X		X											X	
CCB6	1.0	12:39			X	X							X		X											X	
K1510796-011	2.0	12:41													X												
K1510796-012	2.0	12:44													X												
K1510796-013	2.0	12:46													X												
K1510796-014	2.0	12:49													X												
K1510796-015	2.0	12:51													X												
ZZZZZZ	1.0	12:53																									
ZZZZZZ	1.0	12:56																									
ZZZZZZ	1.0	12:58																									
ZZZZZZ	5.0	13:00																									
ZZZZZZ	1.0	13:03																									
CCV7	1.0	13:05				X																					
CCV7	1.0	13:08			X								X		X											X	
CCB7	1.0	13:10			X	X							X		X											X	
LLCCV3	1.0	13:13			X	X							X		X											X	

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

Sieving Data

Service Request: K1510797

Analyst: [illegible]

Date: ~~10/14~~ 10/15/15

Client: OTIE

Lab ID	>2mm Archive (g)	<2mm for Analysis (g)	Total Sample Mass (g)	Comments
K1510797-1A	694.29	657.69		
-1 B	311.78	—		
-2 A	690.76	634.57		
-2 B	252.21	—		
-3 A	760.59	614.17		
-3 B	—	215.40		
-4	619.56	532.84		
-5	788.74	521.99		
				10/13/15

Balance: K-Balance-42

Comments:

Reviewed By: [illegible]

Date: 10/13/15

R:\WET\ANALYSES\SOLIDS\Sieve\Sieve Template for #10 sieve only

ALS Inc.

Service Request Number(s):

K1510797

As Received 2mm Sieve Data

Service Request #	Sample Weight (g)	<2mm Weight (g)	>2mm Weight (g)	
K1510797 -6	1523.02	614.77	900.06	
7	1550.75	551.75	988.89	
8	842.54	330.01	520.64	
9	1849.23	588.04	1268.79	
10	1108.34	420.98	698.51	
11	701.57	251.77	454.36	
				10/19/15

Weight is in gram units.

Balance ID: 42

Analyst: [signature] Date: 10/16/15

Reviewed: [signature] Date: 10/19/15

R\:ICP\misc\digforms\As received Sieve Data1

ALS Environmental
ALS Group USA, Corp
1317 South 13th Avenue
Kelso, WA 98626
T : +1 360 577 7222
F : +1 360 636 1068
www.alsglobal.com

October 29, 2015

Analytical Report for Service Request No: K1510797

Orval Osborne
Oneida Total Integrated Enterprises (OTIE)
317 E. Main St.
Ventura, CA 93001

RE: Tetlin NWR SAR / 2015270

Dear Orval,

Enclosed are the results of the sample(s) submitted to our laboratory September 28, 2015
For your reference, these analyses have been assigned our service request number **K1510797.**

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3376. You may also contact me via email at gregory.salata@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Gregory Salata, Ph.D.
Client Services
Manager

ALS Environmental
ALS Group USA, Corp
1317 South 13th Avenue
Kelso, WA 98626
T : +1 360 577 7222
F : +1 360 636 1068
www.alsglobal.com

Table of Contents

Acronyms
Qualifiers
State Certifications, Accreditations, And Licenses
Case Narrative
Chain of Custody
Total Solids
Metals

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
E	The result is an estimate amount because the value exceeded the instrument calibration range.
J	The result is an estimated value.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.
H	The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

#	The control limit criteria is not applicable. See case narrative.
J	The result is an estimated value.
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
M	The duplicate injection precision was not met.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
S	The reported value was determined by the Method of Standard Additions (MSA).
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
+	The correlation coefficient for the MSA is less than 0.995.
Q	See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
A	A tentatively identified compound, a suspected aldol-condensation product.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
C	The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
D	The reported result is from a dilution.
E	The result is an estimated value.
J	The result is an estimated value.
N	The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
P	The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
Y	The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
Z	The chromatographic fingerprint does not resemble a petroleum product.

ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses

Agency	Web Site	Number
Alaska DEC UST	http://dec.alaska.gov/applications/eh/ehllabreports/USTLabs.aspx	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L14-51
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	Not available	-
Idaho DHW	http://www.healthandwelfare.idaho.gov/Health/Labs/CertificationDrinkingWaterLabs/tabid/1833/Default.aspx	-
ISO 17025	http://www.pjlabs.com/	L14-50
Louisiana DEQ	http://www.deq.louisiana.gov/portal/DIVISIONS/PublicParticipationandPermitSupport/LouisianaLaboratoryAccreditationProgram.aspx	03016
Maine DHS	Not available	WA01276
Michigan DEQ	http://www.michigan.gov/deq/0,1607,7-135-3307_4131_4156---,00.html	9949
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Montana DPHHS	http://www.dphhs.mt.gov/publichealth/	CERT0047
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/oqa/	WA005
North Carolina DWQ	http://www.dwqlab.org/	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/envserv/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wisconsin DNR	http://dnr.wi.gov/	998386840
Wyoming (EPA Region 8)	http://www.epa.gov/region8/water/dwhome/wyomingdi.html	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.

Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/anlayte is offered by that state.

Case Narrative

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

ALS ENVIRONMENTAL

Client:	Oneida Total Integrated Enterprises (OTIE)	**Service Request No.:**	K1510797
Project:	Tetlin NWR SAR/ 2015270	**Date Received:**	09/28/15
Sample Matrix:	Soil		

Case Narrative

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier III deliverables including summary forms for each of the analyses. When appropriate to the method, method blank results have been reported with each analytical test.

Sample Receipt

Eleven soil samples were received for analysis at ALS Environmental on 09/28/15. The samples were received in good condition and consistent with the accompanying chain of custody form. The samples were stored in a refrigerator at 4ºC upon receipt at the laboratory.

Metals

Matrix Spike Recovery Exceptions:
Antimony recoveries are generally low for soil and sediment samples when digested using EPA Method 3050B. Despite anticipated low recoveries, the method is still generally prescribed because of its versatility for general metals analysis. Antimony results (in conjunction with the matrix spike recovery) from this procedure should only be used as indicators to estimate concentrations. The matrix spike recovery of Antimony for sample A1-6 was below the ALS control criterion. Since low recoveries resulted from a method defect and were possibly magnified by certain matrix components, no corrective action was appropriate. Alternative procedures that specifically target Antimony are available but were not specified for this project. The associated QA/QC results (e.g. control sample, calibration standards, etc.) indicated the analysis was in control.

No other anomalies associated with the analysis of these samples were observed.

Approved by_____

Chain of Custody

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Chain of Custody

K1 510797

Shaded Areas For Internal Use Only — 1 of 3

OTIE
Oneida Total Integrated Enterprises

OTIE
317 East Main Street
Ventura, CA 93001
Phone: (805) 585-2110
Fax: (805) 585-2111

Report To:
Contact: Orval Osborne
Company: OTIE
Address: 317 East Main Street
Ventura, CA 93001
Phone: (805) 585-4313
E-Mail: oosborne@otie.com

Bill To:
Contact: Beth Weinfurt
Company: OTIE
Address: 1033 N. Mayfair Road, Suite 200
Milwaukee, WI 53226
Phone: (414) 607-6785
Fax: (414) 257-2492
PO#: _____
Quote: _____

Lab Lot #

Package Sealed Yes No	Samples Sealed Yes No
Received on Ice Yes No	Samples Intact Yes No
Temperature °C of Cooler	
Within Hold Time Yes No	Preserv. indicated Yes No NA
pH Check ok Yes No NA	Res. Cl_2 Check ok Yes No NA
Sample Labels and COC Agree Yes No COC not present	

Sampler Name: Mark Wanek
Signature: M W
Project Name: Tetlin NWR SAR
Project Number: 2015270
Lab: ALS, 1317 S. 13th Avenue Kelso, WA 98626
Lab PM: Greg Salata, 360-501-3376 Gregory.Salata@alsglobal.com
Date Required: NTAT

Laboratory ID	MS MSD	Client Sample ID	Sampling Date	Sampling Time	Matrix	Grab	Lead (total)	Sb, As, Cu, Pb, Zn (total)	Lead, TCLP	Sb, As, Cu, Pb, Zn (TCLP)							Additional Analyses / Remarks
		A1-6	9/23/15	1000	S		X	X									
		A3-6	9/23/15	1010	S		X	X									
		A5-6	9/23/15	1020	S		X										
		B2-6	9/23/15	1030	S		X										
		B4-6	9/23/15	1040	S		X										
		C1-6	9/23/15	1050	S		X										
		C3-6	9/23/15	1100	S		X										
		C5-6	9/23/15	1110	S		X	X									
		C5-12	9/23/15	1120	S		X										
		C5-24	9/23/15	1130	S		X	X									
		C5-6X	9/23/15	1140	S		X	X									

RELINQUISHED BY	COMPANY	DATE	TIME	RECEIVED BY	COMPANY	DATE	TIME
M W	OTIE	9/26/15		[illegible]	ALS	9/28/15	09:00
RELINQUISHED BY	COMPANY	DATE	TIME	RECEIVED BY	COMPANY	DATE	TIME

Matrix Key
S = Soil
SL = Sludge
MS = Miscellaneous
OL = Oil
A = Air
SE = Sediment
SO = Solid
WW = Wastewater
W = Water

Container Key
1. Plastic
2. VOA Vial
3. Amber Glass
4. Widemouth Glass
5. Other

Preservative Key
1. HCl, Cool to 4°
2. H2SO4, Cool to 4°
3. HNO3, Cool to 4°
4. Cool to 4°
5. None

COMMENTS: Hold samples after analysis.
Do not dispose of samples until client notifies lab.
Sb=Antimony. As=Arsenic. Cu=Copper. Pb=Lead.
Zn = Zinc

Date Received / /
Courier: Hand Delivered ☐
Bill of Lading:

PC Greg

Cooler Receipt and Preservation Form

Client / Project: OTTE Service Request *K15* 10797

Received: 9/28/15 Opened: 9/28/15 By: KR Unloaded: 9/28/15 By: KR

1. Samples were received via? *Mail* *Fed Ex* *UPS* *DHL* *PDX* *Courier* *Hand Delivered*
2. Samples were received in: (circle) *Cooler* *Box* *Envelope* *Other*_____ *NA*
3. Were custody seals on coolers? NA Y N If yes, how many and where?_____

   If present, were custody seals intact? Y N If present, were they signed and dated? Y N

Raw Cooler Temp	Corrected Cooler Temp	Raw Temp Blank	Corrected Temp Blank	Corr. Factor	Thermometer ID	Cooler/COC ID NA	Tracking Number NA	Filed
15.6	15.7	—	—	+0.1	351	1 of 4	781403862069	
14.5	14.7	—	—	+0.2	371	2 of	781403862058	
15.0	15.1	—	—	+0.1	365	3 of 4	781403862070	
15.4	15.3			-0.1	354	4 of 4	808626357441	

4. Packing material: *Inserts* *Baggies* *Bubble Wrap* *Gel Packs* *Wet Ice* *Dry Ice* *Sleeves* large plastic bag
5. Were custody papers properly ~~filled~~ out (ink, signed, etc.)? NA Y N
6. Did all bottles arrive in good condition (unbroken)? *Indicate in the table below.* NA Y N
7. Were all sample labels complete (i.e analysis, preservation, etc.)? NA Y N
8. Did all sample labels and tags agree with custody papers? *Indicate major discrepancies in the table on page 2.* NA Y N
9. Were appropriate bottles/containers and volumes received for the tests indicated? NA Y N
10. Were the pH-preserved bottles (*see SMO GEN SOP*) received at the appropriate pH? *Indicate in the table below* NA Y N
11. Were VOA vials received without headspace? *Indicate in the table below.* NA Y N
12. Was C12/Res negative? NA Y N

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count Bottle Type	Out of Temp	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, & Resolutions:_____

***Page*_____*of*_____**

Total Solids

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	Oneida Total Integrated Enterprises (OTIE)	**Service Request:**	K1510797
Project:	Tetlin NWR SAR/2015270	**Date Collected:**	09/23/15
Sample Matrix:	Soil	**Date Received:**	09/28/15
Analysis Method:	160.3 Modified	**Units:**	Percent
Prep Method:	None	**Basis:**	As Received

Solids, Total

Sample Name	Lab Code	Result	MRL	Dil.	Date Analyzed	Q
A1-6	K1510797-001	**89.1**	-	1	10/19/15 17:22	
A3-6	K1510797-002	**87.3**	-	1	10/19/15 17:22	
A5-6	K1510797-003	**88.5**	-	1	10/19/15 17:22	
B2-6	K1510797-004	**89.2**	-	1	10/19/15 17:22	
B4-6	K1510797-005	**90.1**	-	1	10/19/15 17:22	
C1-6	K1510797-006	**88.4**	-	1	10/19/15 17:22	
C3-6	K1510797-007	**89.7**	-	1	10/19/15 17:22	
C5-6	K1510797-008	**90.6**	-	1	10/19/15 17:22	
C5-12	K1510797-009	**92.6**	-	1	10/19/15 17:22	
C5-24	K1510797-010	**92.5**	-	1	10/19/15 17:22	
C5-6X	K1510797-011	**90.1**	-	1	10/19/15 17:22	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	Oneida Total Integrated Enterprises (OTIE)	**Service Request:**	K1510797
Project	Tetlin NWR SAR/2015270	**Date Collected:**	09/23/15
Sample Matrix:	Soil	**Date Received:**	09/28/15
Analysis Method:	160.3 Modified	**Units:**	Percent
Prep Method:	None	**Basis:**	As Received

Replicate Sample Summary
Solids, Total

Sample Name:	Lab Code:	MRL	Sample Result	Duplicate Result	Average	RPD	RPD Limit	Date Analyzed
A1-6	K1510797-001DUP	-	89.1	89.1	89.1	<1	20	10/19/15
C5-6X	K1510797-011DUP	-	90.1	90.1	90.1	<1	20	10/19/15

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Metals

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Metals
- 1 -
INORGANIC ANALYSIS DATA PACKAGE

Client: Oneida Total Integrated Enterpri
Service Request: K1510797
Project No.: 2015270
Date Collected: 09/23/15
Project Name: Tetlin NWR SAR
Date Received: 09/28/15
Matrix: SOIL
Units: mg/Kg
Basis: DRY

Sample Name: A1-6
Lab Code: K1510797-001

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	6010C	3.7	2.0	10/22/15	10/23/15	3.7	U	N
Arsenic	6010C	3.7	2.0	10/22/15	10/23/15	12.7		
Copper	6010C	0.7	2.0	10/22/15	10/23/15	53.8		
Lead	6010C	1.8	2.0	10/22/15	10/23/15	16.0		
Zinc	6010C	0.92	2.0	10/22/15	10/23/15	71.3		

% Solids: 89.1

Comments:

Metals
- 1 -
INORGANIC ANALYSIS DATA PACKAGE

Client:	Oneida Total Integrated Enterpri	**Service Request:**	K1510797
Project No.:	2015270	**Date Collected:**	09/23/15
Project Name:	Tetlin NWR SAR	**Date Received:**	09/28/15
Matrix:	SOIL	**Units:**	mg/Kg
		Basis:	DRY

Sample Name: A3-6 **Lab Code:** K1510797-002

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	6010C	3.9	2.0	10/22/15	10/23/15	3.9	U	N
Arsenic	6010C	3.9	2.0	10/22/15	10/23/15	8.8		
Copper	6010C	0.8	2.0	10/22/15	10/23/15	72.4		
Lead	6010C	2.0	2.0	10/22/15	10/23/15	18.9		
Zinc	6010C	0.98	2.0	10/22/15	10/23/15	82.5		

% Solids: 87.3

Comments:

Metals
- 1 -
INORGANIC ANALYSIS DATA PACKAGE

Client:	Oneida Total Integrated Enterpri	**Service Request:**	K1510797
Project No.:	2015270	**Date Collected:**	09/23/15
Project Name:	Tetlin NWR SAR	**Date Received:**	09/28/15
Matrix:	SOIL	**Units:**	mg/Kg
		Basis:	DRY

Sample Name: A5-6 **Lab Code:** K1510797-003

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Lead	6010C	1.8	2.0	10/22/15	10/23/15	9.7		

% Solids: 88.5

Comments:

Metals
- 1 -
INORGANIC ANALYSIS DATA PACKAGE

Client:	Oneida Total Integrated Enterpri	**Service Request:**	K1510797
Project No.:	2015270	**Date Collected:**	09/23/15
Project Name:	Tetlin NWR SAR	**Date Received:**	09/28/15
Matrix:	SOIL	**Units:**	mg/Kg
		Basis:	DRY

Sample Name: B2-6 **Lab Code:** K1510797-004

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Lead	6010C	1.8	2.0	10/22/15	10/23/15	17.1		

% Solids: 89.2

Comments:

Metals
- 1 -
INORGANIC ANALYSIS DATA PACKAGE

Client:	Oneida Total Integrated Enterpri	**Service Request:**	K1510797
Project No.:	2015270	**Date Collected:**	09/23/15
Project Name:	Tetlin NWR SAR	**Date Received:**	09/28/15
Matrix:	SOIL	**Units:**	mg/Kg
		Basis:	DRY

Sample Name: B4-6 **Lab Code:** K1510797-005

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Lead	6010C	1.8	2.0	10/22/15	10/23/15	22.4		

% Solids: 90.1

Comments:

Metals
- 1 -
INORGANIC ANALYSIS DATA PACKAGE

Client:	Oneida Total Integrated Enterpri	**Service Request:**	K1510797
Project No.:	2015270	**Date Collected:**	09/23/15
Project Name:	Tetlin NWR SAR	**Date Received:**	09/28/15
Matrix:	SOIL	**Units:**	mg/Kg
		Basis:	DRY

Sample Name: C1-6 **Lab Code:** K1510797-006

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Lead	6010C	1.8	2.0	10/22/15	10/23/15	14.5		

% Solids: 88.4

Comments:

Metals
- 1 -
INORGANIC ANALYSIS DATA PACKAGE

Client:	Oneida Total Integrated Enterpri	**Service Request:**	K1510797
Project No.:	2015270	**Date Collected:**	09/23/15
Project Name:	Tetlin NWR SAR	**Date Received:**	09/28/15
Matrix:	SOIL	**Units:**	mg/Kg
		Basis:	DRY

Sample Name: C3-6 **Lab Code:** K1510797-007

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Lead	6010C	1.9	2.0	10/22/15	10/23/15	17.1		

% Solids: 89.7

Comments:

Metals
- 1 -
INORGANIC ANALYSIS DATA PACKAGE

Client:	Oneida Total Integrated Enterpri	**Service Request:**	K1510797
Project No.:	2015270	**Date Collected:**	09/23/15
Project Name:	Tetlin NWR SAR	**Date Received:**	09/28/15
Matrix:	SOIL	**Units:**	mg/Kg
		Basis:	DRY

Sample Name: C5-6 **Lab Code:** K1510797-008

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	6010C	3.6	2.0	10/22/15	10/23/15	3.6	U	N
Arsenic	6010C	3.6	2.0	10/22/15	10/23/15	7.5		
Copper	6010C	0.7	2.0	10/22/15	10/23/15	37.2		
Lead	6010C	1.8	2.0	10/22/15	10/23/15	27.2		
Zinc	6010C	0.90	2.0	10/22/15	10/23/15	73.8		

% Solids: 90.6

Comments:

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client:	Oneida Total Integrated Enterpri	**Service Request:**	K1510797
Project No.:	2015270	**Date Collected:**	09/23/15
Project Name:	Tetlin NWR SAR	**Date Received:**	09/28/15
Matrix:	SOIL	**Units:**	mg/Kg
		Basis:	DRY

Sample Name: C5-12 **Lab Code:** K1510797-009

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Lead	6010C	1.9	2.0	10/22/15	10/23/15	11.7		

% Solids: 92.6

Comments:

Metals
- 1 -
INORGANIC ANALYSIS DATA PACKAGE

Client: Oneida Total Integrated Enterpri
Service Request: K1510797
Project No.: 2015270
Date Collected: 09/23/15
Project Name: Tetlin NWR SAR
Date Received: 09/28/15
Matrix: SOIL
Units: mg/Kg
Basis: DRY

Sample Name: C5-24
Lab Code: K1510797-010

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	6010C	3.5	2.0	10/22/15	10/23/15	3.5	U	N
Arsenic	6010C	3.5	2.0	10/22/15	10/23/15	3.5	U	
Copper	6010C	0.7	2.0	10/22/15	10/23/15	36.9		
Lead	6010C	1.7	2.0	10/22/15	10/23/15	15.3		
Zinc	6010C	0.87	2.0	10/22/15	10/23/15	86.4		

% Solids: 92.5

Comments:

Metals
- 1 -
INORGANIC ANALYSIS DATA PACKAGE

Client: Oneida Total Integrated Enterpri
Service Request: K1510797
Project No.: 2015270
Date Collected: 09/23/15
Project Name: Tetlin NWR SAR
Date Received: 09/28/15
Matrix: SOIL
Units: mg/Kg
Basis: DRY

Sample Name: C5-6X
Lab Code: K1510797-011

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	6010C	3.6	2.0	10/22/15	10/23/15	3.6	U	N
Arsenic	6010C	3.6	2.0	10/22/15	10/23/15	8.4		
Copper	6010C	0.7	2.0	10/22/15	10/23/15	26.7		
Lead	6010C	1.8	2.0	10/22/15	10/23/15	17.6		
Zinc	6010C	0.91	2.0	10/22/15	10/23/15	71.5		

% Solids: 90.1

Comments:

Metals
- 1 -
INORGANIC ANALYSIS DATA PACKAGE

Client: Oneida Total Integrated Enterpri
Service Request: K1510797
Project No.: 2015270
Date Collected:
Project Name: Tetlin NWR SAR
Date Received:
Matrix: SOIL
Units: mg/Kg
Basis: DRY

Sample Name: Method Blank
Lab Code: KQ1512178-01

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	6010C	4.0	2.0	10/22/15	10/23/15	4.0	U	N
Arsenic	6010C	4.0	2.0	10/22/15	10/23/15	4.0	U	
Copper	6010C	0.8	2.0	10/22/15	10/23/15	0.8	U	
Lead	6010C	2.0	2.0	10/22/15	10/23/15	2.0	U	
Zinc	6010C	1.0	2.0	10/22/15	10/23/15	1.0	U	

% Solids: 100.0

Comments:

Metals
- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Oneida Total Integrated Enterpri **Service Request:** K1510797

Project No.: 2015270

Project Name: Tetlin NWR SAR

ICV Source: Inorganic Ventures **CCV Source:** ALS MIXED

Concentration Units: ug/L

	Initial Calibration			Continuing Calibration					
Analyte	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	Method
Antimony	2500	2392	96	250	251	100	250	100	6010C
Arsenic	2500	2490	100	1000	1004	100	1004	100	6010C
Copper	625	591	95	250	249	100	250	100	6010C
Lead	2500	2427	97	250	252	101	253	101	6010C
Zinc	1250	1219	98	250	251	100	249	100	6010C

Metals
- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Oneida Total Integrated Enterpri **Service Request:** K1510797

Project No.: 2015270

Project Name: Tetlin NWR SAR

ICV Source: Inorganic Ventures **CCV Source:** ALS MIXED

Concentration Units: ug/L

	Initial Calibration			Continuing Calibration					
Analyte	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	Method
Antimony				250	254	102	251	100	6010C
Arsenic				1000	1017	102	1017	102	6010C
Copper				250	251	100	251	100	6010C
Lead				250	249	100	252	101	6010C
Zinc				250	250	100	250	100	6010C

Metals
- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Oneida Total Integrated Enterpri **Service Request:** K1510797

Project No.: 2015270

Project Name: Tetlin NWR SAR

ICV Source: Inorganic Ventures **CCV Source:** ALS MIXED

Concentration Units: ug/L

	Initial Calibration			Continuing Calibration					
Analyte	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	Method
Antimony				250	251	100	257	103	6010C
Arsenic				1000	1012	101	1031	103	6010C
Copper				250	246	98	256	102	6010C
Lead				250	256	102	257	103	6010C
Zinc				250	252	101	252	101	6010C

Metals

- 2a -

LOW LEVEL INITIAL CALIBRATION AND LOW LEVEL CONTINUING CALIBRATION VERIFICATION

Client: Oneida Total Integrated Enterprises (OTIE) **SDG No.:** K1510797

Contract: 2015270 **Lab Code:** ALSK **Case No.:** **SAS No.:**

Initial Calibration Source: Inorganic Ventures

Continuing Calibration Source: ALS MIXED

Sample ID	Analyte	Result ug/L	True Value ug/L	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
LLICV1									
	Antimony	22.5	20.0	112	70.0 - 130.0	P	10/23/2015	13:39	102315AICP
	Arsenic	11.0	10.0	110	70.0 - 130.0	P	10/23/2015	13:39	102315AICP
	Copper	3.80	4.0	95	70.0 - 130.0	P	10/23/2015	13:39	102315AICP
	Lead	9.3	10.0	93	70.0 - 130.0	P	10/23/2015	13:39	102315AICP
	Zinc	4.0	4.0	100	70.0 - 130.0	P	10/23/2015	13:39	102315AICP
LLCCV1									
	Antimony	22.2	20.0	111	70.0 - 130.0	P	10/23/2015	14:48	102315AICP
	Arsenic	10.6	10.0	106	70.0 - 130.0	P	10/23/2015	14:48	102315AICP
	Copper	5.00	4.0	125	70.0 - 130.0	P	10/23/2015	14:48	102315AICP
	Lead	9.5	10.0	95	70.0 - 130.0	P	10/23/2015	14:48	102315AICP
	Zinc	4.3	4.0	108	70.0 - 130.0	P	10/23/2015	14:48	102315AICP
LLCCV2									
	Antimony	22.7	20.0	114	70.0 - 130.0	P	10/23/2015	15:32	102315AICP
	Arsenic	9.0	10.0	90	70.0 - 130.0	P	10/23/2015	15:32	102315AICP
	Copper	4.80	4.0	120	70.0 - 130.0	P	10/23/2015	15:32	102315AICP
	Lead	9.8	10.0	98	70.0 - 130.0	P	10/23/2015	15:32	102315AICP
	Zinc	4.2	4.0	105	70.0 - 130.0	P	10/23/2015	15:32	102315AICP
LLCCV3									
	Antimony	23.3	20.0	116	70.0 - 130.0	P	10/23/2015	16:39	102315AICP
	Arsenic	9.4	10.0	94	70.0 - 130.0	P	10/23/2015	16:39	102315AICP
	Copper	4.30	4.0	108	70.0 - 130.0	P	10/23/2015	16:39	102315AICP
	Lead	9.6	10.0	96	70.0 - 130.0	P	10/23/2015	16:39	102315AICP
	Zinc	4.3	4.0	108	70.0 - 130.0	P	10/23/2015	16:39	102315AICP

Metals

- 3 -

BLANKS

Client: Oneida Total Integrated Enterpri **Service Request:** K1510797

Project No.: 2015270

Project Name: Tetlin NWR SAR

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): ug/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Method
Antimony	20.0	U	20.0	U	20.0	U	20.0	U	6010C
Arsenic	20.0	U	20.0	U	20.0	U	20.0	U	6010C
Copper	4.0	U	4.0	U	4.0	U	4.0	U	6010C
Lead	10.0	U	10.0	U	10.0	U	10.0	U	6010C
Zinc	5.00	U	5.00	U	5.00	U	5.00	U	6010C

Metals

- 3 -

BLANKS

Client: Oneida Total Integrated Enterpri **Service Request:** K1510797

Project No.: 2015270

Project Name: Tetlin NWR SAR

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): ug/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Method
Antimony			20.0	U	20.0	U	20.0	U	6010C
Arsenic			20.0	U	20.0	U	20.0	U	6010C
Copper			4.0	U	4.0	U	4.0	U	6010C
Lead			10.0	U	10.0	U	10.0	U	6010C
Zinc			5.00	U	5.00	U	5.00	U	6010C

Metals

- 4 -

ICP INTERFERENCE CHECK SAMPLE

Client: Oneida Total Integrated Enterpri **Service Request:** K1510797

Project No.: 2015270

Project Name: Tetlin NWR SAR

ICP ID Number: K-ICP-AES-03 **ICS Source:** Inorganic Ventures

Concentration Units): ug/L

Analyte	True		Initial Found			Final Found		
	Sol.A	Sol.AB	Sol.A	Sol.AB	%R	Sol.A	Sol.AB	%R
Antimony		1000	11	843	84			
Arsenic			2	-1				
Copper		500	-1	429	86			
Lead		1000	-14	833	83			
Zinc		1000	1	879	88			

Metals

- 5A -

SPIKE SAMPLE RECOVERY

Client: Oneida Total Integrated Enterpri **Service Request:** K1510797

Project No.: 2015270 **Units:** MG/KG

Project Name: Tetlin NWR SAR **Basis:** DRY

Matrix: SOIL **% Solids:** 89.1

Sample Name: A1-6S **Lab Code:** K1510797-001S

Analyte	Control Limit %R	Spike Result	C	Sample Result	C	Spike Added	%R	Q	Method
Antimony	75 - 125	54.1		3.7	U	92.75	58	N	6010C
Arsenic	75 - 125	98.0		12.7		92.75	92		6010C
Copper	75 - 125	98.5		53.8		46.38	96		6010C
Lead	75 - 125	98.0		16.0		92.75	88		6010C
Zinc	75 - 125	153		71.3		92.75	88		6010C

An empty field in the Control Limit column indicates the control limit is not applicable

Metals

- 5B -
POST SPIKE SAMPLE RECOVERY

Client: Oneida Total Integrated Enterpri **Service Request:** K1510797

Project No.: 2015270 **Units:** UG/L

Project Name: Tetlin NWR SAR **Basis:** DRY

Matrix: WATER

Sample Name: A1-6A **Lab Code:** K1510797-001A

Analyte	Control Limit %R	Spike Result	C	Sample Result	C	Spike Added	%R	Q	Method
Antimony	80 - 120	4360.0		20.0		5000	87		6010C
Arsenic	80 - 120	2380.0		69.1		2500	92		6010C
Copper	80 - 120	862.9		292.3		625	91		6010C
Lead	80 - 120	2268.0		86.8		2500	87		6010C
Zinc	80 - 120	1484.00		387.70		1250	88		6010C

Metals

- 6 -

DUPLICATES

Client: Oneida Total Integrated Enterpri **Service Request:** K1510797

Project No.: 2015270 **Units:** MG/KG

Project Name: Tetlin NWR SAR **Basis:** DRY

Matrix: SOIL **% Solids:** 89.1

Sample Name: **A1-6D** **Lab Code:** **K1510797-001D**

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	Method
Antimony		3.7	U	3.7	U			6010C
Arsenic		12.7		11.7		8.2		6010C
Copper	20	53.8		49.7		7.9		6010C
Lead	20	16.0		14.7		8.5		6010C
Zinc	20	71.3		70.4		1.3		6010C

An empty field in the Control Limit column indicates the control limit is not applicable.

Metals

- 7 -

LABORATORY CONTROL SAMPLE

Client: Oneida Total Integrated Enterpri **Service Request:** K1510797

Project No.: 2015270

Project Name: Tetlin NWR SAR

Aqueous LCS Source: **Solid LCS Source:** **ERA D080-540**

Analyte	Aqueous (ug/L) True	Aqueous (ug/L) Found	Aqueous (ug/L) %R	Solid (mg/kg) True	Solid (mg/kg) Found	Solid (mg/kg) C Limits		Solid (mg/kg) %R
Antimony				88.8	87.1	22	259	98
Arsenic				139	142	70	140	102
Copper				168	175	76	125	104
Lead				133	126	73	128	95
Zinc				189	189	70	131	100

Metals

- 9 -

ICP SERIAL DILUTIONS

Client: Oneida Total Integrated Enterpri **Service Request:** K1510797

Project No.: 2015270 **Units:** UG/L

Project Name: Tetlin NWR SAR

Sample Name: A1-6L **Lab Code:** K1510797-001L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Differ-ence	Q	M
Antimony	20.0	U	100.0	U			P
Arsenic	69.1		100.0	U	100.0		P
Copper	292.3		304.5		4.2		P
Lead	86.8		99.0		14.1		P
Zinc	387.70		415.00		7.0		P

Metals

- 10 -

DETECTION LIMITS

Client: Oneida Total Integrated Enterpri **Service Request:** K1510797

Project No.: 2015270

Project Name: Tetlin NWR SAR

ICP/ICP-MS ID #:

GFAA ID #: **AA ID #:**

Analyte	Wave-length (nm)	Back-ground	MRL ug/L	MDL ug/L	M
Antimony	206.8		20.0	20.0	P
Arsenic	189.0		20.0	20.0	P
Copper	327.3		4.0	4.0	P
Lead	220.3		10.0	10.0	P
Zinc	206.2		5.00	5.00	P

Comments:

Metals

- 11A -

ICP INTERELEMENT CORRECTION FACTORS

Client: Oneida Total Integrated Enterpri **Service Request:** K1510797

Project No.: 2015270

Project Name: Tetlin NWR SAR

ICP ID Number: **K-ICP-AES-03**

Analyte	Wave-length (nm)	Interelement Correction Factors for: Al	Ca	Fe	Mg	B
Aluminum	394.401	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Antimony	217.581	0.0000000	0.0000000	-0.0009010	0.0000000	0.0000000
Arsenic	189.042	0.0000330	0.0000000	0.0000000	0.0000000	0.0000000
Barium	455.403	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	234.861	0.0000000	0.0000000	0.0000080	0.0000000	0.0000000
Boron	249.678	0.0000000	0.0000000	-0.0006800	0.0000000	0.0000000
Cadmium	226.502	0.0000000	0.0000000	0.0001570	0.0000000	0.0000000
Calcium	393.366	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.716	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cobalt	228.616	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Copper	327.396	0.0000000	0.0000160	0.0000000	0.0000000	0.0000000
Iron	259.94	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Lead	220.353	-0.0000780	0.0000000	0.0000590	0.0000000	0.0000000
Lithium	670.784	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Magnesium	285.213	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	257.61	0.0000000	0.0000000	0.0000120	0.0000370	0.0000000
Molybdenum	202.03	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.604	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Phosphorus	214.914	-0.0007840	0.0000000	0.0006520	0.0000000	0.0000000
Potassium	766.491	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.0	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silicon	251.611	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silver	328.068	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Sodium	589.592	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Strontium	407.771	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.856	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Tin	189.989	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Titanium	336.121	0.0000000	0.0000110	0.0000000	0.0000440	0.0000000
Vanadium	292.402	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000

Comments:

Metals

- 11A -

ICP INTERELEMENT CORRECTION FACTORS

Client: Oneida Total Integrated Enterpri **Service Request:** K1510797

Project No.: 2015270

Project Name: Tetlin NWR SAR

ICP ID Number: **K-ICP-AES-03**

Zinc	213.856	0.0000000	0.0000000	0.0001170	0.0000000	0.0000000

Comments:

Metals

- 11B -

ICP INTERELEMENT CORRECTION FACTORS

Client: Oneida Total Integrated Enterpri **Service Request:** K1510797

Project No.: 2015270

Project Name: Tetlin NWR SAR

ICP ID Number: **K-ICP-AES-03**

Analyte	Wave-length (nm)	Interelement Correction Factors for: Ba	Cd	Co	Cr	Cu
Aluminum	394.401	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Antimony	217.581	0.0000000	0.0000000	0.0000000	0.0004650	-0.0009350
Arsenic	189.042	0.0000000	0.0000000	0.0000000	0.0005140	0.0000000
Barium	455.403	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	234.861	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Boron	249.678	0.0000000	0.0000000	0.0025890	0.0003110	0.0000000
Cadmium	226.502	0.0000000	0.0000000	-0.0000110	0.0000330	0.0000000
Calcium	393.366	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.716	0.0000000	-0.0001480	0.0000000	0.0000000	0.0000000
Cobalt	228.616	-0.0001220	0.0000000	0.0000000	0.0000000	0.0000000
Copper	327.396	0.0000000	0.0000000	0.0002590	0.0000000	0.0000000
Iron	259.94	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Lead	220.353	0.0000000	0.0000000	0.0001270	0.0000000	0.0003500
Lithium	670.784	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Magnesium	285.213	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	257.61	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Molybdenum	202.03	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.604	0.0000000	0.0000000	-0.0001870	0.0000000	0.0000000
Phosphorus	214.914	0.0000000	-0.0015740	0.0000000	0.0000000	0.0052080
Potassium	766.491	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.0	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silicon	251.611	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silver	328.068	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Sodium	589.592	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Strontium	407.771	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.856	0.0000000	0.0000000	0.0031300	0.0003080	0.0000000
Tin	189.989	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Titanium	336.121	0.0000000	0.0000000	0.0000270	0.0000000	0.0000000
Vanadium	292.402	0.0000000	0.0000000	0.0000000	-0.0058770	0.0000000

Comments:

Metals

- 11B -

ICP INTERELEMENT CORRECTION FACTORS

Client: Oneida Total Integrated Enterpri **Service Request:** K1510797

Project No.: 2015270

Project Name: Tetlin NWR SAR

ICP ID Number: **K-ICP-AES-03**

Zinc	213.856	0.0000000	0.0000000	0.0000000	0.0000000	0.0010410

Comments:

Metals

- 11B -

ICP INTERELEMENT CORRECTION FACTORS

Client: Oneida Total Integrated Enterpri **Service Request:** K1510797

Project No.: 2015270

Project Name: Tetlin NWR SAR

ICP ID Number: **K-ICP-AES-03**

Analyte	Wave-length (nm)	Interelement Correction Factors for: Mn	Mo	Ni	Sb	Si
Aluminum	394.401	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Antimony	217.581	-0.0007640	0.0000000	0.0000000	0.0000000	0.0000000
Arsenic	189.042	-0.0002720	0.0015570	0.0000000	0.0000000	0.0000000
Barium	455.403	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	234.861	-0.0000630	-0.0004470	-0.0000170	0.0000000	0.0000000
Boron	249.678	0.0000000	-0.0019240	0.0000000	0.0000000	0.0000000
Cadmium	226.502	0.0000000	-0.0000110	-0.0000150	0.0000000	0.0000000
Calcium	393.366	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.716	0.0000000	0.0000620	0.0000000	0.0000000	0.0000000
Cobalt	228.616	0.0000000	-0.0012500	0.0001140	0.0000000	0.0000000
Copper	327.396	0.0000000	-0.0002610	0.0000000	0.0000000	0.0000000
Iron	259.94	0.0000000	-0.0002450	0.0000000	0.0000000	0.0000000
Lead	220.353	0.0000000	-0.0007250	0.0002650	0.0000000	0.0000000
Lithium	670.784	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Magnesium	285.213	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	257.61	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Molybdenum	202.03	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.604	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Phosphorus	214.914	-0.0006320	0.0105360	0.0000000	0.0000000	0.0000000
Potassium	766.491	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.0	0.0004420	0.0000000	0.0000000	0.0000000	0.0000000
Silicon	251.611	0.0000000	0.0731890	0.0000000	0.0000000	0.0000000
Silver	328.068	0.0001350	0.0001470	0.0000000	0.0000000	0.0000000
Sodium	589.592	0.0000000	0.0023580	0.0000000	0.0000000	0.0000000
Strontium	407.771	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.856	0.0006530	0.0000000	0.0000000	0.0000000	0.0000000
Tin	189.989	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Titanium	336.121	0.0000000	0.0000400	0.0001110	0.0000000	0.0000000
Vanadium	292.402	-0.0011210	-0.0000900	0.0000000	0.0000000	0.0000000

Comments:

Metals

- 11B -

ICP INTERELEMENT CORRECTION FACTORS

Client: Oneida Total Integrated Enterpri **Service Request:** K1510797

Project No.: 2015270

Project Name: Tetlin NWR SAR

ICP ID Number: **K-ICP-AES-03**

Zinc	213.856	0.0000000	0.0000000	0.0056230	0.0000000	0.0000000

Comments:

Metals

- 11B -

ICP INTERELEMENT CORRECTION FACTORS

Client: Oneida Total Integrated Enterpri **Service Request:** K1510797

Project No.: 2015270

Project Name: Tetlin NWR SAR

ICP ID Number: **K-ICP-AES-03**

Analyte	Wave-length (nm)	Interelement Correction Factors for: Ti	V			
Aluminum	394.401	0.0000000	0.0000000			
Antimony	217.581	0.0000000	0.0021710			
Arsenic	189.042	0.0000000	0.0001150			
Barium	455.403	0.0000000	0.0000000			
Beryllium	234.861	0.0000000	0.0000000			
Boron	249.678	0.0000000	-0.0005070			
Cadmium	226.502	0.0001270	0.0000000			
Calcium	393.366	0.0000000	0.0000000			
Chromium	267.716	0.0000000	-0.0000640			
Cobalt	228.616	0.0024440	0.0000000			
Copper	327.396	0.0001170	-0.0000910			
Iron	259.94	0.0000000	0.0000000			
Lead	220.353	0.0000000	0.0000000			
Lithium	670.784	0.0000000	0.0000000			
Magnesium	285.213	0.0000000	0.0000000			
Manganese	257.61	0.0000000	0.0000000			
Molybdenum	202.03	0.0000000	0.0000000			
Nickel	231.604	0.0000000	0.0000000			
Phosphorus	214.914	0.0000000	-0.0020860			
Potassium	766.491	0.0000000	0.0000000			
Selenium	196.0	0.0000000	0.0000000			
Silicon	251.611	0.0000000	0.0000000			
Silver	328.068	0.0000000	0.0000780			
Sodium	589.592	0.0000000	0.0000000			
Strontium	407.771	0.0000000	0.0000000			
Thallium	190.856	-0.0005060	0.0002630			
Tin	189.989	0.0000000	0.0000000			
Titanium	336.121	0.0000000	0.0000000			
Vanadium	292.402	0.0004260	0.0000000			

Comments:

Metals

- 11B -

ICP INTERELEMENT CORRECTION FACTORS

Client: Oneida Total Integrated Enterpri **Service Request:** K1510797

Project No.: 2015270

Project Name: Tetlin NWR SAR

ICP ID Number: **K-ICP-AES-03**

Zinc	213.856	0.0000000	0.0000000			

Comments:

Metals
-12-
ICP LINEAR RANGES (QUARTERLY)

Client: Oneida Total Integrated Enterpri **Service Request:** K1510797

Project No.: 2015270

Project Name: Tetlin NWR SAR

ICP ID Number: **K-ICP-AES-03**

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Antimony	15.000	90000	6010C
Arsenic	15.000	90000	6010C
Copper	15.000	90000	6010C
Lead	15.000	22500	6010C
Zinc	15.000	18000	6010C

Comments:

Metals
-13-
PREPARATION LOG

Client: Oneida Total Integrated Enterpri **Service Request:** K1510797

Project No.: 2015270

Project Name: Tetlin NWR SAR

Method: P

Sample ID	Preparation Date	Initial Weight (g)	Final Volume(mL)
K1510797-001	10/22/2015	1.22	100.0
K1510797-001D	10/22/2015	1.22	100.0
K1510797-001S	10/22/2015	1.21	100.0
K1510797-002	10/22/2015	1.17	100.0
K1510797-003	10/22/2015	1.23	100.0
K1510797-004	10/22/2015	1.24	100.0
K1510797-005	10/22/2015	1.24	100.0
K1510797-006	10/22/2015	1.24	100.0
K1510797-007	10/22/2015	1.19	100.0
K1510797-008	10/22/2015	1.23	100.0
K1510797-009	10/22/2015	1.17	100.0
K1510797-010	10/22/2015	1.25	100.0
K1510797-011	10/22/2015	1.22	100.0
KQ1512178-01	10/22/2015	1.00	100.0
KQ1512178-02	10/22/2015	1.00	100.0

ALS Group USA, Corp.
dba ALS Environmental

Metals
- 14 -
ANALYSIS RUN LOG

Client: Oneida Total Integrated Enterpri **Service Request:** K1510797

Project No.: 2015270 **Run Number:** 102315AICP03

Project Name: Tetlin NWR SAR

Instrument ID Number: K-ICP-AES-03 **Method:** P

Start Date: 10/23/2015 **End Date:** 10/23/2015

Sample No.	D/F	Time	% R	Analytes																							
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
BLK	1.0	13:25			X	X							X		X											X	
STD A	1.0	13:27			X								X		X											X	
STD B	1.0	13:29				X																					
ICV1	1.0	13:32																									
ICV1	1.0	13:35			X	X							X		X											X	
ICB1	1.0	13:37			X	X							X		X											X	
LLICV1	1.0	13:39			X	X							X		X											X	
ZZZZZZ	1.0	13:42																									
ZZZZZZ	1.0	13:44																									
CCV1	1.0	13:47				X																					
CCV1	1.0	13:49			X								X		X											X	
CCB1	1.0	13:51			X	X							X		X											X	
ICS-A1	1.0	13:54			X	X							X		X											X	
ICS-AB1	1.0	13:57			X	X							X		X											X	
ZZZZZZ	1.0	14:00																									
CCV2	1.0	14:02				X																					
CCV2	1.0	14:05			X								X		X											X	
CCB2	1.0	14:08			X	X							X		X											X	
ZZZZZZ	1.0	14:13																									
ZZZZZZ	1.0	14:16																									
ZZZZZZ	1.0	14:18																									
ZZZZZZ	1.0	14:20																									
ZZZZZZ	1.0	14:23																									
ZZZZZZ	1.0	14:25																									
ZZZZZZ	1.0	14:28																									
ZZZZZZ	1.0	14:30																									
ZZZZZZ	1.0	14:35																									
ZZZZZZ	1.0	14:38																									
CCV3	1.0	14:40				X																					
CCV3	1.0	14:43			X								X		X											X	
CCB3	1.0	14:45			X	X							X		X											X	
LLCCV1	1.0	14:48			X	X							X		X											X	

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

ALS Group USA, Corp.
dba ALS Environmental

Metals
- 14 -
ANALYSIS RUN LOG

Client: Oneida Total Integrated Enterpri **Service Request:** K1510797

Project No.: 2015270 **Run Number:** 102315AICP03

Project Name: Tetlin NWR SAR

Instrument ID Number: K-ICP-AES-03 **Method:** P

Start Date: 10/23/2015 **End Date:** 10/23/2015

Sample No.	D/F	Time	% R	Analytes																							
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	1.0	14:52																									
ZZZZZZ	1.0	14:55																									
ZZZZZZ	1.0	14:58																									
ZZZZZZ	1.0	15:00																									
ZZZZZZ	1.0	15:03																									
ZZZZZZ	1.0	15:05																									
KQ1512178-01	2.0	15:08			X	X							X		X											X	
KQ1512178-02	2.0	15:10			X	X							X		X											X	
K1510797-001	2.0	15:12			X	X							X		X											X	
K1510797-001L	10.0	15:15			X	X							X		X											X	
K1510797-001D	2.0	15:17			X	X							X		X											X	
K1510797-001S	2.0	15:19			X	X							X		X											X	
CCV4	1.0	15:22				X																					
CCV4	1.0	15:24			X								X		X											X	
CCB4	1.0	15:27			X	X							X		X											X	
LLCCV2	1.0	15:32			X	X							X		X											X	
ZZZZZZ	1.0	15:34																									
K1510797-001A	1.0	15:37			X	X							X		X											X	
K1510797-002	2.0	15:40			X	X							X		X											X	
K1510797-003	2.0	15:42													X												
K1510797-004	2.0	15:44													X												
K1510797-005	2.0	15:46													X												
K1510797-006	2.0	15:49													X												
K1510797-007	2.0	15:51													X												
K1510797-008	2.0	15:53			X	X							X		X											X	
K1510797-009	2.0	15:56													X												
K1510797-010	2.0	15:58			X	X							X		X											X	
CCV5	1.0	16:00				X																					
CCV5	1.0	16:03			X								X		X											X	
CCB5	1.0	16:05			X	X							X		X											X	
K1510797-011	2.0	16:08			X	X							X		X											X	
ZZZZZZ	2.0	16:10																									

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

Metals
- 14 -

ANALYSIS RUN LOG

Client: Oneida Total Integrated Enterpri **Service Request:** K1510797

Project No.: 2015270 **Run Number:** 102315AICP03

Project Name: Tetlin NWR SAR

Instrument ID Number: K-ICP-AES-03 **Method:** P

Start Date: 10/23/2015 **End Date:** 10/23/2015

Sample No.	D/F	Time	% R	Analytes																							
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	2.0	16:13																									
ZZZZZZ	2.0	16:15																									
ZZZZZZ	10.0	16:17																									
ZZZZZZ	2.0	16:20																									
ZZZZZZ	2.0	16:22																									
ZZZZZZ	2.0	16:24																									
ZZZZZZ	2.0	16:27																									
ZZZZZZ	2.0	16:29																									
CCV6	1.0	16:31				X																					
CCV6	1.0	16:34			X								X		X											X	
CCB6	1.0	16:36			X	X							X		X											X	
LLCCV3	1.0	16:39			X	X							X		X											X	

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

Sieving Data

Service Request: K1510797

Analyst: [illegible]

Date: ~~10/14~~ 10/15/15

Client: OTIE

Lab ID	>2mm Archive (g)	<2mm for Analysis (g)	Total Sample Mass (g)	Comments
K1510797-1A	694.29	657.69		
-1 B	311.78	—		
-2 A	690.76	634.57		
-2 B	252.21	—		
-3 A	760.59	614.17		
-3 B	—	215.40		
-4	619.56	532.84		
-5	788.74	521.99		
				10/13/15

Balance: K-Balance-42

Comments:

Reviewed By: [illegible]

Date: 10/13/15

R:\WET\ANALYSES\SOLIDS\Sieve\Sieve Template for #10 sieve only

ALS Inc.

Service Request Number(s):

K1510797

As Received 2mm Sieve Data

Service Request #	Sample Weight (g)	<2mm Weight (g)	>2mm Weight (g)	
K1510797 -6	1523.02	614.77	900.06	
7	1550.75	551.75	988.89	
8	842.54	330.01	520.64	
9	1849.23	588.04	1268.79	
10	1108.34	420.98	698.51	
11	701.57	251.77	454.36	
				10/19/15

Weight is in gram units.

Balance ID: 42

Analyst: [signature] Date: 10/16/15

Reviewed: [signature] Date: 10/19/15

R\:ICP\misc\digforms\As received Sieve Data1

ALS Environmental
ALS Group USA, Corp
1317 South 13th Avenue
Kelso, WA 98626
T : +1 360 577 7222
F : +1 360 636 1068
www.alsglobal.com

October 29, 2015

Analytical Report for Service Request No: K1510798

Orval Osborne
Oneida Total Integrated Enterprises (OTIE)
317 E. Main St.
Ventura, CA 93001

RE: Tetlin NWR SAR / 2015270

Dear Orval,

Enclosed are the results of the sample(s) submitted to our laboratory September 28, 2015
For your reference, these analyses have been assigned our service request number **K1510798.**

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3376. You may also contact me via email at gregory.salata@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Gregory Salata, Ph.D.
Client Services
Manager

ALS Environmental
ALS Group USA, Corp
1317 South 13th Avenue
Kelso, WA 98626
T : +1 360 577 7222
F : +1 360 636 1068
www.alsglobal.com

Table of Contents

Acronyms
Qualifiers
State Certifications, Accreditations, And Licenses
Case Narrative
Chain of Custody
Total Solids
Metals

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
E	The result is an estimate amount because the value exceeded the instrument calibration range.
J	The result is an estimated value.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.
H	The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

#	The control limit criteria is not applicable. See case narrative.
J	The result is an estimated value.
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
M	The duplicate injection precision was not met.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
S	The reported value was determined by the Method of Standard Additions (MSA).
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
+	The correlation coefficient for the MSA is less than 0.995.
Q	See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
A	A tentatively identified compound, a suspected aldol-condensation product.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
C	The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
D	The reported result is from a dilution.
E	The result is an estimated value.
J	The result is an estimated value.
N	The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
P	The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
Y	The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
Z	The chromatographic fingerprint does not resemble a petroleum product.

ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses

Agency	Web Site	Number
Alaska DEC UST	http://dec.alaska.gov/applications/eh/ehllabreports/USTLabs.aspx	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L14-51
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	Not available	-
Idaho DHW	http://www.healthandwelfare.idaho.gov/Health/Labs/CertificationDrinkingWaterLabs/tabid/1833/Default.aspx	-
ISO 17025	http://www.pjlabs.com/	L14-50
Louisiana DEQ	http://www.deq.louisiana.gov/portal/DIVISIONS/PublicParticipationandPermitSupport/LouisianaLaboratoryAccreditationProgram.aspx	03016
Maine DHS	Not available	WA01276
Michigan DEQ	http://www.michigan.gov/deq/0,1607,7-135-3307_4131_4156---,00.html	9949
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Montana DPHHS	http://www.dphhs.mt.gov/publichealth/	CERT0047
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/oqa/	WA005
North Carolina DWQ	http://www.dwqlab.org/	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/envserv/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wisconsin DNR	http://dnr.wi.gov/	998386840
Wyoming (EPA Region 8)	http://www.epa.gov/region8/water/dwhome/wyomingdi.html	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.

Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/anlayte is offered by that state.

Case Narrative

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

ALS ENVIRONMENTAL

Client:	Oneida Total Integrated Enterprises (OTIE)	**Service Request No.:**	K1510798
Project:	Tetlin NWR SAR/ 2015270	**Date Received:**	09/28/15
Sample Matrix:	Soil		

Case Narrative

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier III deliverables including summary forms for each of the analyses. When appropriate to the method, method blank results have been reported with each analytical test.

Sample Receipt

Eleven soil samples were received for analysis at ALS Environmental on 09/28/15. The samples were received in good condition and consistent with the accompanying chain of custody form. The samples were stored in a refrigerator at 4ºC upon receipt at the laboratory.

Metals

Matrix Spike Recovery Exceptions:
Antimony recoveries are generally low for soil and sediment samples when digested using EPA Method 3050B. Despite anticipated low recoveries, the method is still generally prescribed because of its versatility for general metals analysis. Antimony results (in conjunction with the matrix spike recovery) from this procedure should only be used as indicators to estimate concentrations. The matrix spike recovery of Antimony for sample G3-TI-6 was below the ALS control criterion. Since low recoveries resulted from a method defect and were possibly magnified by certain matrix components, no corrective action was appropriate. Alternative procedures that specifically target Antimony are available but were not specified for this project. The associated QA/QC results (e.g. control sample, calibration standards, etc.) indicated the analysis was in control.

Relative Percent Difference Exceptions:
The Relative Percent Difference (RPD) for the replicate analysis of Lead in sample G3-TI-6 was outside the normal ALS control limits. The variability in the results was attributed to the heterogeneous character of the sample. Standard mixing techniques were used, but were not sufficient for complete homogenization of this sample.

No other anomalies associated with the analysis of these samples were observed.

Approved by_____

Chain of Custody

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Chain of Custody

K1 910748

OTIE
Oneida Total Integrated Enterprises

OTIE
317 East Main Street
Ventura, CA 93001
Phone: (805) 585-2110
Fax: (805) 585-2111

Report To:
Contact: Orval Osborne
Company: OTIE
Address: 317 East Main Street
Ventura, CA 93001
Phone: (805) 585-4313
E-Mail: oosborne@otie.com

Bill To:
Contact: Beth Weinfurt
Company: OTIE
Address: 1033 N. Mayfair Road, Suite 200
Milwaukee, WI 53226
Phone: (414) 607-6785
Fax: (414) 257-2492
PO#: _____
Quote: _____

Lab Lot #

Package Sealed Yes No	Samples Sealed Yes No
Received on Ice Yes No	Samples Intact Yes No
Temperature °C of Cooler	
Within Hold Time Yes No	Preserv. indicated Yes No NA
pH Check ok Yes No NA	Res. Cl_2 Check ok Yes No NA
Sample Labels and COC Agree Yes No COC not present	

Sampler Name: Mark Wanek
Signature: M Wanek
Project Name: Tetlin NWR SAR
Project Number: 2015270
Lab: ALS, 1317 S. 13th Avenue Kelso, WA 98626
Lab PM: Greg Salata, 360-501-3376 Gregory.Salata@alsglobal.com
Date Required: NTAT

Laboratory ID	MS MSD	Client Sample ID	Sampling Date	Sampling Time	Mtx	Grab	Lead (total)	Sb, As, Cu, Pb, Zn (total)	Lead, TCLP	Sb, As, Cu, Pb, Zn (TCLP)							Additional Analyses / Remarks
		G3-T1-6	9/24/15	0900	S		X										
		G4-T1-6	9/24/15	0910	S		X	X		X							
		G5-T1-6	9/24/15	0920	S		X										
		G6-T1-6	9/24/15	0925	S		X	X		X							
		G7-T1-6	9/24/15	0930	S		X	X		X							
		G8-T1-6	9/24/15	0935	S		X	X		X							
		G9-T1-6	9/24/15	0950	S		X	X		X							
		G10-T1-6	9/24/15	0955	S		X	X		X							
		G13-T1-6	9/24/15	1035	S		X	X		X							
		G17-T1-6	9/24/15	1130	S		X										
		G6-T1-6X	9/24/15	1100	S		X	X		X							

RELINQUISHED BY	COMPANY	DATE	TIME	RECEIVED BY	COMPANY	DATE	TIME
M Wanek	OTIE	9/26/15		Kelly Reed	ALS	9/28/15	09:00
RELINQUISHED BY	COMPANY	DATE	TIME	RECEIVED BY	COMPANY	DATE	TIME

Matrix Key
S = Soil
SL = Sludge
MS = Miscellaneous
OL = Oil
A = Air
SE = Sediment
SO = Solid
WW = Wastewater
W = Water

Container Key
1. Plastic
2. VOA Vial
3. Amber Glass
4. Widemouth Glass
5. Other

Preservative Key
1. HCl, Cool to 4°
2. H2SO4, Cool to 4°
3. HNO3, Cool to 4°
4. Cool to 4°
5. None

COMMENTS: Hold samples after analysis.
Do not dispose of samples until client notifies lab.
Sb=Antimony. As=Arsenic. Cu=Copper. Pb=Lead.
Zn = Zinc

Date Received / /
Courier: Hand Delivered ☐
Bill of Lading:

PC Greg

Cooler Receipt and Preservation Form

Client / Project: OTIE Service Request *K15* 10798

Received: 9/28/15 Opened: 9/28/15 By: KR Unloaded: 9/28/15 By: KR

1. Samples were received via? *Mail* *Fed Ex* *UPS* *DHL* *PDX* *Courier* *Hand Delivered*
2. Samples were received in: (circle) *Cooler* *Box* *Envelope* *Other*_____ *NA*
3. Were custody seals on coolers? NA Y N If yes, how many and where?_____

   If present, were custody seals intact? Y N If present, were they signed and dated? Y N

Raw Cooler Temp	Corrected. Cooler Temp	Raw Temp Blank	Corrected Temp Blank	Corr. Factor	Thermometer ID	Cooler/COC ID NA	Tracking Number NA	Filed
15.6	15.7	—	—	+0.1	351	1 of 4	781403862069	
14.5	14.7	—	—	+0.2	371	2 of	781403862058	
15.0	15.1	—	—	+0.1	365	3 of 4	781403862070	
15.4	15.3			-0.1	354	4 of 4	808626357441	

4. Packing material: *Inserts* *Baggies* *Bubble Wrap* *Gel Packs* *Wet Ice* *Dry Ice* *Sleeves* large plastic bag
5. Were custody papers properly filled out (ink, signed, etc.)? NA Y N
6. Did all bottles arrive in good condition (unbroken)? *Indicate in the table below.* NA Y N
7. Were all sample labels complete (i.e analysis, preservation, etc.)? NA Y N
8. Did all sample labels and tags agree with custody papers? *Indicate major discrepancies in the table on page 2.* NA Y N
9. Were appropriate bottles/containers and volumes received for the tests indicated? NA Y N
10. Were the pH-preserved bottles (*see SMO GEN SOP*) received at the appropriate pH? *Indicate in the table below* NA Y N
11. Were VOA vials received without headspace? *Indicate in the table below.* NA Y N
12. Was C12/Res negative? NA Y N

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count Bottle Type	Out of Temp	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, & Resolutions:_____

***Page*_____*of*_____**

Total Solids

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	Oneida Total Integrated Enterprises (OTIE)	**Service Request:**	K1510798
Project:	Tetlin NWR SAR/2015270	**Date Collected:**	09/24/15
Sample Matrix:	Soil	**Date Received:**	09/28/15
Analysis Method:	160.3 Modified	**Units:**	Percent
Prep Method:	None	**Basis:**	As Received

Solids, Total

Sample Name	Lab Code	Result	MRL	Dil.	Date Analyzed	Q
G3-TI-6	K1510798-001	**89.1**	-	1	10/15/15 17:51	
G4-TI-6	K1510798-002	**88.3**	-	1	10/15/15 17:51	
G5-TI-6	K1510798-003	**90.0**	-	1	10/15/15 17:51	
G6-TI-6	K1510798-004	**91.3**	-	1	10/15/15 17:51	
G7-TI-6	K1510798-005	**89.9**	-	1	10/15/15 17:51	
G8-TI-6	K1510798-006	**86.1**	-	1	10/15/15 17:51	
G9-TI-6	K1510798-007	**85.6**	-	1	10/15/15 17:51	
G10-TI-6	K1510798-008	**84.3**	-	1	10/15/15 17:51	
G13-TI-6	K1510798-009	**85.7**	-	1	10/15/15 17:51	
G17-TI-6	K1510798-010	**87.0**	-	1	10/15/15 17:51	
G6-TI-6X	K1510798-011	**91.3**	-	1	10/15/15 17:51	

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client:	Oneida Total Integrated Enterprises (OTIE)	**Service Request:**	K1510798
Project	Tetlin NWR SAR/2015270	**Date Collected:**	09/24/15
Sample Matrix:	Soil	**Date Received:**	09/28/15
		Date Analyzed:	10/15/15

Replicate Sample Summary
General Chemistry Parameters

Sample Name:	G3-TI-6	**Units:**	Percent
Lab Code:	K1510798-001	**Basis:**	As Received

Analyte Name	Analysis Method	MRL	Sample Result	Duplicate Sample K1510798-001DUP Result	Average	RPD	RPD Limit
Solids, Total	160.3 Modified	-	89.1	89.5	89.3	<1	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Metals

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

TCLP Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client:	Oneida Total Integrated Enterpri	**Service Request:**	K1510798
Project No.:	2015270	**Date Collected:**	9/24/2015
Project Name:	Tetlin NWR SAR	**Date Received:**	9/28/2015
Matrix:	TCLP	**Units:**	mg/L
		Basis:	NA

Sample Name: **G4-TI-6** **Lab Code:** **K1510798-002**

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	6010C	0.10	5.0	10/14/15	10/14/15	0.10	U	
Arsenic	6010C	0.05	5.0	10/14/15	10/14/15	0.05	U	
Copper	6010C	0.10	5.0	10/14/15	10/14/15	0.10	U	
Lead	6010C	0.05	5.0	10/14/15	10/14/15	1.02		
Zinc	6010C	1.0	5.0	10/14/15	10/14/15	1.0	U	

Comments:

TCLP Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client:	Oneida Total Integrated Enterpri	**Service Request:**	K1510798
Project No.:	2015270	**Date Collected:**	9/24/2015
Project Name:	Tetlin NWR SAR	**Date Received:**	9/28/2015
Matrix:	TCLP	**Units:**	mg/L
		Basis:	NA

Sample Name: **G6-TI-6** **Lab Code:** **K1510798-004**

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	6010C	0.10	5.0	10/14/15	10/14/15	0.21		
Arsenic	6010C	0.05	5.0	10/14/15	10/14/15	0.05	U	
Copper	6010C	0.10	5.0	10/14/15	10/14/15	0.10	U	
Lead	6010C	0.05	5.0	10/14/15	10/14/15	32.0		
Zinc	6010C	1.0	5.0	10/14/15	10/14/15	1.0	U	

Comments:

TCLP Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client:	Oneida Total Integrated Enterpri	**Service Request:**	K1510798
Project No.:	2015270	**Date Collected:**	9/24/2015
Project Name:	Tetlin NWR SAR	**Date Received:**	9/28/2015
Matrix:	TCLP	**Units:**	mg/L
		Basis:	NA

Sample Name: **G7-TI-6** **Lab Code:** **K1510798-005**

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	6010C	0.10	5.0	10/14/15	10/14/15	0.10	U	
Arsenic	6010C	0.05	5.0	10/14/15	10/14/15	0.05	U	
Copper	6010C	0.10	5.0	10/14/15	10/14/15	0.10	U	
Lead	6010C	0.05	5.0	10/14/15	10/14/15	0.85		
Zinc	6010C	1.0	5.0	10/14/15	10/14/15	1.0	U	

Comments:

TCLP Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client:	Oneida Total Integrated Enterpri	**Service Request:**	K1510798
Project No.:	2015270	**Date Collected:**	9/24/2015
Project Name:	Tetlin NWR SAR	**Date Received:**	9/28/2015
Matrix:	TCLP	**Units:**	mg/L
		Basis:	NA

Sample Name: **G8-TI-6** **Lab Code:** **K1510798-006**

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	6010C	0.10	5.0	10/14/15	10/14/15	0.10	U	
Arsenic	6010C	0.05	5.0	10/14/15	10/14/15	0.05	U	
Copper	6010C	0.10	5.0	10/14/15	10/14/15	0.10	U	
Lead	6010C	0.05	5.0	10/14/15	10/14/15	2.96		
Zinc	6010C	1.0	5.0	10/14/15	10/14/15	1.0	U	

Comments:

TCLP Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client:	Oneida Total Integrated Enterpri	**Service Request:**	K1510798
Project No.:	2015270	**Date Collected:**	9/24/2015
Project Name:	Tetlin NWR SAR	**Date Received:**	9/28/2015
Matrix:	TCLP	**Units:**	mg/L
		Basis:	NA

Sample Name: **G9-TI-6** **Lab Code:** **K1510798-007**

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	6010C	0.10	5.0	10/14/15	10/14/15	0.10	U	
Arsenic	6010C	0.05	5.0	10/14/15	10/14/15	0.05	U	
Copper	6010C	0.10	5.0	10/14/15	10/14/15	0.10	U	
Lead	6010C	0.05	5.0	10/14/15	10/14/15	0.53		
Zinc	6010C	1.0	5.0	10/14/15	10/14/15	1.0	U	

Comments:

TCLP Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client:	Oneida Total Integrated Enterpri	**Service Request:**	K1510798
Project No.:	2015270	**Date Collected:**	9/24/2015
Project Name:	Tetlin NWR SAR	**Date Received:**	9/28/2015
Matrix:	TCLP	**Units:**	mg/L
		Basis:	NA

Sample Name: **G10-TI-6** **Lab Code:** **K1510798-008**

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	6010C	0.10	5.0	10/14/15	10/14/15	0.10	U	
Arsenic	6010C	0.05	5.0	10/14/15	10/14/15	0.05	U	
Copper	6010C	0.10	5.0	10/14/15	10/14/15	0.10	U	
Lead	6010C	0.05	5.0	10/14/15	10/14/15	0.42		
Zinc	6010C	1.0	5.0	10/14/15	10/14/15	1.0	U	

Comments:

TCLP Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client:	Oneida Total Integrated Enterpri	**Service Request:**	K1510798
Project No.:	2015270	**Date Collected:**	9/24/2015
Project Name:	Tetlin NWR SAR	**Date Received:**	9/28/2015
Matrix:	TCLP	**Units:**	mg/L
		Basis:	NA

Sample Name: **G13-TI-6** **Lab Code:** **K1510798-009**

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	6010C	0.10	5.0	10/14/15	10/14/15	0.10	U	
Arsenic	6010C	0.05	5.0	10/14/15	10/14/15	0.05	U	
Copper	6010C	0.10	5.0	10/14/15	10/14/15	0.10	U	
Lead	6010C	0.05	5.0	10/14/15	10/14/15	0.05	U	
Zinc	6010C	1.0	5.0	10/14/15	10/14/15	1.0	U	

Comments:

TCLP Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client:	Oneida Total Integrated Enterpri	**Service Request:**	K1510798
Project No.:	2015270	**Date Collected:**	9/24/2015
Project Name:	Tetlin NWR SAR	**Date Received:**	9/28/2015
Matrix:	TCLP	**Units:**	mg/L
		Basis:	NA

Sample Name: **G6-TI-6X** **Lab Code:** **K1510798-011**

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	6010C	0.10	5.0	10/14/15	10/14/15	0.13		
Arsenic	6010C	0.05	5.0	10/14/15	10/14/15	0.05	U	
Copper	6010C	0.10	5.0	10/14/15	10/14/15	0.14		
Lead	6010C	0.05	5.0	10/14/15	10/14/15	41.1		
Zinc	6010C	1.0	5.0	10/14/15	10/14/15	1.0	U	

Comments:

TCLP Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: Oneida Total Integrated Enterpri
Service Request: K1510798
Project No.: 2015270
Date Collected:
Project Name: Tetlin NWR SAR
Date Received:
Matrix: TCLP
Units: mg/L
Basis: NA

Sample Name: Method Blank
Lab Code: KQ1511770-02

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	6010C	0.10	5.0	10/14/15	10/14/15	0.10	U	
Arsenic	6010C	0.05	5.0	10/14/15	10/14/15	0.05	U	
Copper	6010C	0.10	5.0	10/14/15	10/14/15	0.10	U	
Lead	6010C	0.05	5.0	10/14/15	10/14/15	0.05	U	
Zinc	6010C	1.0	5.0	10/14/15	10/14/15	1.0	U	

Comments:

TCLP Metals
- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Oneida Total Integrated Enterpri **Service Request:** K1510798

Project No.: 2015270

Project Name: Tetlin NWR SAR

ICV Source: Inorganic Ventures **CCV Source:** ALS MIXED

Concentration Units: mg/L

	Initial Calibration			Continuing Calibration					
Analyte	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	Method
Antimony	2.50	2.42	97	0.25	0.25	100	0.25	100	6010C
Arsenic	2.50	2.51	100	1.00	1.01	101	1.01	101	6010C
Copper	0.625	0.600	96	0.250	0.251	100	0.249	100	6010C
Lead	2.50	2.43	97	0.25	0.25	100	0.25	100	6010C
Zinc	1.25	1.22	98	0.25	0.25	100	0.25	100	6010C

TCLP Metals
- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Oneida Total Integrated Enterpri **Service Request:** K1510798

Project No.: 2015270

Project Name: Tetlin NWR SAR

ICV Source: Inorganic Ventures **CCV Source:** ALS MIXED

Concentration Units: mg/L

	Initial Calibration			Continuing Calibration					
Analyte	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	Method
Antimony				0.25	0.25	100	0.25	100	6010C
Arsenic				1.00	1.00	100	1.00	100	6010C
Copper				0.250	0.248	99	0.247	99	6010C
Lead				0.25	0.25	100	0.25	100	6010C
Zinc				0.25	0.26	104	0.26	104	6010C

TCLP Metals
- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Oneida Total Integrated Enterpri **Service Request:** K1510798

Project No.: 2015270

Project Name: Tetlin NWR SAR

ICV Source: Inorganic Ventures **CCV Source:** ALS MIXED

Concentration Units: mg/L

	Initial Calibration			Continuing Calibration					
Analyte	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	Method
Antimony				0.25	0.25	100	0.25	100	6010C
Arsenic				1.00	1.00	100	1.01	101	6010C
Copper				0.250	0.247	99	0.248	99	6010C
Lead				0.25	0.25	100	0.25	100	6010C
Zinc				0.25	0.26	104	0.25	100	6010C

TCLP Metals
- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Oneida Total Integrated Enterpri **Service Request:** K1510798

Project No.: 2015270

Project Name: Tetlin NWR SAR

ICV Source: Inorganic Ventures **CCV Source:** ALS MIXED

Concentration Units: mg/L

	Initial Calibration			Continuing Calibration					
Analyte	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	Method
Antimony				0.25	0.25	100	0.25	100	6010C
Arsenic				1.00	1.01	101	1.04	104	6010C
Copper				0.250	0.245	98	0.253	101	6010C
Lead				0.25	0.25	100	0.25	100	6010C
Zinc				0.25	0.25	100	0.25	100	6010C

TCLP Metals
- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Oneida Total Integrated Enterpri **Service Request:** K1510798

Project No.: 2015270

Project Name: Tetlin NWR SAR

ICV Source: Inorganic Ventures **CCV Source:** ALS MIXED

Concentration Units: mg/L

	Initial Calibration			Continuing Calibration					
Analyte	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	Method
Antimony				0.25	0.25	100	0.24	96	6010C
Arsenic				1.00	1.03	103	1.01	101	6010C
Copper				0.250	0.257	103	0.251	100	6010C
Lead				0.25	0.25	100	0.25	100	6010C
Zinc				0.25	0.25	100	0.25	100	6010C

TCLP Metals
- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Oneida Total Integrated Enterpri **Service Request:** K1510798

Project No.: 2015270

Project Name: Tetlin NWR SAR

ICV Source: Inorganic Ventures **CCV Source:** ALS MIXED

Concentration Units: mg/L

	Initial Calibration			Continuing Calibration					
Analyte	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	Method
Antimony				0.25	0.25	100	0.25	100	6010C
Arsenic				1.00	1.01	101	1.00	100	6010C
Copper				0.250	0.246	98	0.246	98	6010C
Lead				0.25	0.24	96	0.24	96	6010C
Zinc				0.25	0.25	100	0.25	100	6010C

TCLP Metals
- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Oneida Total Integrated Enterpri **Service Request:** K1510798

Project No.: 2015270

Project Name: Tetlin NWR SAR

ICV Source: Inorganic Ventures **CCV Source:** ALS MIXED

Concentration Units: mg/L

	Initial Calibration			Continuing Calibration					
Analyte	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	Method
Antimony				0.25	0.25	100	0.25	100	6010C
Arsenic				1.00	1.01	101	1.01	101	6010C
Copper				0.250	0.252	101	0.253	101	6010C
Lead				0.25	0.25	100	0.25	100	6010C
Zinc				0.25	0.25	100	0.25	100	6010C

TCLP Metals
- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Oneida Total Integrated Enterpri **Service Request:** K1510798

Project No.: 2015270

Project Name: Tetlin NWR SAR

ICV Source: Inorganic Ventures **CCV Source:** ALS MIXED

Concentration Units: mg/L

	Initial Calibration			Continuing Calibration					
Analyte	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	Method
Antimony				0.25	0.25	100			6010C
Arsenic				1.00	1.00	100			6010C
Copper				0.250	0.244	98			6010C
Lead				0.25	0.24	96			6010C
Zinc				0.25	0.25	100			6010C

TCLP Metals

- 2a -

LOW LEVEL INITIAL CALIBRATION AND LOW LEVEL CONTINUING CALIBRATION VERIFICATION

Client: Oneida Total Integrated Enterprises (OTIE) **SDG No.:** K1510798

Contract: 2015270 **Lab Code:** ALSK **Case No.:** **SAS No.:**

Initial Calibration Source: Inorganic Ventures

Continuing Calibration Source: ALS MIXED

Sample ID	Analyte	Result mg/L	True Value mg/L	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
LLICV1									
	Antimony	0.0197	0.0200	98	70.0 - 130.0	P	10/14/2015	10:42	101415AICP
	Arsenic	0.0096	0.0100	96	70.0 - 130.0	P	10/14/2015	10:42	101415AICP
	Copper	0.0045	0.0040	112	70.0 - 130.0	P	10/14/2015	10:42	101415AICP
	Lead	0.0104	0.0100	104	70.0 - 130.0	P	10/14/2015	10:42	101415AICP
LLICV1-TCLP									
	Zinc	0.2019	0.2000	101	70.0 - 130.0	P	10/14/2015	10:48	101415AICP
LLCCV1									
	Antimony	0.0189	0.0200	94	70.0 - 130.0	P	10/14/2015	12:55	101415AICP
	Arsenic	0.0102	0.0100	102	70.0 - 130.0	P	10/14/2015	12:55	101415AICP
	Copper	0.0040	0.0040	100	70.0 - 130.0	P	10/14/2015	12:55	101415AICP
	Lead	0.0099	0.0100	99	70.0 - 130.0	P	10/14/2015	12:55	101415AICP
LLCCV1-TCLP									
	Zinc	0.2018	0.2000	101	70.0 - 130.0	P	10/14/2015	12:58	101415AICP
LLCCV2									
	Antimony	0.0193	0.0200	96	70.0 - 130.0	P	10/14/2015	15:04	101415AICP
	Arsenic	0.0089	0.0100	89	70.0 - 130.0	P	10/14/2015	15:04	101415AICP
	Lead	0.0098	0.0100	98	70.0 - 130.0	P	10/14/2015	15:04	101415AICP
LLCCV2,0.5									
	Copper	0.0087	0.0080	109	70.0 - 130.0	P	10/14/2015	15:40	101415AICP
LLCCV2-TCLP									
	Zinc	0.1953	0.2000	98	70.0 - 130.0	P	10/14/2015	15:42	101415AICP
LLCCV3-TCLP									
	Zinc	0.1990	0.2000	100	70.0 - 130.0	P	10/14/2015	19:40	101415AICP

TCLP Metals

- 2a -

LOW LEVEL INITIAL CALIBRATION AND LOW LEVEL CONTINUING CALIBRATION VERIFICATION

Client: Oneida Total Integrated Enterprises (OTIE) **SDG No.:** K1510798

Contract: 2015270 **Lab Code:** ALSK **Case No.:** **SAS No.:**

Initial Calibration Source: Inorganic Ventures

Continuing Calibration Source: ALS MIXED

Sample ID	Analyte	Result mg/L	True Value mg/L	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
LLCCV3									
	Antimony	0.0197	0.0200	98	70.0 - 130.0	P	10/14/2015	19:52	101415AICP
	Arsenic	0.0093	0.0100	93	70.0 - 130.0	P	10/14/2015	19:52	101415AICP
	Lead	0.0096	0.0100	96	70.0 - 130.0	P	10/14/2015	19:52	101415AICP
LLCCV3,0.5									
	Copper	0.0090	0.0080	112	70.0 - 130.0	P	10/14/2015	19:57	101415AICP

TCLP Metals

- 3 -

BLANKS

Client: Oneida Total Integrated Enterpri **Service Request:** K1510798

Project No.: 2015270

Project Name: Tetlin NWR SAR

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): mg/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Method
Antimony	0.02	U	0.02	U	0.02	U	0.02	U	6010C
Arsenic	0.01	U	0.01	U	0.01	U	0.01	U	6010C
Copper	0.02	U	0.02	U	0.02	U	0.02	U	6010C
Lead	0.01	U	0.01	U	0.01	U	0.01	U	6010C
Zinc	0.2	U	0.2	U	0.2	U	0.2	U	6010C

TCLP Metals

- 3 -

BLANKS

Client: Oneida Total Integrated Enterpri **Service Request:** K1510798

Project No.: 2015270

Project Name: Tetlin NWR SAR

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): mg/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Method
Antimony			0.02	U	0.02	U	0.02	U	6010C
Arsenic			0.01	U	0.01	U	0.01	U	6010C
Copper			0.02	U	0.02	U	0.02	U	6010C
Lead			0.01	U	0.01	U	0.01	U	6010C
Zinc			0.2	U	0.2	U	0.2	U	6010C

TCLP Metals

- 3 -

BLANKS

Client: Oneida Total Integrated Enterpri **Service Request:** K1510798

Project No.: 2015270

Project Name: Tetlin NWR SAR

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): mg/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Method
Antimony			0.02	U	0.02	U	0.02	U	6010C
Arsenic			0.01	U	0.01	U	0.01	U	6010C
Copper			0.02	U	0.02	U	0.02	U	6010C
Lead			0.01	U	0.01	U	0.01	U	6010C
Zinc			0.2	U	0.2	U	0.2	U	6010C

TCLP Metals

- 3 -

BLANKS

Client: Oneida Total Integrated Enterpri **Service Request:** K1510798

Project No.: 2015270

Project Name: Tetlin NWR SAR

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): mg/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Method
Antimony			0.02	U	0.02	U	0.02	U	6010C
Arsenic			0.01	U	0.01	U	0.01	U	6010C
Copper			0.02	U	0.02	U	0.02	U	6010C
Lead			0.01	U	0.01	U	0.01	U	6010C
Zinc			0.2	U	0.2	U	0.2	U	6010C

TCLP Metals

- 3 -

BLANKS

Client: Oneida Total Integrated Enterpri **Service Request:** K1510798

Project No.: 2015270

Project Name: Tetlin NWR SAR

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): mg/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Method
Antimony			0.02	U	0.02	U	0.02	U	6010C
Arsenic			0.01	U	0.01	U	0.01	U	6010C
Copper			0.02	U	0.02	U	0.02	U	6010C
Lead			0.01	U	0.01	U	0.01	U	6010C
Zinc			0.2	U	0.2	U	0.2	U	6010C

TCLP Metals

- 4 -

ICP INTERFERENCE CHECK SAMPLE

Client: Oneida Total Integrated Enterpri **Service Request:** K1510798

Project No.: 2015270

Project Name: Tetlin NWR SAR

ICP ID Number: K-ICP-AES-03 **ICS Source:** Inorganic Ventures

Concentration Units): mg/L

Analyte	True		Initial Found			Final Found		
	Sol.A	Sol.AB	Sol.A	Sol.AB	%R	Sol.A	Sol.AB	%R
Antimony	0.0	1.0	0.0	0.9	90	0.0	0.9	90
Arsenic	0.0		0.0	0.0		0.0	0.0	
Copper	0.0	0.5	0.0	0.4	80	0.0	0.5	100
Lead	0.0	1.0	0.0	0.9	90	0.0	0.9	90
Zinc	0.0	1.0	0.0	0.9	90	0.0	0.9	90

TCLP Metals
- 5A -
SPIKE SAMPLE RECOVERY

Client: Oneida Total Integrated Enterpri **Service Request:** K1510798

Project No.: 2015270 **Units:** MG/L

Project Name: Tetlin NWR SAR **Basis:** NA

Matrix: TCLP

Sample Name: Batch QC1S **Lab Code:** K1510799-009S

Analyte	Control Limit %R	Spike Result	C	Sample Result	C	Spike Added	%R	Q	Method
Antimony	75 - 125	2.25		0.10	U	2.50	90		6010C
Arsenic	75 - 125	4.79		0.05	U	5.00	96		6010C
Copper	75 - 125	1.11		0.10	U	1.25	89		6010C
Lead	75 - 125	2.24		0.05	U	2.50	90		6010C
Zinc	75 - 125	2.3		1.0	U	2.50	92		6010C

An empty field in the Control Limit column indicates the control limit is not applicable

TCLP Metals

- 5B -

POST SPIKE SAMPLE RECOVERY

Client: Oneida Total Integrated Enterpri **Service Request:** K1510798

Project No.: 2015270 **Units:** MG/L

Project Name: Tetlin NWR SAR **Basis:** NA

Matrix: WATER

Sample Name: **Batch QC1A** **Lab Code:** **K1510799-009A**

Analyte	Control Limit %R	Spike Result	C	Sample Result	C	Spike Added	%R	Q	Method
Antimony	80 - 120	4.4920		0.0200		5.000	90		6010C
Arsenic	80 - 120	4.7090		0.0100		5.000	94		6010C
Copper	80 - 120	0.8641		0.0200		1.000	86		6010C
Lead	80 - 120	4.5010		0.0100		5.000	90		6010C
Zinc	80 - 120	9.4		0.2		10.000	94		6010C

TCLP Metals

- 6 -

DUPLICATES

Client: Oneida Total Integrated Enterpri **Service Request:** K1510798

Project No.: 2015270 **Units:** MG/L

Project Name: Tetlin NWR SAR **Basis:** NA

Matrix: TCLP

Sample Name: Batch QC1D **Lab Code:** K1510799-009D

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	Method
Antimony		0.10	U	0.10	U			6010C
Arsenic		0.05	U	0.05	U			6010C
Copper		0.10	U	0.10	U			6010C
Lead		0.05	U	0.05	U			6010C
Zinc		1.0	U	1.0	U			6010C

An empty field in the Control Limit column indicates the control limit is not applicable.

TCLP Metals

- 7 -

LABORATORY CONTROL SAMPLE

Client: Oneida Total Integrated Enterpri **Service Request:** K1510798

Project No.: 2015270

Project Name: Tetlin NWR SAR

Aqueous LCS Source: ALS MIXED **Solid LCS Source:**

Analyte	Aqueous (ug/L) True	Aqueous (ug/L) Found	Aqueous (ug/L) %R	Solid (mg/kg) True	Solid (mg/kg) Found	Solid (mg/kg) C	Solid (mg/kg) Limits	Solid (mg/kg) %R
Antimony	2.5	2.20	88					
Arsenic	5	4.67	93					
Copper	1.25	1.07	86					
Lead	2.5	2.19	88					
Zinc	2.5	2.4	96					

TCLP Metals

- 10 -

DETECTION LIMITS

Client: Oneida Total Integrated Enterpri **Service Request:** K1510798

Project No.: 2015270

Project Name: Tetlin NWR SAR

ICP/ICP-MS ID #:

GFAA ID #: **AA ID #:**

Analyte	Wave-length (nm)	Back-ground	MRL mg/L	MDL mg/L	M
Antimony	206.8		0.02	0.02	P
Arsenic	189.0		0.01	0.01	P
Copper	327.3		0.02	0.02	P
Lead	220.3		0.01	0.01	P
Zinc	206.2		0.2	0.2	P

Comments:

TCLP Metals

- 11A -

ICP INTERELEMENT CORRECTION FACTORS

Client: Oneida Total Integrated Enterpri **Service Request:** K1510798

Project No.: 2015270

Project Name: Tetlin NWR SAR

ICP ID Number: **K-ICP-AES-03**

Analyte	Wave-length (nm)	Interelement Correction Factors for: Al	Ca	Fe	Mg	B
Aluminum	394.401	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Antimony	217.581	0.0000000	0.0000000	-0.0009010	0.0000000	0.0000000
Arsenic	189.042	0.0000330	0.0000000	0.0000000	0.0000000	0.0000000
Barium	455.403	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	234.861	0.0000000	0.0000000	0.0000080	0.0000000	0.0000000
Boron	249.678	0.0000000	0.0000000	-0.0006800	0.0000000	0.0000000
Cadmium	226.502	0.0000000	0.0000000	0.0001570	0.0000000	0.0000000
Calcium	393.366	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.716	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cobalt	228.616	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Copper	327.396	0.0000000	0.0000160	0.0000000	0.0000000	0.0000000
Iron	259.94	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Lead	220.353	-0.0000780	0.0000000	0.0000590	0.0000000	0.0000000
Lithium	670.784	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Magnesium	285.213	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	257.61	0.0000000	0.0000000	0.0000120	0.0000370	0.0000000
Molybdenum	202.03	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.604	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Phosphorus	214.914	-0.0007840	0.0000000	0.0006520	0.0000000	0.0000000
Potassium	766.491	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.0	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silicon	251.611	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silver	328.068	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Sodium	589.592	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Strontium	407.771	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.856	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Tin	189.989	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Titanium	336.121	0.0000000	0.0000110	0.0000000	0.0000440	0.0000000
Vanadium	292.402	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000

Comments:

TCLP Metals

- 11A -

ICP INTERELEMENT CORRECTION FACTORS

Client: Oneida Total Integrated Enterpri **Service Request:** K1510798

Project No.: 2015270

Project Name: Tetlin NWR SAR

ICP ID Number: **K-ICP-AES-03**

Zinc	213.856	0.0000000	0.0000000	0.0001170	0.0000000	0.0000000

Comments:

TCLP Metals

- 11B -

ICP INTERELEMENT CORRECTION FACTORS

Client: Oneida Total Integrated Enterpri **Service Request:** K1510798

Project No.: 2015270

Project Name: Tetlin NWR SAR

ICP ID Number: **K-ICP-AES-03**

Analyte	Wave-length (nm)	Interelement Correction Factors for: Ba	Cd	Co	Cr	Cu
Aluminum	394.401	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Antimony	217.581	0.0000000	0.0000000	0.0000000	0.0004650	-0.0009350
Arsenic	189.042	0.0000000	0.0000000	0.0000000	0.0005140	0.0000000
Barium	455.403	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	234.861	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Boron	249.678	0.0000000	0.0000000	0.0025890	0.0003110	0.0000000
Cadmium	226.502	0.0000000	0.0000000	-0.0000110	0.0000330	0.0000000
Calcium	393.366	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.716	0.0000000	-0.0001480	0.0000000	0.0000000	0.0000000
Cobalt	228.616	-0.0001220	0.0000000	0.0000000	0.0000000	0.0000000
Copper	327.396	0.0000000	0.0000000	0.0002590	0.0000000	0.0000000
Iron	259.94	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Lead	220.353	0.0000000	0.0000000	0.0001270	0.0000000	0.0003500
Lithium	670.784	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Magnesium	285.213	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	257.61	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Molybdenum	202.03	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.604	0.0000000	0.0000000	-0.0001870	0.0000000	0.0000000
Phosphorus	214.914	0.0000000	-0.0015740	0.0000000	0.0000000	0.0052080
Potassium	766.491	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.0	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silicon	251.611	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silver	328.068	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Sodium	589.592	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Strontium	407.771	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.856	0.0000000	0.0000000	0.0031300	0.0003080	0.0000000
Tin	189.989	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Titanium	336.121	0.0000000	0.0000000	0.0000270	0.0000000	0.0000000
Vanadium	292.402	0.0000000	0.0000000	0.0000000	-0.0058770	0.0000000

Comments:

TCLP Metals

- 11B -

ICP INTERELEMENT CORRECTION FACTORS

Client: Oneida Total Integrated Enterpri **Service Request:** K1510798

Project No.: 2015270

Project Name: Tetlin NWR SAR

ICP ID Number: **K-ICP-AES-03**

Zinc	213.856	0.0000000	0.0000000	0.0000000	0.0000000	0.0010410

Comments:

TCLP Metals

- 11B -

ICP INTERELEMENT CORRECTION FACTORS

Client: Oneida Total Integrated Enterpri **Service Request:** K1510798

Project No.: 2015270

Project Name: Tetlin NWR SAR

ICP ID Number: **K-ICP-AES-03**

Analyte	Wave-length (nm)	Interelement Correction Factors for: Mn	Mo	Ni	Sb	Si
Aluminum	394.401	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Antimony	217.581	-0.0007640	0.0000000	0.0000000	0.0000000	0.0000000
Arsenic	189.042	-0.0002720	0.0015570	0.0000000	0.0000000	0.0000000
Barium	455.403	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	234.861	-0.0000630	-0.0004470	-0.0000170	0.0000000	0.0000000
Boron	249.678	0.0000000	-0.0019240	0.0000000	0.0000000	0.0000000
Cadmium	226.502	0.0000000	-0.0000110	-0.0000150	0.0000000	0.0000000
Calcium	393.366	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.716	0.0000000	0.0000620	0.0000000	0.0000000	0.0000000
Cobalt	228.616	0.0000000	-0.0012500	0.0001140	0.0000000	0.0000000
Copper	327.396	0.0000000	-0.0002610	0.0000000	0.0000000	0.0000000
Iron	259.94	0.0000000	-0.0002450	0.0000000	0.0000000	0.0000000
Lead	220.353	0.0000000	-0.0007250	0.0002650	0.0000000	0.0000000
Lithium	670.784	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Magnesium	285.213	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	257.61	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Molybdenum	202.03	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.604	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Phosphorus	214.914	-0.0006320	0.0105360	0.0000000	0.0000000	0.0000000
Potassium	766.491	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.0	0.0004420	0.0000000	0.0000000	0.0000000	0.0000000
Silicon	251.611	0.0000000	0.0731890	0.0000000	0.0000000	0.0000000
Silver	328.068	0.0001350	0.0001470	0.0000000	0.0000000	0.0000000
Sodium	589.592	0.0000000	0.0023580	0.0000000	0.0000000	0.0000000
Strontium	407.771	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.856	0.0006530	0.0000000	0.0000000	0.0000000	0.0000000
Tin	189.989	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Titanium	336.121	0.0000000	0.0000400	0.0001110	0.0000000	0.0000000
Vanadium	292.402	-0.0011210	-0.0000900	0.0000000	0.0000000	0.0000000

Comments:

TCLP Metals

- 11B -

ICP INTERELEMENT CORRECTION FACTORS

Client: Oneida Total Integrated Enterpri **Service Request:** K1510798

Project No.: 2015270

Project Name: Tetlin NWR SAR

ICP ID Number: **K-ICP-AES-03**

Zinc	213.856	0.0000000	0.0000000	0.0056230	0.0000000	0.0000000

Comments:

TCLP Metals

- 11B -

ICP INTERELEMENT CORRECTION FACTORS

Client: Oneida Total Integrated Enterpri **Service Request:** K1510798

Project No.: 2015270

Project Name: Tetlin NWR SAR

ICP ID Number: **K-ICP-AES-03**

Analyte	Wave-length (nm)	Interelement Correction Factors for: Ti	V			
Aluminum	394.401	0.0000000	0.0000000			
Antimony	217.581	0.0000000	0.0021710			
Arsenic	189.042	0.0000000	0.0001150			
Barium	455.403	0.0000000	0.0000000			
Beryllium	234.861	0.0000000	0.0000000			
Boron	249.678	0.0000000	-0.0005070			
Cadmium	226.502	0.0001270	0.0000000			
Calcium	393.366	0.0000000	0.0000000			
Chromium	267.716	0.0000000	-0.0000640			
Cobalt	228.616	0.0024440	0.0000000			
Copper	327.396	0.0001170	-0.0000910			
Iron	259.94	0.0000000	0.0000000			
Lead	220.353	0.0000000	0.0000000			
Lithium	670.784	0.0000000	0.0000000			
Magnesium	285.213	0.0000000	0.0000000			
Manganese	257.61	0.0000000	0.0000000			
Molybdenum	202.03	0.0000000	0.0000000			
Nickel	231.604	0.0000000	0.0000000			
Phosphorus	214.914	0.0000000	-0.0020860			
Potassium	766.491	0.0000000	0.0000000			
Selenium	196.0	0.0000000	0.0000000			
Silicon	251.611	0.0000000	0.0000000			
Silver	328.068	0.0000000	0.0000780			
Sodium	589.592	0.0000000	0.0000000			
Strontium	407.771	0.0000000	0.0000000			
Thallium	190.856	-0.0005060	0.0002630			
Tin	189.989	0.0000000	0.0000000			
Titanium	336.121	0.0000000	0.0000000			
Vanadium	292.402	0.0004260	0.0000000			

Comments:

TCLP Metals

- 11B -

ICP INTERELEMENT CORRECTION FACTORS

Client: Oneida Total Integrated Enterpri **Service Request:** K1510798

Project No.: 2015270

Project Name: Tetlin NWR SAR

ICP ID Number: **K-ICP-AES-03**

Zinc	213.856	0.0000000	0.0000000			

Comments:

TCLP Metals
-12-
ICP LINEAR RANGES (QUARTERLY)

Client: Oneida Total Integrated Enterpri **Service Request:** K1510798

Project No.: 2015270

Project Name: Tetlin NWR SAR

ICP ID Number: **K-ICP-AES-03**

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Antimony	15.000	90000	6010C
Arsenic	15.000	90000	6010C
Copper	15.000	90000	6010C
Lead	15.000	22500	6010C
Zinc	15.000	18000	6010C

Comments:

TCLP Metals
-13-
PREPARATION LOG

Client: Oneida Total Integrated Enterpri **Service Request:** K1510798

Project No.: 2015270

Project Name: Tetlin NWR SAR

Method: P

Sample ID	Preparation Date	Initial Volume	Final Volume(mL)
K1510798-002	10/14/2015	50.0	50.0
K1510798-004	10/14/2015	50.0	50.0
K1510798-005	10/14/2015	50.0	50.0
K1510798-006	10/14/2015	50.0	50.0
K1510798-007	10/14/2015	50.0	50.0
K1510798-008	10/14/2015	50.0	50.0
K1510798-009	10/14/2015	50.0	50.0
K1510798-011	10/14/2015	50.0	50.0
K1510799-009D	10/14/2015	50.0	50.0
K1510799-009S	10/14/2015	50.0	50.0
KQ1511770-01	10/14/2015	50.0	50.0
KQ1511770-02	10/14/2015	50.0	50.0

TCLP Metals
- 14 -

ANALYSIS RUN LOG

Client: Oneida Total Integrated Enterpri **Service Request:** K1510798

Project No.: 2015270 **Run Number:** 101415AICP03

Project Name: Tetlin NWR SAR

Instrument ID Number: K-ICP-AES-03 **Method:** P

Start Date: 10/14/2015 **End Date:** 10/14/2015

Sample No.	D/F	Time	% R	Analytes																							
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
BLK	1.0	10:22			X	X							X		X											X	
STD A	1.0	10:25			X								X		X											X	
STD B	1.0	10:27				X																					
ZZZZZZ	1.0	10:30																									
ICV1	1.0	10:32			X	X							X		X											X	
ICB1	1.0	10:34			X	X							X		X											X	
ZZZZZZ	1.0	10:37																									
LLICV1	1.0	10:42			X	X							X		X												
ZZZZZZ	1.0	10:45																									
LLICV1-TCLP	1.0	10:48																								X	
CCV1	1.0	10:51				X																					
CCV1	1.0	10:57			X								X		X											X	
CCB1	1.0	11:03			X	X							X		X											X	
ICS-A1	1.0	11:05			X	X							X		X											X	
ICS-AB1	1.0	11:08			X	X							X		X											X	
ZZZZZZ	1.0	11:11																									
CCV2	1.0	11:15				X																					
CCV2	1.0	11:17			X								X		X											X	
ZZZZZZ	1.0	11:20																									
CCB2	1.0	11:30			X	X							X		X											X	
ZZZZZZ	1.0	11:35																									
ZZZZZZ	1.0	11:37																									
ZZZZZZ	1.0	11:40																									
ZZZZZZ	1.0	11:43																									
ZZZZZZ	1.0	11:50																									
ZZZZZZ	1.0	11:52																									
ZZZZZZ	1.0	11:55																									
ZZZZZZ	5.0	11:57																									
ZZZZZZ	1.0	12:00																									
ZZZZZZ	1.0	12:02																									
CCV3	1.0	12:05				X																					
CCV3	1.0	12:07			X								X		X											X	

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

ALS Group USA, Corp.
dba ALS Environmental

TCLP Metals
- 14 -

ANALYSIS RUN LOG

Client: Oneida Total Integrated Enterpri **Service Request:** K1510798

Project No.: 2015270 **Run Number:** 101415AICP03

Project Name: Tetlin NWR SAR

Instrument ID Number: K-ICP-AES-03 **Method:** P

Start Date: 10/14/2015 **End Date:** 10/14/2015

Sample No.	D/F	Time	% R	Analytes																							
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
CCB3	1.0	12:10			X	X							X		X											X	
ZZZZZZ	1.0	12:12																									
ZZZZZZ	1.0	12:15																									
ZZZZZZ	1.0	12:17																									
ZZZZZZ	1.0	12:20																									
ZZZZZZ	1.0	12:22																									
ZZZZZZ	1.0	12:25																									
ZZZZZZ	1.0	12:34																									
ZZZZZZ	5.0	12:36																									
ZZZZZZ	1.0	12:42																									
ZZZZZZ	1.0	12:45																									
CCV4	1.0	12:48				X																					
CCV4	1.0	12:50			X								X		X											X	
CCB4	1.0	12:53			X	X							X		X											X	
LLCCV1	1.0	12:55			X	X							X		X												
LLCCV1-TCLP	1.0	12:58																								X	
ZZZZZZ	1.0	13:01																									
ZZZZZZ	1.0	13:03																									
ZZZZZZ	5.0	13:05																									
ZZZZZZ	1.0	13:08																									
ZZZZZZ	1.0	13:10																									
ZZZZZZ	1.0	13:12																									
ZZZZZZ	1.0	13:14																									
ZZZZZZ	1.0	13:17																									
ZZZZZZ	1.0	13:19																									
ZZZZZZ	1.0	13:21																									
CCV5	1.0	13:23				X																					
CCV5	1.0	13:26			X								X		X											X	
CCB5	1.0	13:28			X	X							X		X											X	
ZZZZZZ	1.0	13:31																									
ZZZZZZ	1.0	13:33																									
ZZZZZZ	1.0	13:35																									

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

TCLP Metals
- 14 -

ANALYSIS RUN LOG

Client: Oneida Total Integrated Enterpri **Service Request:** K1510798

Project No.: 2015270 **Run Number:** 101415AICP03

Project Name: Tetlin NWR SAR

Instrument ID Number: K-ICP-AES-03 **Method:** P

Start Date: 10/14/2015 **End Date:** 10/14/2015

Sample No.	D/F	Time	% R	Analytes																							
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	1.0	13:38																									
ZZZZZZ	1.0	13:40																									
ZZZZZZ	1.0	13:42																									
ZZZZZZ	1.0	13:44																									
ZZZZZZ	1.0	13:47																									
ZZZZZZ	1.0	13:49																									
ZZZZZZ	1.0	13:51																									
CCV6	1.0	13:54				X																					
CCV6	1.0	13:56			X								X		X											X	
CCB6	1.0	13:59			X	X							X		X											X	
ZZZZZZ	5.0	14:01																									
ZZZZZZ	1.0	14:04																									
ZZZZZZ	1.0	14:06																									
ZZZZZZ	1.0	14:08																									
ZZZZZZ	1.0	14:11																									
ZZZZZZ	1.0	14:13																									
ZZZZZZ	1.0	14:15																									
ZZZZZZ	1.0	14:18																									
ZZZZZZ	1.0	14:20																									
ZZZZZZ	1.0	14:23																									
CCV7	1.0	14:25				X																					
CCV7	1.0	14:28			X								X		X											X	
CCB7	1.0	14:30			X	X							X		X											X	
ZZZZZZ	1.0	14:32																									
ZZZZZZ	1.0	14:35																									
ZZZZZZ	1.0	14:37																									
ZZZZZZ	1.0	14:39																									
ZZZZZZ	1.0	14:42																									
ZZZZZZ	1.0	14:44																									
ZZZZZZ	1.0	14:47																									
ZZZZZZ	1.0	14:49																									
ZZZZZZ	1.0	14:52																									

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

ALS Group USA, Corp.
dba ALS Environmental

TCLP Metals
- 14 -

ANALYSIS RUN LOG

Client: Oneida Total Integrated Enterpri **Service Request:** K1510798

Project No.: 2015270 **Run Number:** 101415AICP03

Project Name: Tetlin NWR SAR

Instrument ID Number: K-ICP-AES-03 **Method:** P

Start Date: 10/14/2015 **End Date:** 10/14/2015

Sample No.	D/F	Time	% R	Analytes																							
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	1.0	14:54																									
CCV8	1.0	14:57				X																					
CCV8	1.0	15:00			X								X		X											X	
CCB8	1.0	15:02			X	X							X		X											X	
LLCCV2	1.0	15:04			X	X									X												
ZZZZZZ	1.0	15:07																									
ZZZZZZ	1.0	15:10																									
LLCCV2,0.5	1.0	15:40											X														
LLCCV2-TCLP	1.0	15:42																								X	
ICS-A2	1.0	15:45			X	X							X		X											X	
ICS-AB2	1.0	15:48			X	X							X		X											X	
ZZZZZZ	1.0	16:02																									
ZZZZZZ	1.0	16:07																									
ZZZZZZ	1.0	16:10																									
ZZZZZZ	1.0	16:12																									
ZZZZZZ	1.0	16:15																									
ZZZZZZ	1.0	16:18																									
ZZZZZZ	1.0	16:22																									
ZZZZZZ	1.0	16:25																									
ZZZZZZ	1.0	16:28																									
ZZZZZZ	1.0	16:30																									
CCV9	1.0	16:33				X																					
CCV9	1.0	16:35			X								X		X											X	
CCB9	1.0	16:38			X	X							X		X											X	
ZZZZZZ	1.0	16:40																									
ZZZZZZ	1.0	16:43																									
ZZZZZZ	1.0	16:45																									
ZZZZZZ	1.0	16:48																									
ZZZZZZ	1.0	16:51																									
ZZZZZZ	1.0	16:54																									
ZZZZZZ	1.0	16:56																									
ZZZZZZ	1.0	16:59																									

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

TCLP Metals
- 14 -

ANALYSIS RUN LOG

Client: Oneida Total Integrated Enterpri **Service Request:** K1510798

Project No.: 2015270 **Run Number:** 101415AICP03

Project Name: Tetlin NWR SAR

Instrument ID Number: K-ICP-AES-03 **Method:** P

Start Date: 10/14/2015 **End Date:** 10/14/2015

Sample No.	D/F	Time	% R	Analytes																							
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	1.0	17:01																									
ZZZZZZ	1.0	17:04																									
CCV10	1.0	17:07				X																					
CCV10	1.0	17:09			X								X		X											X	
CCB10	1.0	17:12			X	X							X		X											X	
ZZZZZZ	1.0	17:14																									
ZZZZZZ	1.0	17:17																									
ZZZZZZ	1.0	17:19																									
ZZZZZZ	1.0	17:22																									
ZZZZZZ	1.0	17:24																									
ZZZZZZ	1.0	17:27																									
ZZZZZZ	5.0	17:29																									
ZZZZZZ	1.0	17:32																									
ZZZZZZ	1.0	17:34																									
ZZZZZZ	1.0	17:37																									
CCV11	1.0	17:39				X																					
CCV11	1.0	17:42			X								X		X											X	
CCB11	1.0	17:44			X	X							X		X											X	
ZZZZZZ	1.0	17:47																									
ZZZZZZ	1.0	17:50																									
ZZZZZZ	1.0	17:52																									
ZZZZZZ	1.0	17:55																									
ZZZZZZ	1.0	17:57																									
ZZZZZZ	1.0	18:00																									
KQ1511770-02	5.0	18:02			X	X							X		X											X	
KQ1511770-01	5.0	18:05			X	X							X		X											X	
ZZZZZZ	5.0	18:07																									
ZZZZZZ	25.0	18:10																									
CCV12	1.0	18:12				X																					
CCV12	1.0	18:15			X								X		X											X	
CCB12	1.0	18:17			X	X							X		X											X	
ZZZZZZ	5.0	18:20																									

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

TCLP Metals
- 14 -

ANALYSIS RUN LOG

Client: Oneida Total Integrated Enterpri **Service Request:** K1510798

Project No.: 2015270 **Run Number:** 101415AICP03

Project Name: Tetlin NWR SAR

Instrument ID Number: K-ICP-AES-03 **Method:** P

Start Date: 10/14/2015 **End Date:** 10/14/2015

Sample No.	D/F	Time	% R	Analytes																							
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	5.0	18:22																									
ZZZZZZ	5.0	18:25																									
ZZZZZZ	5.0	18:27																									
ZZZZZZ	25.0	18:30																									
ZZZZZZ	5.0	18:32																									
ZZZZZZ	5.0	18:35																									
ZZZZZZ	5.0	18:37																									
ZZZZZZ	5.0	18:40																									
ZZZZZZ	5.0	18:42																									
CCV13	1.0	18:45				X																					
CCV13	1.0	18:48			X								X		X											X	
CCB13	1.0	18:50			X	X							X		X											X	
ZZZZZZ	5.0	18:52																									
K1510799-009D	5.0	18:55			X	X							X		X											X	
K1510799-009S	5.0	18:57			X	X							X		X											X	
K1510799-009A	5.0	19:00			X	X							X		X											X	
K1510798-002	5.0	19:02			X	X							X		X											X	
K1510798-004	5.0	19:05			X	X							X		X											X	
K1510798-005	5.0	19:07			X	X							X		X											X	
K1510798-006	5.0	19:10			X	X							X		X											X	
K1510798-007	5.0	19:12			X	X							X		X											X	
K1510798-008	5.0	19:15			X	X							X		X											X	
CCV14	1.0	19:18				X																					
CCV14	1.0	19:20			X								X		X											X	
CCB14	1.0	19:23			X	X							X		X											X	
K1510798-009	5.0	19:25			X	X							X		X											X	
K1510798-011	5.0	19:28			X	X							X		X											X	
ZZZZZZ	5.0	19:30																									
ZZZZZZ	5.0	19:33																									
ZZZZZZ	5.0	19:35																									
ZZZZZZ	5.0	19:38																									
LLCCV3-TCLP	1.0	19:40																								X	

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

TCLP Metals

- 14 -

ANALYSIS RUN LOG

Client: Oneida Total Integrated Enterpri **Service Request:** K1510798

Project No.: 2015270 **Run Number:** 101415AICP03

Project Name: Tetlin NWR SAR

Instrument ID Number: K-ICP-AES-03 **Method:** P

Start Date: 10/14/2015 **End Date:** 10/14/2015

Sample No.	D/F	Time	% R	Analytes																							
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
CCV15	1.0	19:43				X																					
CCV15	1.0	19:45			X								X		X											X	
CCB15	1.0	19:47			X	X							X		X											X	
ZZZZZZ	1.0	19:50																									
LLCCV3	1.0	19:52			X	X									X												
ZZZZZZ	1.0	19:55																									
LLCCV3,0.5	1.0	19:57											X														

*** - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14**

Metals
- 1 -
INORGANIC ANALYSIS DATA PACKAGE

Client:	Oneida Total Integrated Enterpri	**Service Request:**	K1510798
Project No.:	2015270	**Date Collected:**	9/24/2015
Project Name:	Tetlin NWR SAR	**Date Received:**	9/28/2015
Matrix:	SOIL	**Units:**	mg/Kg
		Basis:	DRY

Sample Name: G3-TI-6 **Lab Code:** K1510798-001

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Lead	6010C	1.9	2.0	10/22/15	10/23/15	27.6		*

% Solids: 89.1

Comments:

Metals
- 1 -
INORGANIC ANALYSIS DATA PACKAGE

Client:	Oneida Total Integrated Enterpri	**Service Request:**	K1510798
Project No.:	2015270	**Date Collected:**	9/24/2015
Project Name:	Tetlin NWR SAR	**Date Received:**	9/28/2015
Matrix:	SOIL	**Units:**	mg/Kg
		Basis:	DRY

Sample Name: G4-TI-6 **Lab Code:** K1510798-002

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	6010C	3.8	2.0	10/22/15	10/23/15	3.8	U	N
Arsenic	6010C	3.8	2.0	10/22/15	10/23/15	9.5		
Copper	6010C	0.8	2.0	10/22/15	10/23/15	45.9		
Lead	6010C	1.9	2.0	10/22/15	10/23/15	176		*
Zinc	6010C	0.94	2.0	10/22/15	10/23/15	61.7		

% Solids: 88.3

Comments:

Metals
- 1 -
INORGANIC ANALYSIS DATA PACKAGE

Client:	Oneida Total Integrated Enterpri	**Service Request:**	K1510798
Project No.:	2015270	**Date Collected:**	9/24/2015
Project Name:	Tetlin NWR SAR	**Date Received:**	9/28/2015
Matrix:	SOIL	**Units:**	mg/Kg
		Basis:	DRY

Sample Name: G5-TI-6 **Lab Code:** K1510798-003

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Lead	6010C	1.8	2.0	10/22/15	10/23/15	480		*

% Solids: 90.0

Comments:

Metals
- 1 -
INORGANIC ANALYSIS DATA PACKAGE

Client:	Oneida Total Integrated Enterpri	**Service Request:**	K1510798
Project No.:	2015270	**Date Collected:**	9/24/2015
Project Name:	Tetlin NWR SAR	**Date Received:**	9/28/2015
Matrix:	SOIL	**Units:**	mg/Kg
		Basis:	DRY

Sample Name: G6-TI-6 **Lab Code:** K1510798-004

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	6010C	3.6	2.0	10/22/15	10/23/15	4.7		N
Arsenic	6010C	3.6	2.0	10/22/15	10/23/15	7.7		
Copper	6010C	0.7	2.0	10/22/15	10/23/15	60.8		
Lead	6010C	1.8	2.0	10/22/15	10/23/15	702		*
Zinc	6010C	0.89	2.0	10/22/15	10/23/15	73.0		

% Solids: 91.3

Comments:

Metals
- 1 -
INORGANIC ANALYSIS DATA PACKAGE

Client: Oneida Total Integrated Enterpri
Service Request: K1510798
Project No.: 2015270
Date Collected: 9/24/2015
Project Name: Tetlin NWR SAR
Date Received: 9/28/2015
Matrix: SOIL
Units: mg/Kg
Basis: DRY

Sample Name: G7-TI-6
Lab Code: K1510798-005

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	6010C	3.8	2.0	10/22/15	10/23/15	3.8	U	N
Arsenic	6010C	3.8	2.0	10/22/15	10/23/15	8.8		
Copper	6010C	0.8	2.0	10/22/15	10/23/15	62.5		
Lead	6010C	1.9	2.0	10/22/15	10/23/15	447		*
Zinc	6010C	0.94	2.0	10/22/15	10/23/15	63.3		

% Solids: 89.9

Comments:

Metals
- 1 -
INORGANIC ANALYSIS DATA PACKAGE

Client:	Oneida Total Integrated Enterpri	**Service Request:**	K1510798
Project No.:	2015270	**Date Collected:**	9/24/2015
Project Name:	Tetlin NWR SAR	**Date Received:**	9/28/2015
Matrix:	SOIL	**Units:**	mg/Kg
		Basis:	DRY

Sample Name: G8-TI-6 **Lab Code:** K1510798-006

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	6010C	3.9	2.0	10/22/15	10/23/15	291		N
Arsenic	6010C	3.9	2.0	10/22/15	10/23/15	12.1		
Copper	6010C	0.8	2.0	10/22/15	10/23/15	133		
Lead	6010C	48.4	50.0	10/22/15	10/23/15	15200		*
Zinc	6010C	0.97	2.0	10/22/15	10/23/15	66.1		

% Solids: 86.1

Comments:

Metals
- 1 -
INORGANIC ANALYSIS DATA PACKAGE

Client:	Oneida Total Integrated Enterpri	**Service Request:**	K1510798
Project No.:	2015270	**Date Collected:**	9/24/2015
Project Name:	Tetlin NWR SAR	**Date Received:**	9/28/2015
Matrix:	SOIL	**Units:**	mg/Kg
		Basis:	DRY

Sample Name: G9-TI-6 **Lab Code:** K1510798-007

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	6010C	3.8	2.0	10/22/15	10/23/15	5.3		N
Arsenic	6010C	3.8	2.0	10/22/15	10/23/15	8.8		
Copper	6010C	0.8	2.0	10/22/15	10/23/15	50.6		
Lead	6010C	1.9	2.0	10/22/15	10/23/15	1220		*
Zinc	6010C	0.95	2.0	10/22/15	10/23/15	71.0		

% Solids: 85.6

Comments:

Metals
- 1 -
INORGANIC ANALYSIS DATA PACKAGE

Client: Oneida Total Integrated Enterpri
Service Request: K1510798
Project No.: 2015270
Date Collected: 9/24/2015
Project Name: Tetlin NWR SAR
Date Received: 9/28/2015
Matrix: SOIL
Units: mg/Kg
Basis: DRY

Sample Name: G10-TI-6
Lab Code: K1510798-008

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	6010C	3.8	2.0	10/22/15	10/23/15	3.8	U	N
Arsenic	6010C	3.8	2.0	10/22/15	10/23/15	7.7		
Copper	6010C	0.8	2.0	10/22/15	10/23/15	36.6		
Lead	6010C	1.9	2.0	10/22/15	10/23/15	92.7		*
Zinc	6010C	0.96	2.0	10/22/15	10/23/15	66.4		

% Solids: 84.3

Comments:

Metals
- 1 -
INORGANIC ANALYSIS DATA PACKAGE

Client:	Oneida Total Integrated Enterpri	**Service Request:**	K1510798
Project No.:	2015270	**Date Collected:**	9/24/2015
Project Name:	Tetlin NWR SAR	**Date Received:**	9/28/2015
Matrix:	SOIL	**Units:**	mg/Kg
		Basis:	DRY

Sample Name: G13-TI-6 **Lab Code:** K1510798-009

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	6010C	3.8	2.0	10/22/15	10/23/15	3.8	U	N
Arsenic	6010C	3.8	2.0	10/22/15	10/23/15	8.2		
Copper	6010C	0.8	2.0	10/22/15	10/23/15	38.8		
Lead	6010C	1.9	2.0	10/22/15	10/23/15	25.9		*
Zinc	6010C	0.94	2.0	10/22/15	10/23/15	70.0		

% Solids: 85.7

Comments:

Metals
- 1 -
INORGANIC ANALYSIS DATA PACKAGE

Client:	Oneida Total Integrated Enterpri	**Service Request:**	K1510798
Project No.:	2015270	**Date Collected:**	9/24/2015
Project Name:	Tetlin NWR SAR	**Date Received:**	9/28/2015
Matrix:	SOIL	**Units:**	mg/Kg
		Basis:	DRY

Sample Name: G17-TI-6 **Lab Code:** K1510798-010

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Lead	6010C	1.9	2.0	10/22/15	10/23/15	26.8		*

% Solids: 87.0

Comments:

Metals
- 1 -
INORGANIC ANALYSIS DATA PACKAGE

Client:	Oneida Total Integrated Enterpri	**Service Request:**	K1510798
Project No.:	2015270	**Date Collected:**	9/24/2015
Project Name:	Tetlin NWR SAR	**Date Received:**	9/28/2015
Matrix:	SOIL	**Units:**	mg/Kg
		Basis:	DRY

Sample Name: G6-TI-6X **Lab Code:** K1510798-011

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	6010C	3.5	2.0	10/22/15	10/23/15	7.5		N
Arsenic	6010C	3.5	2.0	10/22/15	10/23/15	7.4		
Copper	6010C	0.7	2.0	10/22/15	10/23/15	59.1		
Lead	6010C	1.8	2.0	10/22/15	10/23/15	878		*
Zinc	6010C	0.88	2.0	10/22/15	10/23/15	72.5		

% Solids: 91.3

Comments:

Metals
- 1 -
INORGANIC ANALYSIS DATA PACKAGE

Client: Oneida Total Integrated Enterpri
Service Request: K1510798
Project No.: 2015270
Date Collected:
Project Name: Tetlin NWR SAR
Date Received:
Matrix: SOIL
Units: mg/Kg
Basis: DRY

Sample Name: Method Blank
Lab Code: KQ1512179-01

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	6010C	4.0	2.0	10/22/15	10/23/15	4.0	U	N
Arsenic	6010C	4.0	2.0	10/22/15	10/23/15	4.0	U	
Copper	6010C	0.8	2.0	10/22/15	10/23/15	0.8	U	
Lead	6010C	2.0	2.0	10/22/15	10/23/15	2.0	U	*
Zinc	6010C	1.0	2.0	10/22/15	10/23/15	1.0	U	

% Solids: 100.0

Comments:

Metals
- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Oneida Total Integrated Enterpri **Service Request:** K1510798

Project No.: 2015270

Project Name: Tetlin NWR SAR

ICV Source: Inorganic Ventures **CCV Source:** ALS MIXED

Concentration Units: ug/L

	Initial Calibration			Continuing Calibration					
Analyte	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	Method
Antimony	2500	2392	96	250	251	100	250	100	6010C
Arsenic	2500	2490	100	1000	1004	100	1004	100	6010C
Copper	625	591	95	250	249	100	250	100	6010C
Lead	2500	2427	97	250	252	101	253	101	6010C
Zinc	1250	1219	98	250	251	100	249	100	6010C

Metals
- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Oneida Total Integrated Enterpri **Service Request:** K1510798

Project No.: 2015270

Project Name: Tetlin NWR SAR

ICV Source: Inorganic Ventures **CCV Source:** ALS MIXED

Concentration Units: ug/L

	Initial Calibration			Continuing Calibration					
Analyte	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	Method
Antimony				250	254	102	251	100	6010C
Arsenic				1000	1017	102	1017	102	6010C
Copper				250	251	100	251	100	6010C
Lead				250	249	100	252	101	6010C
Zinc				250	250	100	250	100	6010C

Metals
- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Oneida Total Integrated Enterpri **Service Request:** K1510798

Project No.: 2015270

Project Name: Tetlin NWR SAR

ICV Source: Inorganic Ventures **CCV Source:** ALS MIXED

Concentration Units: ug/L

	Initial Calibration			Continuing Calibration					
Analyte	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	Method
Antimony				250	251	100	257	103	6010C
Arsenic				1000	1012	101	1031	103	6010C
Copper				250	246	98	256	102	6010C
Lead				250	256	102	257	103	6010C
Zinc				250	252	101	252	101	6010C

Metals
- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Oneida Total Integrated Enterpri **Service Request:** K1510798

Project No.: 2015270

Project Name: Tetlin NWR SAR

ICV Source: Inorganic Ventures **CCV Source:** ALS MIXED

Concentration Units: ug/L

	Initial Calibration			Continuing Calibration					
Analyte	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	Method
Antimony				250	254	102			6010C
Arsenic				1000	1028	103			6010C
Copper				250	250	100			6010C
Lead				250	251	100			6010C
Zinc				250	249	100			6010C

Metals

- 2a -

LOW LEVEL INITIAL CALIBRATION AND LOW LEVEL CONTINUING CALIBRATION VERIFICATION

Client: Oneida Total Integrated Enterprises (OTIE) **SDG No.:** K1510798

Contract: 2015270 **Lab Code:** ALSK **Case No.:** **SAS No.:**

Initial Calibration Source: Inorganic Ventures

Continuing Calibration Source: ALS MIXED

Sample ID	Analyte	Result ug/L	True Value ug/L	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
LLICV1									
	Antimony	22.5	20.0	112	70.0 - 130.0	P	10/23/2015	13:39	102315AICP
	Arsenic	11.0	10.0	110	70.0 - 130.0	P	10/23/2015	13:39	102315AICP
	Copper	3.80	4.0	95	70.0 - 130.0	P	10/23/2015	13:39	102315AICP
	Lead	9.3	10.0	93	70.0 - 130.0	P	10/23/2015	13:39	102315AICP
	Zinc	4.0	4.0	100	70.0 - 130.0	P	10/23/2015	13:39	102315AICP
LLCCV1									
	Antimony	22.2	20.0	111	70.0 - 130.0	P	10/23/2015	14:48	102315AICP
	Arsenic	10.6	10.0	106	70.0 - 130.0	P	10/23/2015	14:48	102315AICP
	Copper	5.00	4.0	125	70.0 - 130.0	P	10/23/2015	14:48	102315AICP
	Lead	9.5	10.0	95	70.0 - 130.0	P	10/23/2015	14:48	102315AICP
	Zinc	4.3	4.0	108	70.0 - 130.0	P	10/23/2015	14:48	102315AICP
LLCCV2									
	Antimony	22.7	20.0	114	70.0 - 130.0	P	10/23/2015	15:32	102315AICP
	Arsenic	9.0	10.0	90	70.0 - 130.0	P	10/23/2015	15:32	102315AICP
	Copper	4.80	4.0	120	70.0 - 130.0	P	10/23/2015	15:32	102315AICP
	Lead	9.8	10.0	98	70.0 - 130.0	P	10/23/2015	15:32	102315AICP
	Zinc	4.2	4.0	105	70.0 - 130.0	P	10/23/2015	15:32	102315AICP
LLCCV3									
	Antimony	23.3	20.0	116	70.0 - 130.0	P	10/23/2015	16:39	102315AICP
	Arsenic	9.4	10.0	94	70.0 - 130.0	P	10/23/2015	16:39	102315AICP
	Copper	4.30	4.0	108	70.0 - 130.0	P	10/23/2015	16:39	102315AICP
	Lead	9.6	10.0	96	70.0 - 130.0	P	10/23/2015	16:39	102315AICP
	Zinc	4.3	4.0	108	70.0 - 130.0	P	10/23/2015	16:39	102315AICP
LLCCV4									
	Antimony	23.1	20.0	116	70.0 - 130.0	P	10/23/2015	17:17	102315AICP
	Arsenic	10.1	10.0	101	70.0 - 130.0	P	10/23/2015	17:17	102315AICP
	Copper	4.50	4.0	112	70.0 - 130.0	P	10/23/2015	17:17	102315AICP
	Lead	10.3	10.0	103	70.0 - 130.0	P	10/23/2015	17:17	102315AICP
	Zinc	4.2	4.0	105	70.0 - 130.0	P	10/23/2015	17:17	102315AICP

Metals

- 3 -

BLANKS

Client: Oneida Total Integrated Enterpri **Service Request:** K1510798

Project No.: 2015270

Project Name: Tetlin NWR SAR

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): ug/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Method
Antimony	20.0	U	20.0	U	20.0	U	20.0	U	6010C
Arsenic	20.0	U	20.0	U	20.0	U	20.0	U	6010C
Copper	4.0	U	4.0	U	4.0	U	4.0	U	6010C
Lead	10.0	U	10.0	U	10.0	U	10.0	U	6010C
Zinc	5.00	U	5.00	U	5.00	U	5.00	U	6010C

Metals

- 3 -

BLANKS

Client: Oneida Total Integrated Enterpri **Service Request:** K1510798

Project No.: 2015270

Project Name: Tetlin NWR SAR

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): ug/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Method
Antimony			20.0	U	20.0	U	20.0	U	6010C
Arsenic			20.0	U	20.0	U	20.0	U	6010C
Copper			4.0	U	4.0	U	4.0	U	6010C
Lead			10.0	U	10.0	U	10.0	U	6010C
Zinc			5.00	U	5.00	U	5.00	U	6010C

Metals

- 3 -

BLANKS

Client: Oneida Total Integrated Enterpri **Service Request:** K1510798

Project No.: 2015270

Project Name: Tetlin NWR SAR

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): ug/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Method
Antimony			20.0	U					6010C
Arsenic			20.0	U					6010C
Copper			4.0	U					6010C
Lead			10.0	U					6010C
Zinc			5.00	U					6010C

Metals

- 4 -

ICP INTERFERENCE CHECK SAMPLE

Client: Oneida Total Integrated Enterpri **Service Request:** K1510798

Project No.: 2015270

Project Name: Tetlin NWR SAR

ICP ID Number: K-ICP-AES-03 **ICS Source:** Inorganic Ventures

Concentration Units): ug/L

Analyte	True		Initial Found			Final Found		
	Sol.A	Sol.AB	Sol.A	Sol.AB	%R	Sol.A	Sol.AB	%R
Antimony		1000	11	843	84			
Arsenic			2	-1				
Copper		500	-1	429	86			
Lead		1000	-14	833	83			
Zinc		1000	1	879	88			

Metals

- 5A -

SPIKE SAMPLE RECOVERY

Client: Oneida Total Integrated Enterpri **Service Request:** K1510798

Project No.: 2015270 **Units:** MG/KG

Project Name: Tetlin NWR SAR **Basis:** DRY

Matrix: SOIL **% Solids:** 89.1

Sample Name: G3-TI-6S **Lab Code:** K1510798-001S

Analyte	Control Limit %R	Spike Result	C	Sample Result	C	Spike Added	%R	Q	Method
Antimony	75 - 125	47.3		3.8	U	92.75	51	N	6010C
Arsenic	75 - 125	96.8		6.6		92.75	97		6010C
Copper	75 - 125	95.6		52.3		46.38	93		6010C
Lead	75 - 125	118		27.6		92.75	97		6010C
Zinc	75 - 125	162		75.3		92.75	93		6010C

An empty field in the Control Limit column indicates the control limit is not applicable

Metals

- 5B -
POST SPIKE SAMPLE RECOVERY

Client: Oneida Total Integrated Enterpri **Service Request:** K1510798

Project No.: 2015270 **Units:** UG/L

Project Name: Tetlin NWR SAR **Basis:** DRY

Matrix: WATER

Sample Name: G3-TI-6A **Lab Code:** K1510798-001A

Analyte	Control Limit %R	Spike Result	C	Sample Result	C	Spike Added	%R	Q	Method
Antimony	80 - 120	4388.0		20.0		5000	88		6010C
Arsenic	80 - 120	2354.0		34.4		2500	93		6010C
Copper	80 - 120	834.7		272.8		625	90		6010C
Lead	80 - 120	2373.0		144.1		2500	89		6010C
Zinc	80 - 120	1491.00		392.60		1250	88		6010C

Metals

- 6 -

DUPLICATES

Client: Oneida Total Integrated Enterpri **Service Request:** K1510798

Project No.: 2015270 **Units:** MG/KG

Project Name: Tetlin NWR SAR **Basis:** DRY

Matrix: SOIL **% Solids:** 89.1

Sample Name: **G3-TI-6D** **Lab Code:** **K1510798-001D**

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	Method
Antimony		3.8	U	3.7	U			6010C
Arsenic		6.6		24.8		115.9		6010C
Copper	20	52.3		50.7		3.1		6010C
Lead	20	27.6		38.2		32.2	*	6010C
Zinc	20	75.3		78.4		4.0		6010C

An empty field in the Control Limit column indicates the control limit is not applicable.

Metals

- 7 -

LABORATORY CONTROL SAMPLE

Client: Oneida Total Integrated Enterpri **Service Request:** K1510798

Project No.: 2015270

Project Name: Tetlin NWR SAR

Aqueous LCS Source: **Solid LCS Source:** **ERA D080-540**

Analyte	Aqueous (ug/L) True	Aqueous (ug/L) Found	Aqueous (ug/L) %R	Solid (mg/kg) True	Solid (mg/kg) Found	Solid (mg/kg) C Limits		Solid (mg/kg) %R
Antimony				88.8	83.0	22	259	93
Arsenic				139	141	70	140	101
Copper				168	172	76	125	102
Lead				133	129	73	128	97
Zinc				189	189	70	131	100

Metals

- 9 -

ICP SERIAL DILUTIONS

Client: Oneida Total Integrated Enterpri **Service Request:** K1510798

Project No.: 2015270 **Units:** UG/L

Project Name: Tetlin NWR SAR

Sample Name: G3-TI-6L **Lab Code:** K1510798-001L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	M
Antimony	20.0	U	100.0	U			P
Arsenic	34.4		100.0	U	100.0		P
Copper	272.8		280.0		2.6		P
Lead	144.1		153.0		6.2		P
Zinc	392.60		423.00		7.7		P

Metals

- 10 -

DETECTION LIMITS

Client: Oneida Total Integrated Enterpri **Service Request:** K1510798

Project No.: 2015270

Project Name: Tetlin NWR SAR

ICP/ICP-MS ID #:

GFAA ID #: **AA ID #:**

Analyte	Wave-length (nm)	Back-ground	MRL ug/L	MDL ug/L	M
Antimony	206.8		20.0	20.0	P
Arsenic	189.0		20.0	20.0	P
Copper	327.3		4.0	4.0	P
Lead	220.3		10.0	10.0	P
Zinc	206.2		5.00	5.00	P

Comments:

Metals

- 11A -

ICP INTERELEMENT CORRECTION FACTORS

Client: Oneida Total Integrated Enterpri **Service Request:** K1510798

Project No.: 2015270

Project Name: Tetlin NWR SAR

ICP ID Number: **K-ICP-AES-03**

Analyte	Wave-length (nm)	Interelement Correction Factors for: Al	Ca	Fe	Mg	B
Aluminum	394.401	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Antimony	217.581	0.0000000	0.0000000	-0.0009010	0.0000000	0.0000000
Arsenic	189.042	0.0000330	0.0000000	0.0000000	0.0000000	0.0000000
Barium	455.403	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	234.861	0.0000000	0.0000000	0.0000080	0.0000000	0.0000000
Boron	249.678	0.0000000	0.0000000	-0.0006800	0.0000000	0.0000000
Cadmium	226.502	0.0000000	0.0000000	0.0001570	0.0000000	0.0000000
Calcium	393.366	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.716	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cobalt	228.616	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Copper	327.396	0.0000000	0.0000160	0.0000000	0.0000000	0.0000000
Iron	259.94	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Lead	220.353	-0.0000780	0.0000000	0.0000590	0.0000000	0.0000000
Lithium	670.784	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Magnesium	285.213	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	257.61	0.0000000	0.0000000	0.0000120	0.0000370	0.0000000
Molybdenum	202.03	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.604	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Phosphorus	214.914	-0.0007840	0.0000000	0.0006520	0.0000000	0.0000000
Potassium	766.491	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.0	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silicon	251.611	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silver	328.068	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Sodium	589.592	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Strontium	407.771	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.856	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Tin	189.989	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Titanium	336.121	0.0000000	0.0000110	0.0000000	0.0000440	0.0000000
Vanadium	292.402	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000

Comments:

Metals

- 11A -

ICP INTERELEMENT CORRECTION FACTORS

Client: Oneida Total Integrated Enterpri **Service Request:** K1510798

Project No.: 2015270

Project Name: Tetlin NWR SAR

ICP ID Number: **K-ICP-AES-03**

Zinc	213.856	0.0000000	0.0000000	0.0001170	0.0000000	0.0000000

Comments:

Metals

- 11B -

ICP INTERELEMENT CORRECTION FACTORS

Client: Oneida Total Integrated Enterpri **Service Request:** K1510798

Project No.: 2015270

Project Name: Tetlin NWR SAR

ICP ID Number: **K-ICP-AES-03**

Analyte	Wave-length (nm)	Interelement Correction Factors for: Ba	Cd	Co	Cr	Cu
Aluminum	394.401	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Antimony	217.581	0.0000000	0.0000000	0.0000000	0.0004650	-0.0009350
Arsenic	189.042	0.0000000	0.0000000	0.0000000	0.0005140	0.0000000
Barium	455.403	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	234.861	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Boron	249.678	0.0000000	0.0000000	0.0025890	0.0003110	0.0000000
Cadmium	226.502	0.0000000	0.0000000	-0.0000110	0.0000330	0.0000000
Calcium	393.366	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.716	0.0000000	-0.0001480	0.0000000	0.0000000	0.0000000
Cobalt	228.616	-0.0001220	0.0000000	0.0000000	0.0000000	0.0000000
Copper	327.396	0.0000000	0.0000000	0.0002590	0.0000000	0.0000000
Iron	259.94	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Lead	220.353	0.0000000	0.0000000	0.0001270	0.0000000	0.0003500
Lithium	670.784	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Magnesium	285.213	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	257.61	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Molybdenum	202.03	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.604	0.0000000	0.0000000	-0.0001870	0.0000000	0.0000000
Phosphorus	214.914	0.0000000	-0.0015740	0.0000000	0.0000000	0.0052080
Potassium	766.491	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.0	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silicon	251.611	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silver	328.068	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Sodium	589.592	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Strontium	407.771	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.856	0.0000000	0.0000000	0.0031300	0.0003080	0.0000000
Tin	189.989	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Titanium	336.121	0.0000000	0.0000000	0.0000270	0.0000000	0.0000000
Vanadium	292.402	0.0000000	0.0000000	0.0000000	-0.0058770	0.0000000

Comments:

Metals

- 11B -

ICP INTERELEMENT CORRECTION FACTORS

Client: Oneida Total Integrated Enterpri **Service Request:** K1510798

Project No.: 2015270

Project Name: Tetlin NWR SAR

ICP ID Number: **K-ICP-AES-03**

Zinc	213.856	0.0000000	0.0000000	0.0000000	0.0000000	0.0010410

Comments:

Metals

- 11B -

ICP INTERELEMENT CORRECTION FACTORS

Client: Oneida Total Integrated Enterpri **Service Request:** K1510798

Project No.: 2015270

Project Name: Tetlin NWR SAR

ICP ID Number: **K-ICP-AES-03**

Analyte	Wave-length (nm)	Interelement Correction Factors for: Mn	Mo	Ni	Sb	Si
Aluminum	394.401	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Antimony	217.581	-0.0007640	0.0000000	0.0000000	0.0000000	0.0000000
Arsenic	189.042	-0.0002720	0.0015570	0.0000000	0.0000000	0.0000000
Barium	455.403	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	234.861	-0.0000630	-0.0004470	-0.0000170	0.0000000	0.0000000
Boron	249.678	0.0000000	-0.0019240	0.0000000	0.0000000	0.0000000
Cadmium	226.502	0.0000000	-0.0000110	-0.0000150	0.0000000	0.0000000
Calcium	393.366	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.716	0.0000000	0.0000620	0.0000000	0.0000000	0.0000000
Cobalt	228.616	0.0000000	-0.0012500	0.0001140	0.0000000	0.0000000
Copper	327.396	0.0000000	-0.0002610	0.0000000	0.0000000	0.0000000
Iron	259.94	0.0000000	-0.0002450	0.0000000	0.0000000	0.0000000
Lead	220.353	0.0000000	-0.0007250	0.0002650	0.0000000	0.0000000
Lithium	670.784	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Magnesium	285.213	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	257.61	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Molybdenum	202.03	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.604	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Phosphorus	214.914	-0.0006320	0.0105360	0.0000000	0.0000000	0.0000000
Potassium	766.491	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.0	0.0004420	0.0000000	0.0000000	0.0000000	0.0000000
Silicon	251.611	0.0000000	0.0731890	0.0000000	0.0000000	0.0000000
Silver	328.068	0.0001350	0.0001470	0.0000000	0.0000000	0.0000000
Sodium	589.592	0.0000000	0.0023580	0.0000000	0.0000000	0.0000000
Strontium	407.771	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.856	0.0006530	0.0000000	0.0000000	0.0000000	0.0000000
Tin	189.989	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Titanium	336.121	0.0000000	0.0000400	0.0001110	0.0000000	0.0000000
Vanadium	292.402	-0.0011210	-0.0000900	0.0000000	0.0000000	0.0000000

Comments:

Metals

- 11B -

ICP INTERELEMENT CORRECTION FACTORS

Client: Oneida Total Integrated Enterpri **Service Request:** K1510798

Project No.: 2015270

Project Name: Tetlin NWR SAR

ICP ID Number: **K-ICP-AES-03**

Zinc	213.856	0.0000000	0.0000000	0.0056230	0.0000000	0.0000000

Comments:

Metals

- 11B -

ICP INTERELEMENT CORRECTION FACTORS

Client: Oneida Total Integrated Enterpri **Service Request:** K1510798

Project No.: 2015270

Project Name: Tetlin NWR SAR

ICP ID Number: **K-ICP-AES-03**

Analyte	Wave-length (nm)	Interelement Correction Factors for: Ti	V			
Aluminum	394.401	0.0000000	0.0000000			
Antimony	217.581	0.0000000	0.0021710			
Arsenic	189.042	0.0000000	0.0001150			
Barium	455.403	0.0000000	0.0000000			
Beryllium	234.861	0.0000000	0.0000000			
Boron	249.678	0.0000000	-0.0005070			
Cadmium	226.502	0.0001270	0.0000000			
Calcium	393.366	0.0000000	0.0000000			
Chromium	267.716	0.0000000	-0.0000640			
Cobalt	228.616	0.0024440	0.0000000			
Copper	327.396	0.0001170	-0.0000910			
Iron	259.94	0.0000000	0.0000000			
Lead	220.353	0.0000000	0.0000000			
Lithium	670.784	0.0000000	0.0000000			
Magnesium	285.213	0.0000000	0.0000000			
Manganese	257.61	0.0000000	0.0000000			
Molybdenum	202.03	0.0000000	0.0000000			
Nickel	231.604	0.0000000	0.0000000			
Phosphorus	214.914	0.0000000	-0.0020860			
Potassium	766.491	0.0000000	0.0000000			
Selenium	196.0	0.0000000	0.0000000			
Silicon	251.611	0.0000000	0.0000000			
Silver	328.068	0.0000000	0.0000780			
Sodium	589.592	0.0000000	0.0000000			
Strontium	407.771	0.0000000	0.0000000			
Thallium	190.856	-0.0005060	0.0002630			
Tin	189.989	0.0000000	0.0000000			
Titanium	336.121	0.0000000	0.0000000			
Vanadium	292.402	0.0004260	0.0000000			

Comments:

Metals

- 11B -

ICP INTERELEMENT CORRECTION FACTORS

Client: Oneida Total Integrated Enterpri **Service Request:** K1510798

Project No.: 2015270

Project Name: Tetlin NWR SAR

ICP ID Number: **K-ICP-AES-03**

Zinc	213.856	0.0000000	0.0000000			

Comments:

Metals
-12-
ICP LINEAR RANGES (QUARTERLY)

Client: Oneida Total Integrated Enterpri **Service Request:** K1510798

Project No.: 2015270

Project Name: Tetlin NWR SAR

ICP ID Number: **K-ICP-AES-03**

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Antimony	15.000	90000	6010C
Arsenic	15.000	90000	6010C
Copper	15.000	90000	6010C
Lead	15.000	22500	6010C
Zinc	15.000	18000	6010C

Comments:

Metals
-13-
PREPARATION LOG

Client: Oneida Total Integrated Enterpri **Service Request:** K1510798

Project No.: 2015270

Project Name: Tetlin NWR SAR

Method: P

Sample ID	Preparation Date	Initial Weight (g)	Final Volume(mL)
K1510798-001	10/22/2015	1.17	100.0
K1510798-001D	10/22/2015	1.21	100.0
K1510798-001S	10/22/2015	1.21	100.0
K1510798-002	10/22/2015	1.20	100.0
K1510798-003	10/22/2015	1.25	100.0
K1510798-004	10/22/2015	1.23	100.0
K1510798-005	10/22/2015	1.18	100.0
K1510798-006	10/22/2015	1.20	100.0
K1510798-007	10/22/2015	1.23	100.0
K1510798-008	10/22/2015	1.24	100.0
K1510798-009	10/22/2015	1.24	100.0
K1510798-010	10/22/2015	1.23	100.0
K1510798-011	10/22/2015	1.25	100.0
KQ1512179-01	10/22/2015	1.00	100.0
KQ1512179-02	10/22/2015	1.01	100.0

ALS Group USA, Corp.
dba ALS Environmental

Metals
- 14 -
ANALYSIS RUN LOG

Client: Oneida Total Integrated Enterpri **Service Request:** K1510798

Project No.: 2015270 **Run Number:** 102315AICP03

Project Name: Tetlin NWR SAR

Instrument ID Number: K-ICP-AES-03 **Method:** P

Start Date: 10/23/2015 **End Date:** 10/23/2015

Sample No.	D/F	Time	% R	Analytes																							
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
BLK	1.0	13:25			X	X							X		X											X	
STD A	1.0	13:27			X								X		X											X	
STD B	1.0	13:29				X																					
ICV1	1.0	13:32																									
ICV1	1.0	13:35			X	X							X		X											X	
ICB1	1.0	13:37			X	X							X		X											X	
LLICV1	1.0	13:39			X	X							X		X											X	
ZZZZZZ	1.0	13:42																									
ZZZZZZ	1.0	13:44																									
CCV1	1.0	13:47				X																					
CCV1	1.0	13:49			X								X		X											X	
CCB1	1.0	13:51			X	X							X		X											X	
ICS-A1	1.0	13:54			X	X							X		X											X	
ICS-AB1	1.0	13:57			X	X							X		X											X	
ZZZZZZ	1.0	14:00																									
CCV2	1.0	14:02				X																					
CCV2	1.0	14:05			X								X		X											X	
CCB2	1.0	14:08			X	X							X		X											X	
ZZZZZZ	1.0	14:13																									
ZZZZZZ	1.0	14:16																									
ZZZZZZ	1.0	14:18																									
ZZZZZZ	1.0	14:20																									
ZZZZZZ	1.0	14:23																									
ZZZZZZ	1.0	14:25																									
ZZZZZZ	1.0	14:28																									
ZZZZZZ	1.0	14:30																									
ZZZZZZ	1.0	14:35																									
ZZZZZZ	1.0	14:38																									
CCV3	1.0	14:40				X																					
CCV3	1.0	14:43			X								X		X											X	
CCB3	1.0	14:45			X	X							X		X											X	
LLCCV1	1.0	14:48			X	X							X		X											X	

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

Metals
- 14 -
ANALYSIS RUN LOG

Client: Oneida Total Integrated Enterpri **Service Request:** K1510798

Project No.: 2015270 **Run Number:** 102315AICP03

Project Name: Tetlin NWR SAR

Instrument ID Number: K-ICP-AES-03 **Method:** P

Start Date: 10/23/2015 **End Date:** 10/23/2015

Sample No.	D/F	Time	% R	Analytes																							
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	1.0	14:52																									
ZZZZZZ	1.0	14:55																									
ZZZZZZ	1.0	14:58																									
ZZZZZZ	1.0	15:00																									
ZZZZZZ	1.0	15:03																									
ZZZZZZ	1.0	15:05																									
ZZZZZZ	2.0	15:08																									
ZZZZZZ	2.0	15:10																									
ZZZZZZ	2.0	15:12																									
ZZZZZZ	10.0	15:15																									
ZZZZZZ	2.0	15:17																									
ZZZZZZ	2.0	15:19																									
CCV4	1.0	15:22				X																					
CCV4	1.0	15:24			X								X		X											X	
CCB4	1.0	15:27			X	X							X		X											X	
LLCCV2	1.0	15:32			X	X							X		X											X	
ZZZZZZ	1.0	15:34																									
ZZZZZZ	1.0	15:37																									
ZZZZZZ	2.0	15:40																									
ZZZZZZ	2.0	15:42																									
ZZZZZZ	2.0	15:44																									
ZZZZZZ	2.0	15:46																									
ZZZZZZ	2.0	15:49																									
ZZZZZZ	2.0	15:51																									
ZZZZZZ	2.0	15:53																									
ZZZZZZ	2.0	15:56																									
ZZZZZZ	2.0	15:58																									
CCV5	1.0	16:00				X																					
CCV5	1.0	16:03			X								X		X											X	
CCB5	1.0	16:05			X	X							X		X											X	
ZZZZZZ	2.0	16:08																									
KQ1512179-01	2.0	16:10			X	X							X		X											X	

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

Metals
- 14 -

ANALYSIS RUN LOG

Client: Oneida Total Integrated Enterpri **Service Request:** K1510798

Project No.: 2015270 **Run Number:** 102315AICP03

Project Name: Tetlin NWR SAR

Instrument ID Number: K-ICP-AES-03 **Method:** P

Start Date: 10/23/2015 **End Date:** 10/23/2015

Sample No.	D/F	Time	% R	Analytes																							
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
KQ1512179-02	2.0	16:13			X	X							X		X											X	
K1510798-001	2.0	16:15													X												
K1510798-001L	10.0	16:17			X	X							X		X											X	
K1510798-001D	2.0	16:20			X	X							X		X											X	
K1510798-001S	2.0	16:22			X	X							X		X											X	
K1510798-001A	2.0	16:24			X	X							X		X											X	
K1510798-002	2.0	16:27			X	X							X		X											X	
K1510798-003	2.0	16:29													X												
CCV6	1.0	16:31				X																					
CCV6	1.0	16:34			X								X		X											X	
CCB6	1.0	16:36			X	X							X		X											X	
LLCCV3	1.0	16:39			X	X							X		X											X	
ZZZZZZ	1.0	16:41																									
K1510798-004	2.0	16:44			X	X							X		X											X	
K1510798-005	2.0	16:47			X	X							X		X											X	
K1510798-006	2.0	16:49			X	X							X													X	
K1510798-007	2.0	16:51			X	X							X		X											X	
K1510798-008	2.0	16:54			X	X							X		X											X	
K1510798-009	2.0	16:56			X	X							X		X											X	
K1510798-010	2.0	16:59													X												
K1510798-011	2.0	17:01			X	X							X		X											X	
K1510798-006	50.0	17:03													X												
ZZZZZZ	2.0	17:06																									
CCV7	1.0	17:09				X																					
CCV7	1.0	17:11			X								X		X											X	
CCB7	1.0	17:14			X	X							X		X											X	
LLCCV4	1.0	17:17			X	X							X		X											X	

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

ALS Inc.

Service Request Number(s):

K1510798, K1510799

As Received 2mm Sieve Data

Service Request #		Sample Weight (g)	<2mm Weight (g)	>2mm Weight (g)	
K1510798 -	1	~~167.42~~ 200.10	~~91.85~~ 106.09	~~75.53~~ 92.26	
	2	167.42	91.85	75.53	
	3	146.60	71.99	72.56	
	4	74.16	43.66	27.66	
	5	88.18	61.76	25.74	
	6	267.54	135.97	128.99	
	7	223.68	150.56	70.98	
	8	262.30	133.15	110.57	
	9	312.36	164.49	132.52	
	10	127.27	64.69	59.78	
K1510799	11	129.07	48.81	50.58	
~~K1510798~~ -	1	101.19	55.99	44.44	
	2	303.17	199.83	96.42	
	3	580.07	349.38	223.08	
	4	714.21	404.20	303.01	
	5	583.63	156.09	420.54	
	6	465.03	181.51	446.52	
	7	477.87	145.32	332.55	
	8	198.28	100.73	118.28	
	9	579.71	328.30	240.09	
	10	306.33	318.70	260.63	
	11	481.08	248.73	225.35	

Weight is in gram units.

Balance ID: 23 10/10/15

Analyst: [illegible] Date: 10/10/15 10/14/15

Reviewed: [illegible] Date: 10/14

R\:ICP\misc\digforms\As received Sieve Data1

ALS Inc.

Service Request Number(s):

K1510799

As Received 2mm Sieve Data

Service Request #	Sample Weight (g)	<2mm Weight (g)	>2mm Weight (g)	
~~K1510798~~ K1510799 = 12	543.03	297.64	245.39	
13	499.05	169.29	329.76	
14	471.28	189.47	281.81	

Weight is in gram units.

Balance ID:

Analyst: Lance Jordan BKell

Date: 10/14/15

Reviewed:

Date: 10/15/15

R:\:ICP\misc\digforms\As received Sieve Data1

ALS Environmental
ALS Group USA, Corp
1317 South 13th Avenue
Kelso, WA 98626
T : +1 360 577 7222
F : +1 360 636 1068
www.alsglobal.com

October 29, 2015

Analytical Report for Service Request No: K1510799

Orval Osborne
Oneida Total Integrated Enterprises (OTIE)
317 E. Main St.
Ventura, CA 93001

RE: Tetlin NWR SAR / 2015270

Dear Orval,

Enclosed are the results of the sample(s) submitted to our laboratory September 28, 2015
For your reference, these analyses have been assigned our service request number **K1510799.**

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3376. You may also contact me via email at gregory.salata@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Gregory Salata, Ph.D.
Client Services
Manager

ALS Environmental
ALS Group USA, Corp
1317 South 13th Avenue
Kelso, WA 98626
T : +1 360 577 7222
F : +1 360 636 1068
www.alsglobal.com

Table of Contents

Acronyms
Qualifiers
State Certifications, Accreditations, And Licenses
Case Narrative
Chain of Custody
Total Solids
Metals

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
E	The result is an estimate amount because the value exceeded the instrument calibration range.
J	The result is an estimated value.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.
H	The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

#	The control limit criteria is not applicable. See case narrative.
J	The result is an estimated value.
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
M	The duplicate injection precision was not met.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
S	The reported value was determined by the Method of Standard Additions (MSA).
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
+	The correlation coefficient for the MSA is less than 0.995.
Q	See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
A	A tentatively identified compound, a suspected aldol-condensation product.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
C	The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
D	The reported result is from a dilution.
E	The result is an estimated value.
J	The result is an estimated value.
N	The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
P	The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
Y	The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
Z	The chromatographic fingerprint does not resemble a petroleum product.

ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses

Agency	Web Site	Number
Alaska DEC UST	http://dec.alaska.gov/applications/eh/ehllabreports/USTLabs.aspx	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L14-51
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	Not available	-
Idaho DHW	http://www.healthandwelfare.idaho.gov/Health/Labs/CertificationDrinkingWaterLabs/tabid/1833/Default.aspx	-
ISO 17025	http://www.pjlabs.com/	L14-50
Louisiana DEQ	http://www.deq.louisiana.gov/portal/DIVISIONS/PublicParticipationandPermitSupport/LouisianaLaboratoryAccreditationProgram.aspx	03016
Maine DHS	Not available	WA01276
Michigan DEQ	http://www.michigan.gov/deq/0,1607,7-135-3307_4131_4156---,00.html	9949
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Montana DPHHS	http://www.dphhs.mt.gov/publichealth/	CERT0047
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/oqa/	WA005
North Carolina DWQ	http://www.dwqlab.org/	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/envserv/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wisconsin DNR	http://dnr.wi.gov/	998386840
Wyoming (EPA Region 8)	http://www.epa.gov/region8/water/dwhome/wyomingdi.html	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.

Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/anlayte is offered by that state.

Case Narrative

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

ALS ENVIRONMENTAL

Client:	Oneida Total Integrated Enterprises (OTIE)	**Service Request No.:**	K1510799
Project:	Tetlin NWR SAR/ 2015270	**Date Received:**	09/28/15
Sample Matrix:	Soil		

Case Narrative

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier III deliverables including summary forms for each of the analyses. When appropriate to the method, method blank results have been reported with each analytical test.

Sample Receipt

Fourteen soil samples were received for analysis at ALS Environmental on 09/28/15. The samples were received in good condition and consistent with the accompanying chain of custody form. The samples were stored in a refrigerator at 4ºC upon receipt at the laboratory.

Metals

Matrix Spike Recovery Exceptions:
Antimony recoveries are generally low for soil and sediment samples when digested using EPA Method 3050B. Despite anticipated low recoveries, the method is still generally prescribed because of its versatility for general metals analysis. Antimony results (in conjunction with the matrix spike recovery) from this procedure should only be used as indicators to estimate concentrations. The matrix spike recovery of Antimony for sample G7-T1-6X was below the ALS control criterion. Since low recoveries resulted from a method defect and were possibly magnified by certain matrix components, no corrective action was appropriate. Alternative procedures that specifically target Antimony are available but were not specified for this project. The associated QA/QC results (e.g. control sample, calibration standards, etc.) indicated the analysis was in control.

The matrix spike recovery of Copper for sample G7-T1-6X was outside the ALS control criteria as a result of the heterogeneous character of the sample. The Relative Percent Difference (RPD) for the replicate analysis supported this. Since the unspiked sample contained a high analyte concentration relative to the amount spiked, the variability between replicates was sufficient to bias the percent recovery outside normal ALS control criteria. The associated QA/QC results (e.g. control sample, calibration standards, etc.) indicated the analysis was in control. No further corrective action was appropriate.

The control criteria for matrix spike recovery of Lead for sample G7-T1-6X were not applicable. The analyte concentration in the sample was significantly higher than the added spike concentration, preventing accurate evaluation of the spike recovery.

Relative Percent Difference Exceptions:
The Relative Percent Difference (RPD) for the replicate analysis of Copper and Lead in sample G7-T1-6X was outside the normal ALS control limits. The variability in the results was attributed to the heterogeneous character of the sample. Standard mixing techniques were used, but were not sufficient for complete homogenization of this sample.

No other anomalies associated with the analysis of these samples were observed.

Approved by_____

Chain of Custody

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Chain of Custody

K1510799

Shaded Areas For Internal Use Only

2 of 3

OTIE
Oneida Total Integrated Enterprises

OTIE
317 East Main Street
Ventura, CA 93001
Phone: (805) 585-2110
Fax: (805) 585-2111

Report To:
Contact: Orval Osborne
Company: OTIE
Address: 317 East Main Street
Ventura, CA 93001
Phone: (805) 585-4313
E-Mail: oosborne@otie.com

Bill To:
Contact: Beth Weinfurt
Company: OTIE
Address: 1033 N. Mayfair Road, Suite 200
Milwaukee, WI 53226
Phone: (414) 607-6785
Fax: (414) 257-2492
PO#: _____
Quote: _____

Lab Lot #

Package Sealed Yes No	Samples Sealed Yes No
Received on Ice Yes No	Samples Intact Yes No
Temperature °C of Cooler	
Within Hold Time Yes No	Preserv. indicated Yes No NA
pH Check ok Yes No NA	Res. Cl_2 Check ok Yes No NA
Sample Labels and COC Agree Yes No COC not present	

Sampler Name: Mark Wanek
Signature: [signature]
Project Name: Tetlin NWR SAR
Project Number: 2015270
Lab: ALS, 1317 S. 13th Avenue Kelso, WA 98626
Lab PM: Greg Salata, 360-501-3376 Gregory.Salata@alsglobal.com
Date Required: NTAT

Laboratory ID	MS MSD	Client Sample ID	Sampling Date	Sampling Time	Mtx	Grab	Lead (total)	Sb, As, Cu, Pb, Zn (total)	Lead, TCLP	Sb, As, Cu, Pb, Zn (TCLP)							Additional Analyses / Remarks
		G7-T1-6X	9/24/15	1115	S		X	X MW		X MW							
		G4-T2-12	9/24/15	1345	S		X	X		X MW							
		G5-T2-12	9/24/15	1400	S		X										
		G8-T2-12	9/24/15	1415	S		X										
		G10-T2-12	9/24/15	1430	S		X										
		G13-T2-12	9/24/15	1445	S		X										
		G15-T2-12	9/24/15	1500	S		X										
		G4-T2-12X	9/24/15	1515	S		X	X MW		X MW							
		G4-T3-24	9/24/15	1530	S		X	X		X							
		G6-T3-24	9/24/15	1545	S		X										
		G7-T3-24	9/24/15	1600	S		X										

RELINQUISHED BY	COMPANY	DATE	TIME	RECEIVED BY	COMPANY	DATE	TIME
[signature]	OTIE	9/26/15		[signature]	ALS	9/28/15	09:00
RELINQUISHED BY	COMPANY	DATE	TIME	RECEIVED BY	COMPANY	DATE	TIME

Matrix Key
S = Soil
SL = Sludge
MS = Miscellaneous
OL = Oil
A = Air
SE = Sediment
SO = Solid
WW = Wastewater
W = Water

Container Key
1. Plastic
2. VOA Vial
3. Amber Glass
4. Widemouth Glass
5. Other

Preservative Key
1. HCl, Cool to 4°
2. H2SO4, Cool to 4°
3. HNO3, Cool to 4°
4. Cool to 4°
5. None

COMMENTS: Hold samples after analysis.
Do not dispose of samples until client notifies lab.
Sb=Antimony. As=Arsenic. Cu=Copper. Pb=Lead.
Zn = Zinc

Date Received / /
Courier: Hand Delivered ☐
Bill of Lading:

K1510799

Chain of Custody

OTIE
Oneida Total Integrated Enterprises

OTIE
317 East Main Street
Ventura, CA 93001
Phone: (805) 585-2110
Fax: (805) 585-2111

Report To:
Contact: Orval Osborne
Company: OTIE
Address: 317 East Main Street
Ventura, CA 93001
Phone: (805) 585-4313
E-Mail: oosborne@otie.com

Bill To:
Contact: Beth Weinfurt
Company: OTIE
Address: 1033 N. Mayfair Road, Suite 200
Milwaukee, WI 53226
Phone: (414) 607-6785
Fax: (414) 257-2492
PO#: _____
Quote: _____

Shaded Areas For Internal Use Only

Lab Lot #

Package Sealed Yes No	Samples Sealed Yes No
Received on Ice Yes No	Samples Intact Yes No
Temperature °C of Cooler	
Within Hold Time Yes No	Preserv. indicated Yes No NA
pH Check ok Yes No NA	Res. Cl_2 Check ok Yes No NA
Sample Labels and COC Agree Yes No COC not present	

Sampler Name:
Signature:
Project Name: Tetlin NWR SAR
Project Number: 2015270
Lab: ALS, 1317 S. 13th Avenue Kelso, WA 98626
Lab PM: Greg Salata, 360-501-3376 Gregory.Salata@alsglobal.com
Date Required: NTAT

Laboratory ID	MS MSD	Client Sample ID	Sampling Date	Sampling Time	Matrix	Grab	Lead (total)	Sb, As, Cu, Pb, Zn (total)	Lead, TCLP	Sb, As, Cu, Pb, Zn (TCLP)	Additional Analyses / Remarks
		G8-T3-24	9/24/15	1615	S		X				
		G10-T3-24	9/24/15	1630	S		X				
		G14-T3-24	9/24/15	1645	S		X				

RELINQUISHED BY	COMPANY	DATE	TIME	RECEIVED BY	COMPANY	DATE	TIME
[illegible]	OTIE	9-26-15		Kelly Reed	ALS	9/28/15	09:00
RELINQUISHED BY	COMPANY	DATE	TIME	RECEIVED BY	COMPANY	DATE	TIME

Matrix Key
S = Soil
SL = Sludge
MS = Miscellaneous
OL = Oil
A = Air
SE = Sediment
SO = Solid
WW = Wastewater
W = Water

Container Key
1. Plastic
2. VOA Vial
3. Amber Glass
4. Widemouth Glass
5. Other

Preservative Key
1. HCl, Cool to 4°
2. H2SO4, Cool to 4°
3. HNO3, Cool to 4°
4. Cool to 4°
5. None

COMMENTS: Hold samples after analysis.
Do not dispose of samples until client notifies lab.
Sb=Antimony. As=Arsenic. Cu=Copper. Pb=Lead.
Zn = Zinc

Date Received / /
Courier: Hand Delivered ☐
Bill of Lading:

PC Greg

Cooler Receipt and Preservation Form

Client / Project: OTIE Service Request *K15* 10799

Received: 9/28/15 Opened: 9/28/15 By: KR Unloaded: 9/28/15 By: KR

1. Samples were received via? *Mail* *Fed Ex* *UPS* *DHL* *PDX* *Courier* *Hand Delivered*
2. Samples were received in: (circle) *Cooler* *Box* *Envelope* *Other*_____ *NA*
3. Were custody seals on coolers? NA Y N If yes, how many and where?_____

   If present, were custody seals intact? Y N If present, were they signed and dated? Y N

Raw Cooler Temp	Corrected Cooler Temp	Raw Temp Blank	Corrected Temp Blank	Corr. Factor	Thermometer ID	Cooler/COC ID NA	Tracking Number NA	Filed
15.6	15.7	—	—	+0.1	357	1 of 4	781403862069	
14.5	14.7	—	—	+0.2	371	2 of	781403862058	
15.0	15.1	—	—	+0.1	365	3 of 4	781403862070	
15.4	15.3	—	—	-0.1	354	4 of 4	808262357441	

4. Packing material: *Inserts* *Baggies* *Bubble Wrap* *Gel Packs* *Wet Ice* *Dry Ice* *Sleeves* large plastic bag
5. Were custody papers properly filled out (ink, signed, etc.)? NA Y N
6. Did all bottles arrive in good condition (unbroken)? *Indicate in the table below.* NA Y N
7. Were all sample labels complete (i.e analysis, preservation, etc.)? NA Y N
8. Did all sample labels and tags agree with custody papers? *Indicate major discrepancies in the table on page 2.* NA Y N
9. Were appropriate bottles/containers and volumes received for the tests indicated? NA Y N
10. Were the pH-preserved bottles (*see SMO GEN SOP*) received at the appropriate pH? *Indicate in the table below* NA Y N
11. Were VOA vials received without headspace? *Indicate in the table below.* NA Y N
12. Was C12/Res negative? NA Y N

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count Bottle Type	Out of Temp	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, & Resolutions:_____

***Page*_____*of*_____**

Total Solids

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	Oneida Total Integrated Enterprises (OTIE)	**Service Request:**	K1510799
Project:	Tetlin NWR SAR/2015270	**Date Collected:**	09/24/15
Sample Matrix:	Soil	**Date Received:**	09/28/15
Analysis Method:	160.3 Modified	**Units:**	Percent
Prep Method:	None	**Basis:**	As Received

Solids, Total

Sample Name	Lab Code	Result	MRL	Dil.	Date Analyzed	Q
G7-T1-6X	K1510799-001	**89.7**	-	1	10/15/15 18:25	
G4-T2-12	K1510799-002	**86.2**	-	1	10/15/15 18:25	
G5-T2-12	K1510799-003	**86.5**	-	1	10/15/15 18:25	
G8-T2-12	K1510799-004	**88.4**	-	1	10/15/15 18:25	
G10-T2-12	K1510799-005	**87.6**	-	1	10/15/15 18:25	
G13-T2-12	K1510799-006	**88.2**	-	1	10/15/15 18:25	
G15-T2-12	K1510799-007	**87.3**	-	1	10/15/15 18:25	
G4-T2-12X	K1510799-008	**86.5**	-	1	10/15/15 18:25	
G4-T3-24	K1510799-009	**87.7**	-	1	10/15/15 18:25	
G6-T3-24	K1510799-010	**89.0**	-	1	10/15/15 18:25	
G7-T3-24	K1510799-011	**90.5**	-	1	10/15/15 18:25	
G8-T3-24	K1510799-012	**92.0**	-	1	10/15/15 18:25	
G10-T3-24	K1510799-013	**89.2**	-	1	10/15/15 18:25	
G14-T3-24	K1510799-014	**90.3**	-	1	10/15/15 18:25	

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client:	Oneida Total Integrated Enterprises (OTIE)	**Service Request:**	K1510799
Project	Tetlin NWR SAR/2015270	**Date Collected:**	09/24/15
Sample Matrix:	Soil	**Date Received:**	09/28/15
		Date Analyzed:	10/15/15

Replicate Sample Summary
General Chemistry Parameters

Sample Name:	G10-T2-12	**Units:**	Percent
Lab Code:	K1510799-005	**Basis:**	As Received

Analyte Name	Analysis Method	MRL	Sample Result	Duplicate Sample K1510799-005DUP Result	Average	RPD	RPD Limit
Solids, Total	160.3 Modified	-	87.6	87.7	87.7	<1	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Metals

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

TCLP Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client:	Oneida Total Integrated Enterpri	**Service Request:**	K1510799
Project No.:	2015270	**Date Collected:**	9/24/2015
Project Name:	Tetlin NWR SAR	**Date Received:**	9/28/2015
Matrix:	TCLP	**Units:**	mg/L
		Basis:	NA

Sample Name: **G4-T3-24** **Lab Code:** **K1510799-009**

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	6010C	0.10	5.0	10/14/15	10/14/15	0.10	U	
Arsenic	6010C	0.05	5.0	10/14/15	10/14/15	0.05	U	
Copper	6010C	0.10	5.0	10/14/15	10/14/15	0.10	U	
Lead	6010C	0.05	5.0	10/14/15	10/14/15	0.05	U	
Zinc	6010C	1.0	5.0	10/14/15	10/14/15	1.0	U	

Comments:

TCLP Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: Oneida Total Integrated Enterpri
Service Request: K1510799
Project No.: 2015270
Date Collected:
Project Name: Tetlin NWR SAR
Date Received:
Matrix: TCLP
Units: mg/L
Basis: NA

Sample Name: Method Blank
Lab Code: KQ1511770-02

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	6010C	0.10	5.0	10/14/15	10/14/15	0.10	U	
Arsenic	6010C	0.05	5.0	10/14/15	10/14/15	0.05	U	
Copper	6010C	0.10	5.0	10/14/15	10/14/15	0.10	U	
Lead	6010C	0.05	5.0	10/14/15	10/14/15	0.05	U	
Zinc	6010C	1.0	5.0	10/14/15	10/14/15	1.0	U	

Comments:

TCLP Metals
- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Oneida Total Integrated Enterpri **Service Request:** K1510799

Project No.: 2015270

Project Name: Tetlin NWR SAR

ICV Source: Inorganic Ventures **CCV Source:** ALS MIXED

Concentration Units: mg/L

	Initial Calibration			Continuing Calibration					
Analyte	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	Method
Antimony	2.50	2.42	97	0.25	0.25	100	0.25	100	6010C
Arsenic	2.50	2.51	100	1.00	1.01	101	1.01	101	6010C
Copper	0.625	0.600	96	0.250	0.251	100	0.249	100	6010C
Lead	2.50	2.43	97	0.25	0.25	100	0.25	100	6010C
Zinc	1.25	1.22	98	0.25	0.25	100	0.25	100	6010C

TCLP Metals
- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Oneida Total Integrated Enterpri **Service Request:** K1510799

Project No.: 2015270

Project Name: Tetlin NWR SAR

ICV Source: Inorganic Ventures **CCV Source:** ALS MIXED

Concentration Units: mg/L

	Initial Calibration			Continuing Calibration					
Analyte	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	Method
Antimony				0.25	0.25	100	0.25	100	6010C
Arsenic				1.00	1.00	100	1.00	100	6010C
Copper				0.250	0.248	99	0.247	99	6010C
Lead				0.25	0.25	100	0.25	100	6010C
Zinc				0.25	0.26	104	0.26	104	6010C

TCLP Metals
- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Oneida Total Integrated Enterpri **Service Request:** K1510799

Project No.: 2015270

Project Name: Tetlin NWR SAR

ICV Source: Inorganic Ventures **CCV Source:** ALS MIXED

Concentration Units: mg/L

	Initial Calibration			Continuing Calibration					
Analyte	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	Method
Antimony				0.25	0.25	100	0.25	100	6010C
Arsenic				1.00	1.00	100	1.01	101	6010C
Copper				0.250	0.247	99	0.248	99	6010C
Lead				0.25	0.25	100	0.25	100	6010C
Zinc				0.25	0.26	104	0.25	100	6010C

TCLP Metals
- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Oneida Total Integrated Enterpri **Service Request:** K1510799

Project No.: 2015270

Project Name: Tetlin NWR SAR

ICV Source: Inorganic Ventures **CCV Source:** ALS MIXED

Concentration Units: mg/L

	Initial Calibration			Continuing Calibration					
Analyte	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	Method
Antimony				0.25	0.25	100	0.25	100	6010C
Arsenic				1.00	1.01	101	1.04	104	6010C
Copper				0.250	0.245	98	0.253	101	6010C
Lead				0.25	0.25	100	0.25	100	6010C
Zinc				0.25	0.25	100	0.25	100	6010C

TCLP Metals
- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Oneida Total Integrated Enterpri **Service Request:** K1510799

Project No.: 2015270

Project Name: Tetlin NWR SAR

ICV Source: Inorganic Ventures **CCV Source:** ALS MIXED

Concentration Units: mg/L

	Initial Calibration			Continuing Calibration					
Analyte	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	Method
Antimony				0.25	0.25	100	0.24	96	6010C
Arsenic				1.00	1.03	103	1.01	101	6010C
Copper				0.250	0.257	103	0.251	100	6010C
Lead				0.25	0.25	100	0.25	100	6010C
Zinc				0.25	0.25	100	0.25	100	6010C

TCLP Metals
- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Oneida Total Integrated Enterpri **Service Request:** K1510799

Project No.: 2015270

Project Name: Tetlin NWR SAR

ICV Source: Inorganic Ventures **CCV Source:** ALS MIXED

Concentration Units: mg/L

	Initial Calibration			Continuing Calibration					
Analyte	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	Method
Antimony				0.25	0.25	100	0.25	100	6010C
Arsenic				1.00	1.01	101	1.00	100	6010C
Copper				0.250	0.246	98	0.246	98	6010C
Lead				0.25	0.24	96	0.24	96	6010C
Zinc				0.25	0.25	100	0.25	100	6010C

TCLP Metals
- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Oneida Total Integrated Enterpri **Service Request:** K1510799

Project No.: 2015270

Project Name: Tetlin NWR SAR

ICV Source: Inorganic Ventures **CCV Source:** ALS MIXED

Concentration Units: mg/L

	Initial Calibration			Continuing Calibration					
Analyte	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	Method
Antimony				0.25	0.25	100	0.25	100	6010C
Arsenic				1.00	1.01	101	1.01	101	6010C
Copper				0.250	0.252	101	0.253	101	6010C
Lead				0.25	0.25	100	0.25	100	6010C
Zinc				0.25	0.25	100	0.25	100	6010C

TCLP Metals
- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Oneida Total Integrated Enterpri **Service Request:** K1510799

Project No.: 2015270

Project Name: Tetlin NWR SAR

ICV Source: Inorganic Ventures **CCV Source:** ALS MIXED

Concentration Units: mg/L

	Initial Calibration			Continuing Calibration					
Analyte	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	Method
Antimony				0.25	0.25	100			6010C
Arsenic				1.00	1.00	100			6010C
Copper				0.250	0.244	98			6010C
Lead				0.25	0.24	96			6010C
Zinc				0.25	0.25	100			6010C

TCLP Metals

- 2a -

LOW LEVEL INITIAL CALIBRATION AND LOW LEVEL CONTINUING CALIBRATION VERIFICATION

Client: Oneida Total Integrated Enterprises (OTIE) **SDG No.:** K1510799

Contract: 2015270 **Lab Code:** ALSK **Case No.:** **SAS No.:**

Initial Calibration Source: Inorganic Ventures

Continuing Calibration Source: ALS MIXED

Sample ID	Analyte	Result mg/L	True Value mg/L	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
LLICV1									
	Antimony	0.0197	0.0200	98	70.0 - 130.0	P	10/14/2015	10:42	101415AICP
	Arsenic	0.0096	0.0100	96	70.0 - 130.0	P	10/14/2015	10:42	101415AICP
	Copper	0.0045	0.0040	112	70.0 - 130.0	P	10/14/2015	10:42	101415AICP
	Lead	0.0104	0.0100	104	70.0 - 130.0	P	10/14/2015	10:42	101415AICP
LLICV1-TCLP									
	Zinc	0.2019	0.2000	101	70.0 - 130.0	P	10/14/2015	10:48	101415AICP
LLCCV1									
	Antimony	0.0189	0.0200	94	70.0 - 130.0	P	10/14/2015	12:55	101415AICP
	Arsenic	0.0102	0.0100	102	70.0 - 130.0	P	10/14/2015	12:55	101415AICP
	Copper	0.0040	0.0040	100	70.0 - 130.0	P	10/14/2015	12:55	101415AICP
	Lead	0.0099	0.0100	99	70.0 - 130.0	P	10/14/2015	12:55	101415AICP
LLCCV1-TCLP									
	Zinc	0.2018	0.2000	101	70.0 - 130.0	P	10/14/2015	12:58	101415AICP
LLCCV2									
	Antimony	0.0193	0.0200	96	70.0 - 130.0	P	10/14/2015	15:04	101415AICP
	Arsenic	0.0089	0.0100	89	70.0 - 130.0	P	10/14/2015	15:04	101415AICP
	Lead	0.0098	0.0100	98	70.0 - 130.0	P	10/14/2015	15:04	101415AICP
LLCCV2,0.5									
	Copper	0.0087	0.0080	109	70.0 - 130.0	P	10/14/2015	15:40	101415AICP
LLCCV2-TCLP									
	Zinc	0.1953	0.2000	98	70.0 - 130.0	P	10/14/2015	15:42	101415AICP
LLCCV3-TCLP									
	Zinc	0.1990	0.2000	100	70.0 - 130.0	P	10/14/2015	19:40	101415AICP

TCLP Metals

- 2a -

LOW LEVEL INITIAL CALIBRATION AND LOW LEVEL CONTINUING CALIBRATION VERIFICATION

Client: Oneida Total Integrated Enterprises (OTIE) **SDG No.:** K1510799

Contract: 2015270 **Lab Code:** ALSK **Case No.:** **SAS No.:**

Initial Calibration Source: Inorganic Ventures

Continuing Calibration Source: ALS MIXED

Sample ID	Analyte	Result mg/L	True Value mg/L	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
LLCCV3									
	Antimony	0.0197	0.0200	98	70.0 - 130.0	P	10/14/2015	19:52	101415AICP
	Arsenic	0.0093	0.0100	93	70.0 - 130.0	P	10/14/2015	19:52	101415AICP
	Lead	0.0096	0.0100	96	70.0 - 130.0	P	10/14/2015	19:52	101415AICP
LLCCV3,0.5									
	Copper	0.0090	0.0080	112	70.0 - 130.0	P	10/14/2015	19:57	101415AICP

TCLP Metals

- 3 -

BLANKS

Client: Oneida Total Integrated Enterpri **Service Request:** K1510799

Project No.: 2015270

Project Name: Tetlin NWR SAR

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): mg/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Method
Antimony	0.02	U	0.02	U	0.02	U	0.02	U	6010C
Arsenic	0.01	U	0.01	U	0.01	U	0.01	U	6010C
Copper	0.02	U	0.02	U	0.02	U	0.02	U	6010C
Lead	0.01	U	0.01	U	0.01	U	0.01	U	6010C
Zinc	0.2	U	0.2	U	0.2	U	0.2	U	6010C

TCLP Metals

- 3 -

BLANKS

Client: Oneida Total Integrated Enterpri **Service Request:** K1510799

Project No.: 2015270

Project Name: Tetlin NWR SAR

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): mg/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Method
Antimony			0.02	U	0.02	U	0.02	U	6010C
Arsenic			0.01	U	0.01	U	0.01	U	6010C
Copper			0.02	U	0.02	U	0.02	U	6010C
Lead			0.01	U	0.01	U	0.01	U	6010C
Zinc			0.2	U	0.2	U	0.2	U	6010C

TCLP Metals

- 3 -

BLANKS

Client: Oneida Total Integrated Enterpri **Service Request:** K1510799

Project No.: 2015270

Project Name: Tetlin NWR SAR

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): mg/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Method
Antimony			0.02	U	0.02	U	0.02	U	6010C
Arsenic			0.01	U	0.01	U	0.01	U	6010C
Copper			0.02	U	0.02	U	0.02	U	6010C
Lead			0.01	U	0.01	U	0.01	U	6010C
Zinc			0.2	U	0.2	U	0.2	U	6010C

TCLP Metals

- 3 -

BLANKS

Client: Oneida Total Integrated Enterpri **Service Request:** K1510799

Project No.: 2015270

Project Name: Tetlin NWR SAR

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): mg/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Method
Antimony			0.02	U	0.02	U	0.02	U	6010C
Arsenic			0.01	U	0.01	U	0.01	U	6010C
Copper			0.02	U	0.02	U	0.02	U	6010C
Lead			0.01	U	0.01	U	0.01	U	6010C
Zinc			0.2	U	0.2	U	0.2	U	6010C

TCLP Metals

- 3 -

BLANKS

Client: Oneida Total Integrated Enterpri **Service Request:** K1510799

Project No.: 2015270

Project Name: Tetlin NWR SAR

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): mg/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Method
Antimony			0.02	U	0.02	U	0.02	U	6010C
Arsenic			0.01	U	0.01	U	0.01	U	6010C
Copper			0.02	U	0.02	U	0.02	U	6010C
Lead			0.01	U	0.01	U	0.01	U	6010C
Zinc			0.2	U	0.2	U	0.2	U	6010C

TCLP Metals

- 4 -

ICP INTERFERENCE CHECK SAMPLE

Client: Oneida Total Integrated Enterpri **Service Request:** K1510799

Project No.: 2015270

Project Name: Tetlin NWR SAR

ICP ID Number: K-ICP-AES-03 **ICS Source:** Inorganic Ventures

Concentration Units): mg/L

Analyte	True		Initial Found			Final Found		
	Sol.A	Sol.AB	Sol.A	Sol.AB	%R	Sol.A	Sol.AB	%R
Antimony	0.0	1.0	0.0	0.9	90	0.0	0.9	90
Arsenic	0.0		0.0	0.0		0.0	0.0	
Copper	0.0	0.5	0.0	0.4	80	0.0	0.5	100
Lead	0.0	1.0	0.0	0.9	90	0.0	0.9	90
Zinc	0.0	1.0	0.0	0.9	90	0.0	0.9	90

TCLP Metals
- 5A -
SPIKE SAMPLE RECOVERY

Client: Oneida Total Integrated Enterpri **Service Request:** K1510799

Project No.: 2015270 **Units:** MG/L

Project Name: Tetlin NWR SAR **Basis:** NA

Matrix: TCLP

Sample Name: G4-T3-24S **Lab Code:** K1510799-009S

Analyte	Control Limit %R	Spike Result	C	Sample Result	C	Spike Added	%R	Q	Method
Antimony	75 - 125	2.25		0.10	U	2.50	90		6010C
Arsenic	75 - 125	4.79		0.05	U	5.00	96		6010C
Copper	75 - 125	1.11		0.10	U	1.25	89		6010C
Lead	75 - 125	2.24		0.05	U	2.50	90		6010C
Zinc	75 - 125	2.3		1.0	U	2.50	92		6010C

An empty field in the Control Limit column indicates the control limit is not applicable

TCLP Metals

- 5B -

POST SPIKE SAMPLE RECOVERY

Client: Oneida Total Integrated Enterpri **Service Request:** K1510799

Project No.: 2015270 **Units:** MG/L

Project Name: Tetlin NWR SAR **Basis:** NA

Matrix: WATER

Sample Name: G4-T3-24A **Lab Code:** K1510799-009A

Analyte	Control Limit %R	Spike Result	C	Sample Result	C	Spike Added	%R	Q	Method
Antimony	80 - 120	4.4920		0.0200		5.000	90		6010C
Arsenic	80 - 120	4.7090		0.0100		5.000	94		6010C
Copper	80 - 120	0.8641		0.0200		1.000	86		6010C
Lead	80 - 120	4.5010		0.0100		5.000	90		6010C
Zinc	80 - 120	9.4		0.2		10.000	94		6010C

TCLP Metals

- 6 -

DUPLICATES

Client: Oneida Total Integrated Enterpri **Service Request:** K1510799

Project No.: 2015270 **Units:** MG/L

Project Name: Tetlin NWR SAR **Basis:** NA

Matrix: TCLP

Sample Name: G4-T3-24D **Lab Code:** K1510799-009D

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	Method
Antimony		0.10	U	0.10	U			6010C
Arsenic		0.05	U	0.05	U			6010C
Copper		0.10	U	0.10	U			6010C
Lead		0.05	U	0.05	U			6010C
Zinc		1.0	U	1.0	U			6010C

An empty field in the Control Limit column indicates the control limit is not applicable.

TCLP Metals

- 7 -

LABORATORY CONTROL SAMPLE

Client: Oneida Total Integrated Enterpri **Service Request:** K1510799

Project No.: 2015270

Project Name: Tetlin NWR SAR

Aqueous LCS Source: ALS MIXED **Solid LCS Source:**

Analyte	Aqueous (ug/L) True	Aqueous (ug/L) Found	Aqueous (ug/L) %R	Solid (mg/kg) True	Solid (mg/kg) Found	Solid (mg/kg) C	Solid (mg/kg) Limits	Solid (mg/kg) %R
Antimony	2.5	2.20	88					
Arsenic	5	4.67	93					
Copper	1.25	1.07	86					
Lead	2.5	2.19	88					
Zinc	2.5	2.4	96					

TCLP Metals

- 10 -

DETECTION LIMITS

Client: Oneida Total Integrated Enterpri **Service Request:** K1510799

Project No.: 2015270

Project Name: Tetlin NWR SAR

ICP/ICP-MS ID #:

GFAA ID #: **AA ID #:**

Analyte	Wave-length (nm)	Back-ground	MRL mg/L	MDL mg/L	M
Antimony	206.8		0.02	0.02	P
Arsenic	189.0		0.01	0.01	P
Copper	327.3		0.02	0.02	P
Lead	220.3		0.01	0.01	P
Zinc	206.2		0.2	0.2	P

Comments:

TCLP Metals

- 11A -

ICP INTERELEMENT CORRECTION FACTORS

Client: Oneida Total Integrated Enterpri **Service Request:** K1510799

Project No.: 2015270

Project Name: Tetlin NWR SAR

ICP ID Number: **K-ICP-AES-03**

Analyte	Wave-length (nm)	Interelement Correction Factors for: Al	Ca	Fe	Mg	B
Aluminum	394.401	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Antimony	217.581	0.0000000	0.0000000	-0.0009010	0.0000000	0.0000000
Arsenic	189.042	0.0000330	0.0000000	0.0000000	0.0000000	0.0000000
Barium	455.403	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	234.861	0.0000000	0.0000000	0.0000080	0.0000000	0.0000000
Boron	249.678	0.0000000	0.0000000	-0.0006800	0.0000000	0.0000000
Cadmium	226.502	0.0000000	0.0000000	0.0001570	0.0000000	0.0000000
Calcium	393.366	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.716	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cobalt	228.616	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Copper	327.396	0.0000000	0.0000160	0.0000000	0.0000000	0.0000000
Iron	259.94	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Lead	220.353	-0.0000780	0.0000000	0.0000590	0.0000000	0.0000000
Lithium	670.784	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Magnesium	285.213	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	257.61	0.0000000	0.0000000	0.0000120	0.0000370	0.0000000
Molybdenum	202.03	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.604	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Phosphorus	214.914	-0.0007840	0.0000000	0.0006520	0.0000000	0.0000000
Potassium	766.491	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.0	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silicon	251.611	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silver	328.068	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Sodium	589.592	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Strontium	407.771	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.856	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Tin	189.989	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Titanium	336.121	0.0000000	0.0000110	0.0000000	0.0000440	0.0000000
Vanadium	292.402	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000

Comments:

TCLP Metals

- 11A -

ICP INTERELEMENT CORRECTION FACTORS

Client: Oneida Total Integrated Enterpri **Service Request:** K1510799

Project No.: 2015270

Project Name: Tetlin NWR SAR

ICP ID Number: **K-ICP-AES-03**

Zinc	213.856	0.0000000	0.0000000	0.0001170	0.0000000	0.0000000

Comments:

TCLP Metals

- 11B -

ICP INTERELEMENT CORRECTION FACTORS

Client: Oneida Total Integrated Enterpri **Service Request:** K1510799

Project No.: 2015270

Project Name: Tetlin NWR SAR

ICP ID Number: **K-ICP-AES-03**

Analyte	Wave-length (nm)	Interelement Correction Factors for: Ba	Cd	Co	Cr	Cu
Aluminum	394.401	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Antimony	217.581	0.0000000	0.0000000	0.0000000	0.0004650	-0.0009350
Arsenic	189.042	0.0000000	0.0000000	0.0000000	0.0005140	0.0000000
Barium	455.403	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	234.861	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Boron	249.678	0.0000000	0.0000000	0.0025890	0.0003110	0.0000000
Cadmium	226.502	0.0000000	0.0000000	-0.0000110	0.0000330	0.0000000
Calcium	393.366	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.716	0.0000000	-0.0001480	0.0000000	0.0000000	0.0000000
Cobalt	228.616	-0.0001220	0.0000000	0.0000000	0.0000000	0.0000000
Copper	327.396	0.0000000	0.0000000	0.0002590	0.0000000	0.0000000
Iron	259.94	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Lead	220.353	0.0000000	0.0000000	0.0001270	0.0000000	0.0003500
Lithium	670.784	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Magnesium	285.213	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	257.61	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Molybdenum	202.03	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.604	0.0000000	0.0000000	-0.0001870	0.0000000	0.0000000
Phosphorus	214.914	0.0000000	-0.0015740	0.0000000	0.0000000	0.0052080
Potassium	766.491	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.0	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silicon	251.611	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silver	328.068	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Sodium	589.592	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Strontium	407.771	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.856	0.0000000	0.0000000	0.0031300	0.0003080	0.0000000
Tin	189.989	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Titanium	336.121	0.0000000	0.0000000	0.0000270	0.0000000	0.0000000
Vanadium	292.402	0.0000000	0.0000000	0.0000000	-0.0058770	0.0000000

Comments:

TCLP Metals

- 11B -

ICP INTERELEMENT CORRECTION FACTORS

Client: Oneida Total Integrated Enterpri **Service Request:** K1510799

Project No.: 2015270

Project Name: Tetlin NWR SAR

ICP ID Number: **K-ICP-AES-03**

Zinc	213.856	0.0000000	0.0000000	0.0000000	0.0000000	0.0010410

Comments:

TCLP Metals

- 11B -

ICP INTERELEMENT CORRECTION FACTORS

Client: Oneida Total Integrated Enterpri **Service Request:** K1510799

Project No.: 2015270

Project Name: Tetlin NWR SAR

ICP ID Number: **K-ICP-AES-03**

Analyte	Wave-length (nm)	Interelement Correction Factors for: Mn	Mo	Ni	Sb	Si
Aluminum	394.401	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Antimony	217.581	-0.0007640	0.0000000	0.0000000	0.0000000	0.0000000
Arsenic	189.042	-0.0002720	0.0015570	0.0000000	0.0000000	0.0000000
Barium	455.403	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	234.861	-0.0000630	-0.0004470	-0.0000170	0.0000000	0.0000000
Boron	249.678	0.0000000	-0.0019240	0.0000000	0.0000000	0.0000000
Cadmium	226.502	0.0000000	-0.0000110	-0.0000150	0.0000000	0.0000000
Calcium	393.366	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.716	0.0000000	0.0000620	0.0000000	0.0000000	0.0000000
Cobalt	228.616	0.0000000	-0.0012500	0.0001140	0.0000000	0.0000000
Copper	327.396	0.0000000	-0.0002610	0.0000000	0.0000000	0.0000000
Iron	259.94	0.0000000	-0.0002450	0.0000000	0.0000000	0.0000000
Lead	220.353	0.0000000	-0.0007250	0.0002650	0.0000000	0.0000000
Lithium	670.784	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Magnesium	285.213	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	257.61	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Molybdenum	202.03	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.604	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Phosphorus	214.914	-0.0006320	0.0105360	0.0000000	0.0000000	0.0000000
Potassium	766.491	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.0	0.0004420	0.0000000	0.0000000	0.0000000	0.0000000
Silicon	251.611	0.0000000	0.0731890	0.0000000	0.0000000	0.0000000
Silver	328.068	0.0001350	0.0001470	0.0000000	0.0000000	0.0000000
Sodium	589.592	0.0000000	0.0023580	0.0000000	0.0000000	0.0000000
Strontium	407.771	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.856	0.0006530	0.0000000	0.0000000	0.0000000	0.0000000
Tin	189.989	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Titanium	336.121	0.0000000	0.0000400	0.0001110	0.0000000	0.0000000
Vanadium	292.402	-0.0011210	-0.0000900	0.0000000	0.0000000	0.0000000

Comments:

TCLP Metals

- 11B -

ICP INTERELEMENT CORRECTION FACTORS

Client: Oneida Total Integrated Enterpri **Service Request:** K1510799

Project No.: 2015270

Project Name: Tetlin NWR SAR

ICP ID Number: **K-ICP-AES-03**

Zinc	213.856	0.0000000	0.0000000	0.0056230	0.0000000	0.0000000

Comments:

TCLP Metals

- 11B -

ICP INTERELEMENT CORRECTION FACTORS

Client: Oneida Total Integrated Enterpri **Service Request:** K1510799

Project No.: 2015270

Project Name: Tetlin NWR SAR

ICP ID Number: **K-ICP-AES-03**

Analyte	Wave-length (nm)	Interelement Correction Factors for: Ti	V			
Aluminum	394.401	0.0000000	0.0000000			
Antimony	217.581	0.0000000	0.0021710			
Arsenic	189.042	0.0000000	0.0001150			
Barium	455.403	0.0000000	0.0000000			
Beryllium	234.861	0.0000000	0.0000000			
Boron	249.678	0.0000000	-0.0005070			
Cadmium	226.502	0.0001270	0.0000000			
Calcium	393.366	0.0000000	0.0000000			
Chromium	267.716	0.0000000	-0.0000640			
Cobalt	228.616	0.0024440	0.0000000			
Copper	327.396	0.0001170	-0.0000910			
Iron	259.94	0.0000000	0.0000000			
Lead	220.353	0.0000000	0.0000000			
Lithium	670.784	0.0000000	0.0000000			
Magnesium	285.213	0.0000000	0.0000000			
Manganese	257.61	0.0000000	0.0000000			
Molybdenum	202.03	0.0000000	0.0000000			
Nickel	231.604	0.0000000	0.0000000			
Phosphorus	214.914	0.0000000	-0.0020860			
Potassium	766.491	0.0000000	0.0000000			
Selenium	196.0	0.0000000	0.0000000			
Silicon	251.611	0.0000000	0.0000000			
Silver	328.068	0.0000000	0.0000780			
Sodium	589.592	0.0000000	0.0000000			
Strontium	407.771	0.0000000	0.0000000			
Thallium	190.856	-0.0005060	0.0002630			
Tin	189.989	0.0000000	0.0000000			
Titanium	336.121	0.0000000	0.0000000			
Vanadium	292.402	0.0004260	0.0000000			

Comments:

TCLP Metals

- 11B -

ICP INTERELEMENT CORRECTION FACTORS

Client: Oneida Total Integrated Enterpri **Service Request:** K1510799

Project No.: 2015270

Project Name: Tetlin NWR SAR

ICP ID Number: **K-ICP-AES-03**

Zinc	213.856	0.0000000	0.0000000			

Comments:

TCLP Metals
-12-
ICP LINEAR RANGES (QUARTERLY)

Client: Oneida Total Integrated Enterpri **Service Request:** K1510799

Project No.: 2015270

Project Name: Tetlin NWR SAR

ICP ID Number: **K-ICP-AES-03**

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Antimony	15.000	90000	6010C
Arsenic	15.000	90000	6010C
Copper	15.000	90000	6010C
Lead	15.000	22500	6010C
Zinc	15.000	18000	6010C

Comments:

TCLP Metals
-13-
PREPARATION LOG

Client: Oneida Total Integrated Enterpri **Service Request:** K1510799

Project No.: 2015270

Project Name: Tetlin NWR SAR

Method: P

Sample ID	Preparation Date	Initial Volume	Final Volume(mL)
K1510799-009	10/14/2015	50.0	50.0
K1510799-009D	10/14/2015	50.0	50.0
K1510799-009S	10/14/2015	50.0	50.0
KQ1511770-01	10/14/2015	50.0	50.0
KQ1511770-02	10/14/2015	50.0	50.0

TCLP Metals
- 14 -

ANALYSIS RUN LOG

Client: Oneida Total Integrated Enterpri **Service Request:** K1510799

Project No.: 2015270 **Run Number:** 101415AICP03

Project Name: Tetlin NWR SAR

Instrument ID Number: K-ICP-AES-03 **Method:** P

Start Date: 10/14/2015 **End Date:** 10/14/2015

Sample No.	D/F	Time	% R	Analytes																							
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
BLK	1.0	10:22			X	X							X		X											X	
STD A	1.0	10:25			X								X		X											X	
STD B	1.0	10:27				X																					
ZZZZZZ	1.0	10:30																									
ICV1	1.0	10:32			X	X							X		X											X	
ICB1	1.0	10:34			X	X							X		X											X	
ZZZZZZ	1.0	10:37																									
LLICV1	1.0	10:42			X	X							X		X												
ZZZZZZ	1.0	10:45																									
LLICV1-TCLP	1.0	10:48																								X	
CCV1	1.0	10:51				X																					
CCV1	1.0	10:57			X								X		X											X	
CCB1	1.0	11:03			X	X							X		X											X	
ICS-A1	1.0	11:05			X	X							X		X											X	
ICS-AB1	1.0	11:08			X	X							X		X											X	
ZZZZZZ	1.0	11:11																									
CCV2	1.0	11:15				X																					
CCV2	1.0	11:17			X								X		X											X	
ZZZZZZ	1.0	11:20																									
CCB2	1.0	11:30			X	X							X		X											X	
ZZZZZZ	1.0	11:35																									
ZZZZZZ	1.0	11:37																									
ZZZZZZ	1.0	11:40																									
ZZZZZZ	1.0	11:43																									
ZZZZZZ	1.0	11:50																									
ZZZZZZ	1.0	11:52																									
ZZZZZZ	1.0	11:55																									
ZZZZZZ	5.0	11:57																									
ZZZZZZ	1.0	12:00																									
ZZZZZZ	1.0	12:02																									
CCV3	1.0	12:05				X																					
CCV3	1.0	12:07			X								X		X											X	

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

ALS Group USA, Corp.
dba ALS Environmental

TCLP Metals
- 14 -
ANALYSIS RUN LOG

Client: Oneida Total Integrated Enterpri **Service Request:** K1510799

Project No.: 2015270 **Run Number:** 101415AICP03

Project Name: Tetlin NWR SAR

Instrument ID Number: K-ICP-AES-03 **Method:** P

Start Date: 10/14/2015 **End Date:** 10/14/2015

Sample No.	D/F	Time	% R	Analytes																							
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
CCB3	1.0	12:10			X	X							X		X											X	
ZZZZZZ	1.0	12:12																									
ZZZZZZ	1.0	12:15																									
ZZZZZZ	1.0	12:17																									
ZZZZZZ	1.0	12:20																									
ZZZZZZ	1.0	12:22																									
ZZZZZZ	1.0	12:25																									
ZZZZZZ	1.0	12:34																									
ZZZZZZ	5.0	12:36																									
ZZZZZZ	1.0	12:42																									
ZZZZZZ	1.0	12:45																									
CCV4	1.0	12:48				X																					
CCV4	1.0	12:50			X								X		X											X	
CCB4	1.0	12:53			X	X							X		X											X	
LLCCV1	1.0	12:55			X	X							X		X												
LLCCV1-TCLP	1.0	12:58																								X	
ZZZZZZ	1.0	13:01																									
ZZZZZZ	1.0	13:03																									
ZZZZZZ	5.0	13:05																									
ZZZZZZ	1.0	13:08																									
ZZZZZZ	1.0	13:10																									
ZZZZZZ	1.0	13:12																									
ZZZZZZ	1.0	13:14																									
ZZZZZZ	1.0	13:17																									
ZZZZZZ	1.0	13:19																									
ZZZZZZ	1.0	13:21																									
CCV5	1.0	13:23				X																					
CCV5	1.0	13:26			X								X		X											X	
CCB5	1.0	13:28			X	X							X		X											X	
ZZZZZZ	1.0	13:31																									
ZZZZZZ	1.0	13:33																									
ZZZZZZ	1.0	13:35																									

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

TCLP Metals
- 14 -

ANALYSIS RUN LOG

Client: Oneida Total Integrated Enterpri **Service Request:** K1510799

Project No.: 2015270 **Run Number:** 101415AICP03

Project Name: Tetlin NWR SAR

Instrument ID Number: K-ICP-AES-03 **Method:** P

Start Date: 10/14/2015 **End Date:** 10/14/2015

Sample No.	D/F	Time	% R	Analytes																							
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	1.0	13:38																									
ZZZZZZ	1.0	13:40																									
ZZZZZZ	1.0	13:42																									
ZZZZZZ	1.0	13:44																									
ZZZZZZ	1.0	13:47																									
ZZZZZZ	1.0	13:49																									
ZZZZZZ	1.0	13:51																									
CCV6	1.0	13:54				X																					
CCV6	1.0	13:56			X								X		X											X	
CCB6	1.0	13:59			X	X							X		X											X	
ZZZZZZ	5.0	14:01																									
ZZZZZZ	1.0	14:04																									
ZZZZZZ	1.0	14:06																									
ZZZZZZ	1.0	14:08																									
ZZZZZZ	1.0	14:11																									
ZZZZZZ	1.0	14:13																									
ZZZZZZ	1.0	14:15																									
ZZZZZZ	1.0	14:18																									
ZZZZZZ	1.0	14:20																									
ZZZZZZ	1.0	14:23																									
CCV7	1.0	14:25				X																					
CCV7	1.0	14:28			X								X		X											X	
CCB7	1.0	14:30			X	X							X		X											X	
ZZZZZZ	1.0	14:32																									
ZZZZZZ	1.0	14:35																									
ZZZZZZ	1.0	14:37																									
ZZZZZZ	1.0	14:39																									
ZZZZZZ	1.0	14:42																									
ZZZZZZ	1.0	14:44																									
ZZZZZZ	1.0	14:47																									
ZZZZZZ	1.0	14:49																									
ZZZZZZ	1.0	14:52																									

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

ALS Group USA, Corp.
dba ALS Environmental

TCLP Metals
- 14 -

ANALYSIS RUN LOG

Client: Oneida Total Integrated Enterpri **Service Request:** K1510799

Project No.: 2015270 **Run Number:** 101415AICP03

Project Name: Tetlin NWR SAR

Instrument ID Number: K-ICP-AES-03 **Method:** P

Start Date: 10/14/2015 **End Date:** 10/14/2015

Sample No.	D/F	Time	% R	Analytes																							
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	1.0	14:54																									
CCV8	1.0	14:57				X																					
CCV8	1.0	15:00			X								X		X											X	
CCB8	1.0	15:02			X	X							X		X											X	
LLCCV2	1.0	15:04			X	X									X												
ZZZZZZ	1.0	15:07																									
ZZZZZZ	1.0	15:10																									
LLCCV2,0.5	1.0	15:40											X														
LLCCV2-TCLP	1.0	15:42																								X	
ICS-A2	1.0	15:45			X	X							X		X											X	
ICS-AB2	1.0	15:48			X	X							X		X											X	
ZZZZZZ	1.0	16:02																									
ZZZZZZ	1.0	16:07																									
ZZZZZZ	1.0	16:10																									
ZZZZZZ	1.0	16:12																									
ZZZZZZ	1.0	16:15																									
ZZZZZZ	1.0	16:18																									
ZZZZZZ	1.0	16:22																									
ZZZZZZ	1.0	16:25																									
ZZZZZZ	1.0	16:28																									
ZZZZZZ	1.0	16:30																									
CCV9	1.0	16:33				X																					
CCV9	1.0	16:35			X								X		X											X	
CCB9	1.0	16:38			X	X							X		X											X	
ZZZZZZ	1.0	16:40																									
ZZZZZZ	1.0	16:43																									
ZZZZZZ	1.0	16:45																									
ZZZZZZ	1.0	16:48																									
ZZZZZZ	1.0	16:51																									
ZZZZZZ	1.0	16:54																									
ZZZZZZ	1.0	16:56																									
ZZZZZZ	1.0	16:59																									

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

TCLP Metals
- 14 -

ANALYSIS RUN LOG

Client: Oneida Total Integrated Enterpri **Service Request:** K1510799

Project No.: 2015270 **Run Number:** 101415AICP03

Project Name: Tetlin NWR SAR

Instrument ID Number: K-ICP-AES-03 **Method:** P

Start Date: 10/14/2015 **End Date:** 10/14/2015

Sample No.	D/F	Time	% R	Analytes																							
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	1.0	17:01																									
ZZZZZZ	1.0	17:04																									
CCV10	1.0	17:07				X																					
CCV10	1.0	17:09			X								X		X											X	
CCB10	1.0	17:12			X	X							X		X											X	
ZZZZZZ	1.0	17:14																									
ZZZZZZ	1.0	17:17																									
ZZZZZZ	1.0	17:19																									
ZZZZZZ	1.0	17:22																									
ZZZZZZ	1.0	17:24																									
ZZZZZZ	1.0	17:27																									
ZZZZZZ	5.0	17:29																									
ZZZZZZ	1.0	17:32																									
ZZZZZZ	1.0	17:34																									
ZZZZZZ	1.0	17:37																									
CCV11	1.0	17:39				X																					
CCV11	1.0	17:42			X								X		X											X	
CCB11	1.0	17:44			X	X							X		X											X	
ZZZZZZ	1.0	17:47																									
ZZZZZZ	1.0	17:50																									
ZZZZZZ	1.0	17:52																									
ZZZZZZ	1.0	17:55																									
ZZZZZZ	1.0	17:57																									
ZZZZZZ	1.0	18:00																									
KQ1511770-02	5.0	18:02			X	X							X		X											X	
KQ1511770-01	5.0	18:05			X	X							X		X											X	
ZZZZZZ	5.0	18:07																									
ZZZZZZ	25.0	18:10																									
CCV12	1.0	18:12				X																					
CCV12	1.0	18:15			X								X		X											X	
CCB12	1.0	18:17			X	X							X		X											X	
ZZZZZZ	5.0	18:20																									

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

TCLP Metals
- 14 -

ANALYSIS RUN LOG

Client: Oneida Total Integrated Enterpri **Service Request:** K1510799

Project No.: 2015270 **Run Number:** 101415AICP03

Project Name: Tetlin NWR SAR

Instrument ID Number: K-ICP-AES-03 **Method:** P

Start Date: 10/14/2015 **End Date:** 10/14/2015

Sample No.	D/F	Time	% R	Analytes																							
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	5.0	18:22																									
ZZZZZZ	5.0	18:25																									
ZZZZZZ	5.0	18:27																									
ZZZZZZ	25.0	18:30																									
ZZZZZZ	5.0	18:32																									
ZZZZZZ	5.0	18:35																									
ZZZZZZ	5.0	18:37																									
ZZZZZZ	5.0	18:40																									
ZZZZZZ	5.0	18:42																									
CCV13	1.0	18:45				X																					
CCV13	1.0	18:48			X								X		X											X	
CCB13	1.0	18:50			X	X							X		X											X	
K1510799-009	5.0	18:52			X	X							X		X											X	
K1510799-009D	5.0	18:55			X	X							X		X											X	
K1510799-009S	5.0	18:57			X	X							X		X											X	
K1510799-009A	5.0	19:00			X	X							X		X											X	
ZZZZZZ	5.0	19:02																									
ZZZZZZ	5.0	19:05																									
ZZZZZZ	5.0	19:07																									
ZZZZZZ	5.0	19:10																									
ZZZZZZ	5.0	19:12																									
ZZZZZZ	5.0	19:15																									
CCV14	1.0	19:18				X																					
CCV14	1.0	19:20			X								X		X											X	
CCB14	1.0	19:23			X	X							X		X											X	
ZZZZZZ	5.0	19:25																									
ZZZZZZ	5.0	19:28																									
ZZZZZZ	5.0	19:30																									
ZZZZZZ	5.0	19:33																									
ZZZZZZ	5.0	19:35																									
ZZZZZZ	5.0	19:38																									
LLCCV3-TCLP	1.0	19:40																								X	

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

TCLP Metals

- 14 -

ANALYSIS RUN LOG

Client: Oneida Total Integrated Enterpri **Service Request:** K1510799

Project No.: 2015270 **Run Number:** 101415AICP03

Project Name: Tetlin NWR SAR

Instrument ID Number: K-ICP-AES-03 **Method:** P

Start Date: 10/14/2015 **End Date:** 10/14/2015

Sample No.	D/F	Time	% R	Analytes																							
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
CCV15	1.0	19:43				X																					
CCV15	1.0	19:45			X								X		X											X	
CCB15	1.0	19:47			X	X							X		X											X	
ZZZZZZ	1.0	19:50																									
LLCCV3	1.0	19:52			X	X									X												
ZZZZZZ	1.0	19:55																									
LLCCV3,0.5	1.0	19:57											X														

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

Metals
- 1 -
INORGANIC ANALYSIS DATA PACKAGE

Client:	Oneida Total Integrated Enterpri	**Service Request:**	K1510799
Project No.:	2015270	**Date Collected:**	9/24/2015
Project Name:	Tetlin NWR SAR	**Date Received:**	9/28/2015
Matrix:	SOIL	**Units:**	mg/Kg
		Basis:	DRY

Sample Name: G7-T1-6X **Lab Code:** K1510799-001

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Lead	6010C	1.9	2.0	10/22/15	10/23/15	430		*

% Solids: 89.7

Comments:

Metals
- 1 -
INORGANIC ANALYSIS DATA PACKAGE

Client:	Oneida Total Integrated Enterpri	**Service Request:**	K1510799
Project No.:	2015270	**Date Collected:**	9/24/2015
Project Name:	Tetlin NWR SAR	**Date Received:**	9/28/2015
Matrix:	SOIL	**Units:**	mg/Kg
		Basis:	DRY

Sample Name: G4-T2-12 **Lab Code:** K1510799-002

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	6010C	3.8	2.0	10/22/15	10/23/15	3.8	U	N
Arsenic	6010C	3.8	2.0	10/22/15	10/23/15	9.3		
Copper	6010C	0.8	2.0	10/22/15	10/23/15	38.8		N*
Lead	6010C	1.9	2.0	10/22/15	10/23/15	196		*
Zinc	6010C	0.96	2.0	10/22/15	10/23/15	50.8		

% Solids: 86.2

Comments:

Metals
- 1 -
INORGANIC ANALYSIS DATA PACKAGE

Client:	Oneida Total Integrated Enterpri	**Service Request:**	K1510799
Project No.:	2015270	**Date Collected:**	9/24/2015
Project Name:	Tetlin NWR SAR	**Date Received:**	9/28/2015
Matrix:	SOIL	**Units:**	mg/Kg
		Basis:	DRY

Sample Name: G5-T2-12 **Lab Code:** K1510799-003

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Lead	6010C	2.0	2.0	10/22/15	10/23/15	20.4		*

% Solids: 86.5

Comments:

Metals
- 1 -
INORGANIC ANALYSIS DATA PACKAGE

Client:	Oneida Total Integrated Enterpri	**Service Request:**	K1510799
Project No.:	2015270	**Date Collected:**	9/24/2015
Project Name:	Tetlin NWR SAR	**Date Received:**	9/28/2015
Matrix:	SOIL	**Units:**	mg/Kg
		Basis:	DRY

Sample Name: G8-T2-12 **Lab Code:** K1510799-004

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Lead	6010C	2.0	2.0	10/22/15	10/23/15	102		*

% Solids: 88.4

Comments:

Metals
- 1 -
INORGANIC ANALYSIS DATA PACKAGE

Client:	Oneida Total Integrated Enterpri	**Service Request:**	K1510799
Project No.:	2015270	**Date Collected:**	9/24/2015
Project Name:	Tetlin NWR SAR	**Date Received:**	9/28/2015
Matrix:	SOIL	**Units:**	mg/Kg
		Basis:	DRY

Sample Name: G10-T2-12 **Lab Code:** K1510799-005

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Lead	6010C	1.9	2.0	10/22/15	10/23/15	16.8		*

% Solids: 87.6

Comments:

Metals
- 1 -
INORGANIC ANALYSIS DATA PACKAGE

Client:	Oneida Total Integrated Enterpri	**Service Request:**	K1510799
Project No.:	2015270	**Date Collected:**	9/24/2015
Project Name:	Tetlin NWR SAR	**Date Received:**	9/28/2015
Matrix:	SOIL	**Units:**	mg/Kg
		Basis:	DRY

Sample Name: G13-T2-12 **Lab Code:** K1510799-006

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Lead	6010C	2.0	2.0	10/22/15	10/23/15	26.6		*

% Solids: 88.2

Comments:

Metals
- 1 -
INORGANIC ANALYSIS DATA PACKAGE

Client:	Oneida Total Integrated Enterpri	**Service Request:**	K1510799
Project No.:	2015270	**Date Collected:**	9/24/2015
Project Name:	Tetlin NWR SAR	**Date Received:**	9/28/2015
Matrix:	SOIL	**Units:**	mg/Kg
		Basis:	DRY

Sample Name: G15-T2-12 **Lab Code:** K1510799-007

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Lead	6010C	1.7	2.0	10/22/15	10/23/15	19.4		*

% Solids: 87.3

Comments:

Metals
- 1 -
INORGANIC ANALYSIS DATA PACKAGE

Client:	Oneida Total Integrated Enterpri	**Service Request:**	K1510799
Project No.:	2015270	**Date Collected:**	9/24/2015
Project Name:	Tetlin NWR SAR	**Date Received:**	9/28/2015
Matrix:	SOIL	**Units:**	mg/Kg
		Basis:	DRY

Sample Name: G4-T2-12X **Lab Code:** K1510799-008

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Lead	6010C	2.0	2.0	10/22/15	10/23/15	912		*

% Solids: 86.5

Comments:

Metals
- 1 -
INORGANIC ANALYSIS DATA PACKAGE

Client: Oneida Total Integrated Enterpri
Service Request: K1510799
Project No.: 2015270
Date Collected: 9/24/2015
Project Name: Tetlin NWR SAR
Date Received: 9/28/2015
Matrix: SOIL
Units: mg/Kg
Basis: DRY

Sample Name: G4-T3-24
Lab Code: K1510799-009

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	6010C	4.0	2.0	10/22/15	10/23/15	5.4		N
Arsenic	6010C	4.0	2.0	10/22/15	10/23/15	9.0		
Copper	6010C	0.8	2.0	10/22/15	10/23/15	39.1		N*
Lead	6010C	2.0	2.0	10/22/15	10/23/15	705		*
Zinc	6010C	0.99	2.0	10/22/15	10/23/15	62.2		

% Solids: 87.7

Comments:

Metals
- 1 -
INORGANIC ANALYSIS DATA PACKAGE

Client:	Oneida Total Integrated Enterpri	**Service Request:**	K1510799
Project No.:	2015270	**Date Collected:**	9/24/2015
Project Name:	Tetlin NWR SAR	**Date Received:**	9/28/2015
Matrix:	SOIL	**Units:**	mg/Kg
		Basis:	DRY

Sample Name: G6-T3-24 **Lab Code:** K1510799-010

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Lead	6010C	1.9	2.0	10/22/15	10/23/15	11.0		*

% Solids: 89.0

Comments:

Metals
- 1 -
INORGANIC ANALYSIS DATA PACKAGE

Client:	Oneida Total Integrated Enterpri	**Service Request:**	K1510799
Project No.:	2015270	**Date Collected:**	9/24/2015
Project Name:	Tetlin NWR SAR	**Date Received:**	9/28/2015
Matrix:	SOIL	**Units:**	mg/Kg
		Basis:	DRY

Sample Name: G7-T3-24 **Lab Code:** K1510799-011

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Lead	6010C	1.9	2.0	10/22/15	10/23/15	13.0		*

% Solids: 90.5

Comments:

Metals
- 1 -
INORGANIC ANALYSIS DATA PACKAGE

Client:	Oneida Total Integrated Enterpri	**Service Request:**	K1510799
Project No.:	2015270	**Date Collected:**	9/24/2015
Project Name:	Tetlin NWR SAR	**Date Received:**	9/28/2015
Matrix:	SOIL	**Units:**	mg/Kg
		Basis:	DRY

Sample Name: G8-T3-24 **Lab Code:** K1510799-012

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Lead	6010C	1.8	2.0	10/22/15	10/23/15	28.2		*

% Solids: 92.0

Comments:

Metals
- 1 -
INORGANIC ANALYSIS DATA PACKAGE

Client:	Oneida Total Integrated Enterpri	**Service Request:**	K1510799
Project No.:	2015270	**Date Collected:**	9/24/2015
Project Name:	Tetlin NWR SAR	**Date Received:**	9/28/2015
Matrix:	SOIL	**Units:**	mg/Kg
		Basis:	DRY

Sample Name: G10-T3-24 **Lab Code:** K1510799-013

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Lead	6010C	1.9	2.0	10/22/15	10/23/15	11.2		*

% Solids: 89.2

Comments:

Metals
- 1 -
INORGANIC ANALYSIS DATA PACKAGE

Client:	Oneida Total Integrated Enterpri	**Service Request:**	K1510799
Project No.:	2015270	**Date Collected:**	9/24/2015
Project Name:	Tetlin NWR SAR	**Date Received:**	9/28/2015
Matrix:	SOIL	**Units:**	mg/Kg
		Basis:	DRY

Sample Name: G14-T3-24 **Lab Code:** K1510799-014

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Lead	6010C	1.7	2.0	10/22/15	10/23/15	32.8		*

% Solids: 90.3

Comments:

Metals
- 1 -
INORGANIC ANALYSIS DATA PACKAGE

Client: Oneida Total Integrated Enterpri
Service Request: K1510799
Project No.: 2015270
Date Collected:
Project Name: Tetlin NWR SAR
Date Received:
Matrix: SOIL
Units: mg/Kg
Basis: DRY

Sample Name: Method Blank
Lab Code: KQ1512180-01

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	6010C	4.0	2.0	10/22/15	10/23/15	4.0	U	N
Arsenic	6010C	4.0	2.0	10/22/15	10/23/15	4.0	U	
Copper	6010C	0.8	2.0	10/22/15	10/23/15	0.8	U	N*
Lead	6010C	2.0	2.0	10/22/15	10/23/15	2.0	U	*
Zinc	6010C	1.0	2.0	10/22/15	10/23/15	1.0	U	

% Solids: 100.0

Comments:

Metals
- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Oneida Total Integrated Enterpri **Service Request:** K1510799

Project No.: 2015270

Project Name: Tetlin NWR SAR

ICV Source: Inorganic Ventures **CCV Source:** ALS MIXED

Concentration Units: ug/L

	Initial Calibration			Continuing Calibration					
Analyte	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	Method
Antimony	2500	2392	96	250	251	100	250	100	6010C
Arsenic	2500	2490	100	1000	1004	100	1004	100	6010C
Copper	625	591	95	250	249	100	250	100	6010C
Lead	2500	2427	97	250	252	101	253	101	6010C
Zinc	1250	1219	98	250	251	100	249	100	6010C

Metals
- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Oneida Total Integrated Enterpri **Service Request:** K1510799

Project No.: 2015270

Project Name: Tetlin NWR SAR

ICV Source: Inorganic Ventures **CCV Source:** ALS MIXED

Concentration Units: ug/L

	Initial Calibration			Continuing Calibration					
Analyte	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	Method
Antimony				250	254	102	251	100	6010C
Arsenic				1000	1017	102	1017	102	6010C
Copper				250	251	100	251	100	6010C
Lead				250	249	100	252	101	6010C
Zinc				250	250	100	250	100	6010C

Metals
- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Oneida Total Integrated Enterpri **Service Request:** K1510799

Project No.: 2015270

Project Name: Tetlin NWR SAR

ICV Source: Inorganic Ventures **CCV Source:** ALS MIXED

Concentration Units: ug/L

	Initial Calibration			Continuing Calibration					
Analyte	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	Method
Antimony				250	251	100	257	103	6010C
Arsenic				1000	1012	101	1031	103	6010C
Copper				250	246	98	256	102	6010C
Lead				250	256	102	257	103	6010C
Zinc				250	252	101	252	101	6010C

Metals
- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Oneida Total Integrated Enterpri **Service Request:** K1510799

Project No.: 2015270

Project Name: Tetlin NWR SAR

ICV Source: Inorganic Ventures **CCV Source:** ALS MIXED

Concentration Units: ug/L

	Initial Calibration			Continuing Calibration					
Analyte	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	Method
Antimony				250	254	102	249	100	6010C
Arsenic				1000	1028	103	1012	101	6010C
Copper				250	250	100	248	99	6010C
Lead				250	251	100	252	101	6010C
Zinc				250	249	100	249	100	6010C

Metals
- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Oneida Total Integrated Enterpri **Service Request:** K1510799

Project No.: 2015270

Project Name: Tetlin NWR SAR

ICV Source: Inorganic Ventures **CCV Source:** ALS MIXED

Concentration Units: ug/L

	Initial Calibration			Continuing Calibration					
Analyte	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	Method
Antimony				250	249	100	250	100	6010C
Arsenic				1000	1020	102	1020	102	6010C
Copper				250	248	99	246	98	6010C
Lead				250	251	100	253	101	6010C
Zinc				250	249	100	250	100	6010C

Metals
- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Oneida Total Integrated Enterpri **Service Request:** K1510799

Project No.: 2015270

Project Name: Tetlin NWR SAR

ICV Source: Inorganic Ventures **CCV Source:** ALS MIXED

Concentration Units: ug/L

	Initial Calibration			Continuing Calibration					
Analyte	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	Method
Antimony				250	251	100			6010C
Arsenic				1000	1013	101			6010C
Copper				250	248	99			6010C
Lead				250	252	101			6010C
Zinc				250	251	100			6010C

Metals

- 2a -

LOW LEVEL INITIAL CALIBRATION AND LOW LEVEL CONTINUING CALIBRATION VERIFICATION

Client: Oneida Total Integrated Enterprises (OTIE) **SDG No.:** K1510799

Contract: 2015270 **Lab Code:** ALSK **Case No.:** **SAS No.:**

Initial Calibration Source: Inorganic Ventures

Continuing Calibration Source: ALS MIXED

Sample ID	Analyte	Result ug/L	True Value ug/L	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
LLICV1									
	Antimony	22.5	20.0	112	70.0 - 130.0	P	10/23/2015	13:39	102315AICP
	Arsenic	11.0	10.0	110	70.0 - 130.0	P	10/23/2015	13:39	102315AICP
	Copper	3.80	4.0	95	70.0 - 130.0	P	10/23/2015	13:39	102315AICP
	Lead	9.3	10.0	93	70.0 - 130.0	P	10/23/2015	13:39	102315AICP
	Zinc	4.0	4.0	100	70.0 - 130.0	P	10/23/2015	13:39	102315AICP
LLCCV1									
	Antimony	22.2	20.0	111	70.0 - 130.0	P	10/23/2015	14:48	102315AICP
	Arsenic	10.6	10.0	106	70.0 - 130.0	P	10/23/2015	14:48	102315AICP
	Copper	5.00	4.0	125	70.0 - 130.0	P	10/23/2015	14:48	102315AICP
	Lead	9.5	10.0	95	70.0 - 130.0	P	10/23/2015	14:48	102315AICP
	Zinc	4.3	4.0	108	70.0 - 130.0	P	10/23/2015	14:48	102315AICP
LLCCV2									
	Antimony	22.7	20.0	114	70.0 - 130.0	P	10/23/2015	15:32	102315AICP
	Arsenic	9.0	10.0	90	70.0 - 130.0	P	10/23/2015	15:32	102315AICP
	Copper	4.80	4.0	120	70.0 - 130.0	P	10/23/2015	15:32	102315AICP
	Lead	9.8	10.0	98	70.0 - 130.0	P	10/23/2015	15:32	102315AICP
	Zinc	4.2	4.0	105	70.0 - 130.0	P	10/23/2015	15:32	102315AICP
LLCCV3									
	Antimony	23.3	20.0	116	70.0 - 130.0	P	10/23/2015	16:39	102315AICP
	Arsenic	9.4	10.0	94	70.0 - 130.0	P	10/23/2015	16:39	102315AICP
	Copper	4.30	4.0	108	70.0 - 130.0	P	10/23/2015	16:39	102315AICP
	Lead	9.6	10.0	96	70.0 - 130.0	P	10/23/2015	16:39	102315AICP
	Zinc	4.3	4.0	108	70.0 - 130.0	P	10/23/2015	16:39	102315AICP
LLCCV4									
	Antimony	23.1	20.0	116	70.0 - 130.0	P	10/23/2015	17:17	102315AICP
	Arsenic	10.1	10.0	101	70.0 - 130.0	P	10/23/2015	17:17	102315AICP
	Copper	4.50	4.0	112	70.0 - 130.0	P	10/23/2015	17:17	102315AICP
	Lead	10.3	10.0	103	70.0 - 130.0	P	10/23/2015	17:17	102315AICP
	Zinc	4.2	4.0	105	70.0 - 130.0	P	10/23/2015	17:17	102315AICP

Metals

- 2a -

LOW LEVEL INITIAL CALIBRATION AND LOW LEVEL CONTINUING CALIBRATION VERIFICATION

Client: Oneida Total Integrated Enterprises (OTIE) **SDG No.:** K1510799

Contract: 2015270 **Lab Code:** ALSK **Case No.:** **SAS No.:**

Initial Calibration Source: Inorganic Ventures

Continuing Calibration Source: ALS MIXED

Sample ID	Analyte	Result ug/L	True Value ug/L	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
LLCCV									
	Antimony	22.4	20.0	112	70.0 - 130.0	P	10/23/2015	19:22	102315AICP
	Arsenic	10.0	10.0	100	70.0 - 130.0	P	10/23/2015	19:22	102315AICP
	Lead	9.8	10.0	98	70.0 - 130.0	P	10/23/2015	19:22	102315AICP
	Zinc	4.2	4.0	105	70.0 - 130.0	P	10/23/2015	19:22	102315AICP
LLCCV									
	Copper	5.10	4.0	128	70.0 - 130.0	P	10/23/2015	19:24	102315AICP

Metals

- 3 -

BLANKS

Client: Oneida Total Integrated Enterpri **Service Request:** K1510799

Project No.: 2015270

Project Name: Tetlin NWR SAR

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): ug/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Method
Antimony	20.0	U	20.0	U	20.0	U	20.0	U	6010C
Arsenic	20.0	U	20.0	U	20.0	U	20.0	U	6010C
Copper	4.0	U	4.0	U	4.0	U	4.0	U	6010C
Lead	10.0	U	10.0	U	10.0	U	10.0	U	6010C
Zinc	5.00	U	5.00	U	5.00	U	5.00	U	6010C

Metals

- 3 -

BLANKS

Client: Oneida Total Integrated Enterpri **Service Request:** K1510799

Project No.: 2015270

Project Name: Tetlin NWR SAR

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): ug/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Method
Antimony			20.0	U	20.0	U	20.0	U	6010C
Arsenic			20.0	U	20.0	U	20.0	U	6010C
Copper			4.0	U	4.0	U	4.0	U	6010C
Lead			10.0	U	10.0	U	10.0	U	6010C
Zinc			5.00	U	5.00	U	5.00	U	6010C

Metals

- 3 -

BLANKS

Client: Oneida Total Integrated Enterpri **Service Request:** K1510799

Project No.: 2015270

Project Name: Tetlin NWR SAR

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): ug/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Method
Antimony			20.0	U	20.0	U	20.0	U	6010C
Arsenic			20.0	U	20.0	U	20.0	U	6010C
Copper			4.0	U	4.0	U	4.0	U	6010C
Lead			10.0	U	10.0	U	10.0	U	6010C
Zinc			5.00	U	5.00	U	5.00	U	6010C

Metals

- 3 -

BLANKS

Client: Oneida Total Integrated Enterpri **Service Request:** K1510799

Project No.: 2015270

Project Name: Tetlin NWR SAR

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): ug/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Method
Antimony			20.0	U	20.0	U			6010C
Arsenic			20.0	U	20.0	U			6010C
Copper			4.0	U	4.0	U			6010C
Lead			10.0	U	10.0	U			6010C
Zinc			5.00	U	5.00	U			6010C

Metals

- 4 -

ICP INTERFERENCE CHECK SAMPLE

Client: Oneida Total Integrated Enterpri **Service Request:** K1510799

Project No.: 2015270

Project Name: Tetlin NWR SAR

ICP ID Number: K-ICP-AES-03 **ICS Source:** Inorganic Ventures

Concentration Units): ug/L

Analyte	True Sol.A	True Sol.AB	Initial Found Sol.A	Initial Found Sol.AB	Initial Found %R	Final Found Sol.A	Final Found Sol.AB	Final Found %R
Antimony		1000	11	843	84			
Arsenic			2	-1				
Copper		500	-1	429	86			
Lead		1000	-14	833	83			
Zinc		1000	1	879	88			

Metals

- 5A -

SPIKE SAMPLE RECOVERY

Client: Oneida Total Integrated Enterpri **Service Request:** K1510799

Project No.: 2015270 **Units:** MG/KG

Project Name: Tetlin NWR SAR **Basis:** DRY

Matrix: SOIL **% Solids:** 89.7

Sample Name: G7-T1-6XS **Lab Code:** K1510799-001S

Analyte	Control Limit %R	Spike Result	C	Sample Result	C	Spike Added	%R	Q	Method
Antimony	75 - 125	42.4		3.7	U	95.28	45	N	6010C
Arsenic	75 - 125	98.8		8.5		95.28	95		6010C
Copper	75 - 125	130		131		47.64	-2	N	6010C
Lead		965		430		95.28	562		6010C
Zinc	75 - 125	153		68.5		95.28	89		6010C

An empty field in the Control Limit column indicates the control limit is not applicable

Metals

- 5B -
POST SPIKE SAMPLE RECOVERY

Client: Oneida Total Integrated Enterpri **Service Request:** K1510799

Project No.: 2015270 **Units:** UG/L

Project Name: Tetlin NWR SAR **Basis:** DRY

Matrix: WATER

Sample Name: G7-T1-6XA **Lab Code:** K1510799-001A

Analyte	Control Limit %R	Spike Result	C	Sample Result	C	Spike Added	%R	Q	Method
Antimony	80 - 120	4436.0		20.0		5000	89		6010C
Arsenic	80 - 120	2385.0		45.8		2500	94		6010C
Copper	80 - 120	1263.0		702.2		625	90		6010C
Lead	80 - 120	4494.0		2310.0		2500	87		6010C
Zinc	80 - 120	1456.00		367.80		1250	87		6010C

Metals

- 6 -

DUPLICATES

Client: Oneida Total Integrated Enterpri **Service Request:** K1510799

Project No.: 2015270 **Units:** MG/KG

Project Name: Tetlin NWR SAR **Basis:** DRY

Matrix: SOIL **% Solids:** 89.7

Sample Name: G7-T1-6XD **Lab Code:** K1510799-001D

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	Method
Antimony		3.7	U	5.1		200.0		6010C
Arsenic		8.5		8.3		2.4		6010C
Copper	20	131		95.4		31.4	*	6010C
Lead	20	430		962		76.4	*	6010C
Zinc	20	68.5		65.8		4.0		6010C

An empty field in the Control Limit column indicates the control limit is not applicable.

Metals

- 7 -

LABORATORY CONTROL SAMPLE

Client: Oneida Total Integrated Enterpri **Service Request:** K1510799

Project No.: 2015270

Project Name: Tetlin NWR SAR

Aqueous LCS Source: **Solid LCS Source:** **ERA D080-540**

Analyte	Aqueous (ug/L) True	Aqueous (ug/L) Found	Aqueous (ug/L) %R	Solid (mg/kg) True	Solid (mg/kg) Found	Solid (mg/kg) Limits C	Solid (mg/kg) Limits	Solid (mg/kg) %R
Antimony				88.8	65.7	22	259	74
Arsenic				139	144	70	140	104
Copper				168	170	76	125	101
Lead				133	139	73	128	105
Zinc				189	185	70	131	98

Metals

- 9 -

ICP SERIAL DILUTIONS

Client: Oneida Total Integrated Enterpri **Service Request:** K1510799

Project No.: 2015270 **Units:** UG/L

Project Name: Tetlin NWR SAR

Sample Name: G7-T1-6XL **Lab Code:** K1510799-001L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Differ-ence	Q	M
Antimony	20.0	U	100.0	U			P
Arsenic	45.8		100.0	U	100.0		P
Copper	702.2		722.5		2.9		P
Lead	2310.0		2509.5		8.6		P
Zinc	367.80		395.00		7.4		P

Metals

- 10 -

DETECTION LIMITS

Client: Oneida Total Integrated Enterpri **Service Request:** K1510799

Project No.: 2015270

Project Name: Tetlin NWR SAR

ICP/ICP-MS ID #:

GFAA ID #: **AA ID #:**

Analyte	Wave-length (nm)	Back-ground	MRL ug/L	MDL ug/L	M
Antimony	206.8		20.0	20.0	P
Arsenic	189.0		20.0	20.0	P
Copper	327.3		4.0	4.0	P
Lead	220.3		10.0	10.0	P
Zinc	206.2		5.00	5.00	P

Comments:

Metals

- 11A -

ICP INTERELEMENT CORRECTION FACTORS

Client: Oneida Total Integrated Enterpri **Service Request:** K1510799

Project No.: 2015270

Project Name: Tetlin NWR SAR

ICP ID Number: **K-ICP-AES-03**

Analyte	Wave-length (nm)	Interelement Correction Factors for: Al	Ca	Fe	Mg	B
Aluminum	394.401	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Antimony	217.581	0.0000000	0.0000000	-0.0009010	0.0000000	0.0000000
Arsenic	189.042	0.0000330	0.0000000	0.0000000	0.0000000	0.0000000
Barium	455.403	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	234.861	0.0000000	0.0000000	0.0000080	0.0000000	0.0000000
Boron	249.678	0.0000000	0.0000000	-0.0006800	0.0000000	0.0000000
Cadmium	226.502	0.0000000	0.0000000	0.0001570	0.0000000	0.0000000
Calcium	393.366	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.716	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cobalt	228.616	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Copper	327.396	0.0000000	0.0000160	0.0000000	0.0000000	0.0000000
Iron	259.94	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Lead	220.353	-0.0000780	0.0000000	0.0000590	0.0000000	0.0000000
Lithium	670.784	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Magnesium	285.213	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	257.61	0.0000000	0.0000000	0.0000120	0.0000370	0.0000000
Molybdenum	202.03	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.604	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Phosphorus	214.914	-0.0007840	0.0000000	0.0006520	0.0000000	0.0000000
Potassium	766.491	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.0	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silicon	251.611	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silver	328.068	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Sodium	589.592	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Strontium	407.771	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.856	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Tin	189.989	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Titanium	336.121	0.0000000	0.0000110	0.0000000	0.0000440	0.0000000
Vanadium	292.402	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000

Comments:

Metals

- 11A -

ICP INTERELEMENT CORRECTION FACTORS

Client: Oneida Total Integrated Enterpri **Service Request:** K1510799

Project No.: 2015270

Project Name: Tetlin NWR SAR

ICP ID Number: **K-ICP-AES-03**

Zinc	213.856	0.0000000	0.0000000	0.0001170	0.0000000	0.0000000

Comments:

Metals

- 11B -

ICP INTERELEMENT CORRECTION FACTORS

Client: Oneida Total Integrated Enterpri **Service Request:** K1510799

Project No.: 2015270

Project Name: Tetlin NWR SAR

ICP ID Number: **K-ICP-AES-03**

Analyte	Wave-length (nm)	Interelement Correction Factors for: Ba	Cd	Co	Cr	Cu
Aluminum	394.401	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Antimony	217.581	0.0000000	0.0000000	0.0000000	0.0004650	-0.0009350
Arsenic	189.042	0.0000000	0.0000000	0.0000000	0.0005140	0.0000000
Barium	455.403	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	234.861	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Boron	249.678	0.0000000	0.0000000	0.0025890	0.0003110	0.0000000
Cadmium	226.502	0.0000000	0.0000000	-0.0000110	0.0000330	0.0000000
Calcium	393.366	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.716	0.0000000	-0.0001480	0.0000000	0.0000000	0.0000000
Cobalt	228.616	-0.0001220	0.0000000	0.0000000	0.0000000	0.0000000
Copper	327.396	0.0000000	0.0000000	0.0002590	0.0000000	0.0000000
Iron	259.94	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Lead	220.353	0.0000000	0.0000000	0.0001270	0.0000000	0.0003500
Lithium	670.784	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Magnesium	285.213	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	257.61	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Molybdenum	202.03	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.604	0.0000000	0.0000000	-0.0001870	0.0000000	0.0000000
Phosphorus	214.914	0.0000000	-0.0015740	0.0000000	0.0000000	0.0052080
Potassium	766.491	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.0	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silicon	251.611	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silver	328.068	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Sodium	589.592	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Strontium	407.771	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.856	0.0000000	0.0000000	0.0031300	0.0003080	0.0000000
Tin	189.989	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Titanium	336.121	0.0000000	0.0000000	0.0000270	0.0000000	0.0000000
Vanadium	292.402	0.0000000	0.0000000	0.0000000	-0.0058770	0.0000000

Comments:

Metals

- 11B -

ICP INTERELEMENT CORRECTION FACTORS

Client: Oneida Total Integrated Enterpri **Service Request:** K1510799

Project No.: 2015270

Project Name: Tetlin NWR SAR

ICP ID Number: **K-ICP-AES-03**

Zinc	213.856	0.0000000	0.0000000	0.0000000	0.0000000	0.0010410

Comments:

Metals

- 11B -

ICP INTERELEMENT CORRECTION FACTORS

Client: Oneida Total Integrated Enterpri **Service Request:** K1510799

Project No.: 2015270

Project Name: Tetlin NWR SAR

ICP ID Number: **K-ICP-AES-03**

Analyte	Wave-length (nm)	Interelement Correction Factors for: Mn	Mo	Ni	Sb	Si
Aluminum	394.401	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Antimony	217.581	-0.0007640	0.0000000	0.0000000	0.0000000	0.0000000
Arsenic	189.042	-0.0002720	0.0015570	0.0000000	0.0000000	0.0000000
Barium	455.403	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	234.861	-0.0000630	-0.0004470	-0.0000170	0.0000000	0.0000000
Boron	249.678	0.0000000	-0.0019240	0.0000000	0.0000000	0.0000000
Cadmium	226.502	0.0000000	-0.0000110	-0.0000150	0.0000000	0.0000000
Calcium	393.366	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.716	0.0000000	0.0000620	0.0000000	0.0000000	0.0000000
Cobalt	228.616	0.0000000	-0.0012500	0.0001140	0.0000000	0.0000000
Copper	327.396	0.0000000	-0.0002610	0.0000000	0.0000000	0.0000000
Iron	259.94	0.0000000	-0.0002450	0.0000000	0.0000000	0.0000000
Lead	220.353	0.0000000	-0.0007250	0.0002650	0.0000000	0.0000000
Lithium	670.784	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Magnesium	285.213	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	257.61	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Molybdenum	202.03	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.604	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Phosphorus	214.914	-0.0006320	0.0105360	0.0000000	0.0000000	0.0000000
Potassium	766.491	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.0	0.0004420	0.0000000	0.0000000	0.0000000	0.0000000
Silicon	251.611	0.0000000	0.0731890	0.0000000	0.0000000	0.0000000
Silver	328.068	0.0001350	0.0001470	0.0000000	0.0000000	0.0000000
Sodium	589.592	0.0000000	0.0023580	0.0000000	0.0000000	0.0000000
Strontium	407.771	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.856	0.0006530	0.0000000	0.0000000	0.0000000	0.0000000
Tin	189.989	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Titanium	336.121	0.0000000	0.0000400	0.0001110	0.0000000	0.0000000
Vanadium	292.402	-0.0011210	-0.0000900	0.0000000	0.0000000	0.0000000

Comments:

Metals

- 11B -

ICP INTERELEMENT CORRECTION FACTORS

Client: Oneida Total Integrated Enterpri **Service Request:** K1510799

Project No.: 2015270

Project Name: Tetlin NWR SAR

ICP ID Number: **K-ICP-AES-03**

Zinc	213.856	0.0000000	0.0000000	0.0056230	0.0000000	0.0000000

Comments:

Metals

- 11B -

ICP INTERELEMENT CORRECTION FACTORS

Client: Oneida Total Integrated Enterpri **Service Request:** K1510799

Project No.: 2015270

Project Name: Tetlin NWR SAR

ICP ID Number: **K-ICP-AES-03**

Analyte	Wave-length (nm)	Interelement Correction Factors for: Ti	V			
Aluminum	394.401	0.0000000	0.0000000			
Antimony	217.581	0.0000000	0.0021710			
Arsenic	189.042	0.0000000	0.0001150			
Barium	455.403	0.0000000	0.0000000			
Beryllium	234.861	0.0000000	0.0000000			
Boron	249.678	0.0000000	-0.0005070			
Cadmium	226.502	0.0001270	0.0000000			
Calcium	393.366	0.0000000	0.0000000			
Chromium	267.716	0.0000000	-0.0000640			
Cobalt	228.616	0.0024440	0.0000000			
Copper	327.396	0.0001170	-0.0000910			
Iron	259.94	0.0000000	0.0000000			
Lead	220.353	0.0000000	0.0000000			
Lithium	670.784	0.0000000	0.0000000			
Magnesium	285.213	0.0000000	0.0000000			
Manganese	257.61	0.0000000	0.0000000			
Molybdenum	202.03	0.0000000	0.0000000			
Nickel	231.604	0.0000000	0.0000000			
Phosphorus	214.914	0.0000000	-0.0020860			
Potassium	766.491	0.0000000	0.0000000			
Selenium	196.0	0.0000000	0.0000000			
Silicon	251.611	0.0000000	0.0000000			
Silver	328.068	0.0000000	0.0000780			
Sodium	589.592	0.0000000	0.0000000			
Strontium	407.771	0.0000000	0.0000000			
Thallium	190.856	-0.0005060	0.0002630			
Tin	189.989	0.0000000	0.0000000			
Titanium	336.121	0.0000000	0.0000000			
Vanadium	292.402	0.0004260	0.0000000			

Comments:

Metals

- 11B -

ICP INTERELEMENT CORRECTION FACTORS

Client: Oneida Total Integrated Enterpri **Service Request:** K1510799

Project No.: 2015270

Project Name: Tetlin NWR SAR

ICP ID Number: **K-ICP-AES-03**

Zinc	213.856	0.0000000	0.0000000			

Comments:

Metals
-12-
ICP LINEAR RANGES (QUARTERLY)

Client: Oneida Total Integrated Enterpri **Service Request:** K1510799

Project No.: 2015270

Project Name: Tetlin NWR SAR

ICP ID Number: **K-ICP-AES-03**

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Antimony	15.000	90000	6010C
Arsenic	15.000	90000	6010C
Copper	15.000	90000	6010C
Lead	15.000	22500	6010C
Zinc	15.000	18000	6010C

Comments:

Metals
-13-
PREPARATION LOG

Client: Oneida Total Integrated Enterpri **Service Request:** K1510799

Project No.: 2015270

Project Name: Tetlin NWR SAR

Method: P

Sample ID	Preparation Date	Initial Weight (g)	Final Volume(mL)
K1510799-001	10/22/2015	1.20	100.0
K1510799-001D	10/22/2015	1.15	100.0
K1510799-001S	10/22/2015	1.17	100.0
K1510799-002	10/22/2015	1.21	100.0
K1510799-003	10/22/2015	1.18	100.0
K1510799-004	10/22/2015	1.15	100.0
K1510799-005	10/22/2015	1.19	100.0
K1510799-006	10/22/2015	1.16	100.0
K1510799-007	10/22/2015	1.34	100.0
K1510799-008	10/22/2015	1.18	100.0
K1510799-009	10/22/2015	1.16	100.0
K1510799-010	10/22/2015	1.21	100.0
K1510799-011	10/22/2015	1.16	100.0
K1510799-012	10/22/2015	1.20	100.0
K1510799-013	10/22/2015	1.16	100.0
K1510799-014	10/22/2015	1.32	100.0
KQ1512180-01	10/22/2015	1.00	100.0
KQ1512180-02	10/22/2015	1.05	100.0

ALS Group USA, Corp.
dba ALS Environmental

Metals
- 14 -
ANALYSIS RUN LOG

Client: Oneida Total Integrated Enterpri **Service Request:** K1510799

Project No.: 2015270 **Run Number:** 102315AICP03

Project Name: Tetlin NWR SAR

Instrument ID Number: K-ICP-AES-03 **Method:** P

Start Date: 10/23/2015 **End Date:** 10/23/2015

Sample No.	D/F	Time	% R	Analytes																							
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
BLK	1.0	13:25			X	X							X		X											X	
STD A	1.0	13:27			X								X		X											X	
STD B	1.0	13:29				X																					
ICV1	1.0	13:32																									
ICV1	1.0	13:35			X	X							X		X											X	
ICB1	1.0	13:37			X	X							X		X											X	
LLICV1	1.0	13:39			X	X							X		X											X	
ZZZZZZ	1.0	13:42																									
ZZZZZZ	1.0	13:44																									
CCV1	1.0	13:47				X																					
CCV1	1.0	13:49			X								X		X											X	
CCB1	1.0	13:51			X	X							X		X											X	
ICS-A1	1.0	13:54			X	X							X		X											X	
ICS-AB1	1.0	13:57			X	X							X		X											X	
ZZZZZZ	1.0	14:00																									
CCV2	1.0	14:02				X																					
CCV2	1.0	14:05			X								X		X											X	
CCB2	1.0	14:08			X	X							X		X											X	
ZZZZZZ	1.0	14:13																									
ZZZZZZ	1.0	14:16																									
ZZZZZZ	1.0	14:18																									
ZZZZZZ	1.0	14:20																									
ZZZZZZ	1.0	14:23																									
ZZZZZZ	1.0	14:25																									
ZZZZZZ	1.0	14:28																									
ZZZZZZ	1.0	14:30																									
ZZZZZZ	1.0	14:35																									
ZZZZZZ	1.0	14:38																									
CCV3	1.0	14:40				X																					
CCV3	1.0	14:43			X								X		X											X	
CCB3	1.0	14:45			X	X							X		X											X	
LLCCV1	1.0	14:48			X	X							X		X											X	

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

Metals
- 14 -

ANALYSIS RUN LOG

Client: Oneida Total Integrated Enterpri **Service Request:** K1510799

Project No.: 2015270 **Run Number:** 102315AICP03

Project Name: Tetlin NWR SAR

Instrument ID Number: K-ICP-AES-03 **Method:** P

Start Date: 10/23/2015 **End Date:** 10/23/2015

Sample No.	D/F	Time	% R	Analytes																							
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	1.0	14:52																									
ZZZZZZ	1.0	14:55																									
ZZZZZZ	1.0	14:58																									
ZZZZZZ	1.0	15:00																									
ZZZZZZ	1.0	15:03																									
ZZZZZZ	1.0	15:05																									
ZZZZZZ	2.0	15:08																									
ZZZZZZ	2.0	15:10																									
ZZZZZZ	2.0	15:12																									
ZZZZZZ	10.0	15:15																									
ZZZZZZ	2.0	15:17																									
ZZZZZZ	2.0	15:19																									
CCV4	1.0	15:22				X																					
CCV4	1.0	15:24			X								X		X											X	
CCB4	1.0	15:27			X	X							X		X											X	
LLCCV2	1.0	15:32			X	X							X		X											X	
ZZZZZZ	1.0	15:34																									
ZZZZZZ	1.0	15:37																									
ZZZZZZ	2.0	15:40																									
ZZZZZZ	2.0	15:42																									
ZZZZZZ	2.0	15:44																									
ZZZZZZ	2.0	15:46																									
ZZZZZZ	2.0	15:49																									
ZZZZZZ	2.0	15:51																									
ZZZZZZ	2.0	15:53																									
ZZZZZZ	2.0	15:56																									
ZZZZZZ	2.0	15:58																									
CCV5	1.0	16:00				X																					
CCV5	1.0	16:03			X								X		X											X	
CCB5	1.0	16:05			X	X							X		X											X	
ZZZZZZ	2.0	16:08																									
ZZZZZZ	2.0	16:10																									

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

Metals
- 14 -

ANALYSIS RUN LOG

Client: Oneida Total Integrated Enterpri **Service Request:** K1510799

Project No.: 2015270 **Run Number:** 102315AICP03

Project Name: Tetlin NWR SAR

Instrument ID Number: K-ICP-AES-03 **Method:** P

Start Date: 10/23/2015 **End Date:** 10/23/2015

Sample No.	D/F	Time	% R	Analytes																							
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	2.0	16:13																									
ZZZZZZ	2.0	16:15																									
ZZZZZZ	10.0	16:17																									
ZZZZZZ	2.0	16:20																									
ZZZZZZ	2.0	16:22																									
ZZZZZZ	2.0	16:24																									
ZZZZZZ	2.0	16:27																									
ZZZZZZ	2.0	16:29																									
CCV6	1.0	16:31				X																					
CCV6	1.0	16:34			X								X		X											X	
CCB6	1.0	16:36			X	X							X		X											X	
LLCCV3	1.0	16:39			X	X							X		X											X	
ZZZZZZ	1.0	16:41																									
ZZZZZZ	2.0	16:44																									
ZZZZZZ	2.0	16:47																									
ZZZZZZ	2.0	16:49																									
ZZZZZZ	2.0	16:51																									
ZZZZZZ	2.0	16:54																									
ZZZZZZ	2.0	16:56																									
ZZZZZZ	2.0	16:59																									
ZZZZZZ	2.0	17:01																									
ZZZZZZ	50.0	17:03																									
ZZZZZZ	2.0	17:06																									
CCV7	1.0	17:09				X																					
CCV7	1.0	17:11			X								X		X											X	
CCB7	1.0	17:14			X	X							X		X											X	
LLCCV4	1.0	17:17			X	X							X		X											X	
ZZZZZZ	1.0	17:19																									
ZZZZZZ	2.0	17:24																									
ZZZZZZ	2.0	17:27																									
ZZZZZZ	10.0	17:29																									
ZZZZZZ	2.0	17:31																									

*** - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14**

Metals
- 14 -

ANALYSIS RUN LOG

Client: Oneida Total Integrated Enterpri **Service Request:** K1510799

Project No.: 2015270 **Run Number:** 102315AICP03

Project Name: Tetlin NWR SAR

Instrument ID Number: K-ICP-AES-03 **Method:** P

Start Date: 10/23/2015 **End Date:** 10/23/2015

Sample No.	D/F	Time	% R	Analytes																							
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	2.0	17:34																									
ZZZZZZ	2.0	17:36																									
ZZZZZZ	2.0	17:39																									
ZZZZZZ	2.0	17:41																									
ZZZZZZ	2.0	17:43																									
ZZZZZZ	2.0	17:46																									
CCV8	1.0	17:48				X																					
CCV8	1.0	17:51			X								X		X											X	
CCB8	1.0	17:53			X	X							X		X											X	
ZZZZZZ	2.0	17:56																									
ZZZZZZ	2.0	17:58																									
ZZZZZZ	2.0	18:00																									
ZZZZZZ	2.0	18:03																									
ZZZZZZ	2.0	18:05																									
ZZZZZZ	2.0	18:07																									
KQ1512180-01	2.0	18:10			X	X							X		X											X	
KQ1512180-02	2.0	18:12			X	X							X		X											X	
K1510799-001	2.0	18:15													X												
K1510799-001L	10.0	18:17			X	X							X		X											X	
CCV9	1.0	18:19				X																					
CCV9	1.0	18:22			X								X		X											X	
CCB9	1.0	18:24			X	X							X		X											X	
K1510799-001D	2.0	18:27			X	X							X		X											X	
K1510799-001S	2.0	18:29			X	X							X		X											X	
K1510799-001A	2.0	18:31			X	X							X		X											X	
K1510799-002	2.0	18:34			X	X							X		X											X	
K1510799-003	2.0	18:36													X												
K1510799-004	2.0	18:39													X												
K1510799-005	2.0	18:41													X												
K1510799-006	2.0	18:43													X												
K1510799-007	2.0	18:46													X												
K1510799-008	2.0	18:48													X												

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

Metals
- 14 -

ANALYSIS RUN LOG

Client: Oneida Total Integrated Enterpri **Service Request:** K1510799

Project No.: 2015270 **Run Number:** 102315AICP03

Project Name: Tetlin NWR SAR

Instrument ID Number: K-ICP-AES-03 **Method:** P

Start Date: 10/23/2015 **End Date:** 10/23/2015

Sample No.	D/F	Time	% R	Analytes																							
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
CCV10	1.0	18:50				X																					
CCV10	1.0	18:53			X								X		X											X	
CCB10	1.0	18:55			X	X							X		X											X	
K1510799-009	2.0	18:58			X	X							X		X											X	
K1510799-010	2.0	19:00													X												
K1510799-011	2.0	19:02													X												
K1510799-012	2.0	19:05													X												
K1510799-013	2.0	19:07													X												
K1510799-014	2.0	19:09													X												
CCV11	1.0	19:12				X																					
CCV11	1.0	19:14			X								X		X											X	
CCB11	1.0	19:17			X	X							X		X											X	
ZZZZZZ	1.0	19:19																									
LLCCV5	1.0	19:22			X	X									X											X	
LLCCV5	1.0	19:24											X														

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

ALS Inc.

Service Request Number(s):

K1510798, K1510799

As Received 2mm Sieve Data

Service Request #		Sample Weight (g)	<2mm Weight (g)	>2mm Weight (g)	
K1510798 -	1	~~167.42~~ 200.10	~~91.85~~ 106.09	~~75.53~~ 92.26	
	2	167.42	91.85	75.53	
	3	146.60	71.99	72.56	
	4	74.16	43.66	27.66	
	5	88.18	61.76	25.74	
	6	267.54	135.97	128.99	
	7	223.68	150.56	70.98	
	8	262.30	133.15	110.57	
	9	312.36	164.49	132.52	
	10	127.27	64.69	59.78	
K1510799	11	129.07	48.81	50.58	
~~K1510798~~ -	1	101.19	55.99	44.44	
	2	303.17	199.83	96.42	
	3	580.07	349.38	223.08	
	4	714.21	404.20	303.01	
	5	583.63	156.09	420.54	
	6	465.03	181.51	446.52	
	7	477.87	145.32	332.55	
	8	198.28	100.73	118.28	
	9	579.71	328.30	240.09	
	10	306.33	318.70	260.63	
	11	481.08	248.73	225.35	

Weight is in gram units.

Balance ID: 23 10/10/15

Analyst: [signature] Date: 10/10/15 10/14/15

Reviewed: [signature] Date: 10/14

R\:ICP\misc\digforms\As received Sieve Data1

ALS Inc.

Service Request Number(s):

K1510799

As Received 2mm Sieve Data

Service Request #	Sample Weight (g)	<2mm Weight (g)	>2mm Weight (g)	
~~K1510798~~ K1510799 = 12	543.03	297.64	245.39	
13	499.05	169.29	329.76	
14	471.28	189.47	281.81	

Weight is in gram units.

Balance ID:

Analyst: Lance Jordan BKell — Date: 10/14/15

Reviewed: — Date: 10/15/15

R:\:ICP\misc\digforms\As received Sieve Data1

ALS Environmental
ALS Group USA, Corp
1317 South 13th Avenue
Kelso, WA 98626
T : +1 360 577 7222
F : +1 360 636 1068
www.alsglobal.com

November 02, 2015

Analytical Report for Service Request No: K1510800

Orval Osborne
Oneida Total Integrated Enterprises (OTIE)
317 E. Main St.
Ventura, CA 93001

RE: Tetlin NWR Former Small Arms Range / 2015270

Dear Orval,

Enclosed are the results of the sample(s) submitted to our laboratory September 28, 2015
For your reference, these analyses have been assigned our service request number **K1510800.**

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3376. You may also contact me via email at gregory.salata@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Janet Mallich
for
Gregory Salata, Ph.D.
Client Services
Manager

ALS Environmental
ALS Group USA, Corp
1317 South 13th Avenue
Kelso, WA 98626
T : +1 360 577 7222
F : +1 360 636 1068
www.alsglobal.com

Table of Contents

Acronyms
Qualifiers
State Certifications, Accreditations, And Licenses
Case Narrative
Chain of Custody
Total Solids
Metals

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
E	The result is an estimate amount because the value exceeded the instrument calibration range.
J	The result is an estimated value.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.
H	The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

#	The control limit criteria is not applicable. See case narrative.
J	The result is an estimated value.
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
M	The duplicate injection precision was not met.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
S	The reported value was determined by the Method of Standard Additions (MSA).
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
+	The correlation coefficient for the MSA is less than 0.995.
Q	See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
A	A tentatively identified compound, a suspected aldol-condensation product.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
C	The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
D	The reported result is from a dilution.
E	The result is an estimated value.
J	The result is an estimated value.
N	The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
P	The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
Y	The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
Z	The chromatographic fingerprint does not resemble a petroleum product.

ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses

Agency	Web Site	Number
Alaska DEC UST	http://dec.alaska.gov/applications/eh/ehllabreports/USTLabs.aspx	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L14-51
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	Not available	-
Idaho DHW	http://www.healthandwelfare.idaho.gov/Health/Labs/CertificationDrinkingWaterLabs/tabid/1833/Default.aspx	-
ISO 17025	http://www.pjlabs.com/	L14-50
Louisiana DEQ	http://www.deq.louisiana.gov/portal/DIVISIONS/PublicParticipationandPermitSupport/LouisianaLaboratoryAccreditationProgram.aspx	03016
Maine DHS	Not available	WA01276
Michigan DEQ	http://www.michigan.gov/deq/0,1607,7-135-3307_4131_4156---,00.html	9949
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Montana DPHHS	http://www.dphhs.mt.gov/publichealth/	CERT0047
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/oqa/	WA005
North Carolina DWQ	http://www.dwqlab.org/	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/envserv/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wisconsin DNR	http://dnr.wi.gov/	998386840
Wyoming (EPA Region 8)	http://www.epa.gov/region8/water/dwhome/wyomingdi.html	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.

Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/anlayte is offered by that state.

Case Narrative

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

ALS ENVIRONMENTAL

Client:	Oneida Total Integrated Enterprises	**Service Request No.:**	K1510800
Project:	Tetlin NWR Former Small Arms Range	**Date Received:**	9/28/2015
Sample Matrix:	Soil		

Case Narrative

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier III deliverables including summary forms for each of the analyses. When appropriate to the method, method blank results have been reported with each analytical test.

Sample Receipt

Eleven soil samples were received for analysis at ALS Environmental on 9/28/2015. The samples were received in good condition and consistent with the accompanying chain of custody form. The samples were stored in a refrigerator at 4ºC receipt at the laboratory.

Total Metals

Matrix Spike Recovery Exceptions:

Antimony recoveries are generally low for soil and sediment samples when digested using EPA Method 3050B. Despite anticipated low recoveries, the method is still generally prescribed because of its versatility for general metals analysis. Antimony results (in conjunction with the matrix spike recovery) from this procedure should only be used as indicators to estimate concentrations. The matrix spike recovery of Antimony for sample BG1-6 was below the ALS control criterion. Since low recoveries resulted from a method defect and were possibly magnified by certain matrix components, no corrective action was appropriate. Alternative procedures that specifically target Antimony are available but were not specified for this project. The associated QA/QC results (e.g. control sample, calibration standards, etc.) indicated the analysis was in control.

No other anomalies were observed associated with the analysis of these samples.

Approved by_____

Chain of Custody

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Chain of Custody

OTIE
Oneida Total Integrated Enterprises

OTIE
317 East Main Street
Ventura, CA 93001
Phone: (805) 585-2110
Fax: (805) 585-2111

Report To:
Contact: Orval Osborne
Company: OTIE
Address: 317 East Main Street
Ventura, CA 93001
Phone: (805) 585-4313
E-Mail: oosborne@otie.com

Bill To: K1510800
Contact: Beth Weinfurt
Company: OTIE
Address: 1033 N. Mayfair Road, Suite 200
Milwaukee, WI 53226
Phone: (414) 607-6785
Fax: (414) 257-2492
PO#: _____
Quote: _____

Shaded Areas For Internal Use Only 1 of 1

Lab Lot #

Package Sealed	Samples Sealed
Yes No	Yes No
Received on Ice	Samples Intact
Yes No	Yes No

Temperature °C of Cooler

Within Hold Time	Preserv. indicated
Yes No	Yes No NA
pH Check ok	Res. Cl_2 Check ok
Yes No NA	Yes No NA

Sample Labels and COC Agree
Yes No COC not present

Sampler Name: Mark Wanek
Signature: Mark Wanek
Project Name: Tetlin NWR SAR
Project Number: 2015270
Lab: ALS, 1317 S. 13th Avenue Kelso, WA 98626
Lab PM: Greg Salata, 360-501-3376 Gregory.Salata@alsglobal.com
Date Required: NTAT

Laboratory ID	MS MSD	Client Sample ID	Sampling Date	Sampling Time	Mtx	Grab	Lead (total)	Sb, As, Cu, Pb, Zn (total)	Lead, TCLP	Sb, As, Cu, Pb, Zn (TCLP)							Additional Analyses / Remarks
		BG1-6	9/22/15	1400	S		X	X									
		BG2-6	9/22/15	1410	S		X										
		BG3-6	9/22/15	1420	S		X	X									
		BG4-6	9/22/15	1430	S		X										
		BG5-6	9/22/15	1440	S		X	X									
		BG6-6	9/22/15	1450	S		X										
		BG7-6	9/22/15	~~1455~~ 1500	S		X	X									
		BG8-6	9/22/15	~~14~~ 1510	S		X										
		BG9-6	9/22/15	1520	S		X	X									
		BG10-6	9/22/15	1530	S		X										
		BG3-6X	9/22/15	1540	S		X	X									

RELINQUISHED BY	COMPANY	DATE	TIME	RECEIVED BY	COMPANY	DATE	TIME
Mark Wanek	OTIE	9/26/15		Kelly Reed	ALS	9/28/15	09:00
RELINQUISHED BY	COMPANY	DATE	TIME	RECEIVED BY	COMPANY	DATE	TIME

Matrix Key
S = Soil
SL = Sludge
MS = Miscellaneous
OL = Oil
A = Air
SE = Sediment
SO = Solid
WW = Wastewater
W = Water

Container Key
1. Plastic
2. VOA Vial
3. Amber Glass
4. Widemouth Glass
5. Other

Preservative Key
1. HCl, Cool to 4°
2. H2SO4, Cool to 4°
3. HNO3, Cool to 4°
4. Cool to 4°
5. None

COMMENTS: Hold samples after analysis.
Do not dispose of samples until client notifies lab.
Sb=Antimony. As=Arsenic. Cu=Copper. Pb=Lead.
Zn = Zinc

Date Received / /
Courier: Hand Delivered
Bill of Lading:

ALS

PC Greg

Cooler Receipt and Preservation Form

Client / Project: OTIE Service Request K15 10800

Received: 9/28/15 Opened: 9/28/15 By: KR Unloaded: 9/28/15 By: KR

1. Samples were received via? *Mail* *Fed Ex* *UPS* *DHL* *PDX* *Courier* *Hand Delivered*
2. Samples were received in: (circle) *Cooler* *Box* *Envelope* *Other*_____ *NA*
3. Were custody seals on coolers? NA Y N If yes, how many and where?_____

   If present, were custody seals intact? Y N If present, were they signed and dated? Y N

Raw Cooler Temp	Corrected Cooler Temp	Raw Temp Blank	Corrected Temp Blank	Corr. Factor	Thermometer ID	Cooler/COC ID NA	Tracking Number NA	Filed
15.6	15.7	—	—	+0.1	351	1 of 4	781403862069	
14.5	14.7	—	—	+0.2	371	2 of	781403862058	
15.0	15.1	—	—	+0.1	365	3 of 4	781403862070	
15.4	15.3			-0.1	354	4 of 4	808262357441	

4. Packing material: *Inserts* *Baggies* *Bubble Wrap* *Gel Packs* *Wet Ice* *Dry Ice* *Sleeves* large plastic bag
5. Were custody papers properly filled out (ink, signed, etc.)? NA Y N
6. Did all bottles arrive in good condition (unbroken)? *Indicate in the table below.* NA Y N
7. Were all sample labels complete (i.e analysis, preservation, etc.)? NA Y N
8. Did all sample labels and tags agree with custody papers? *Indicate major discrepancies in the table on page 2.* NA Y N
9. Were appropriate bottles/containers and volumes received for the tests indicated? NA Y N
10. Were the pH-preserved bottles (*see SMO GEN SOP*) received at the appropriate pH? *Indicate in the table below* NA Y N
11. Were VOA vials received without headspace? *Indicate in the table below.* NA Y N
12. Was C12/Res negative? NA Y N

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count Bottle Type	Out of Temp	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, & Resolutions:_____

***Page*____*of*____**

Total Solids

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	Oneida Total Integrated Enterprises (OTIE)	**Service Request:**	K1510800
Project:	Tetlin NWR Former Small Arms Range/2015270	**Date Collected:**	09/22/15
Sample Matrix:	Soil	**Date Received:**	09/28/15
Analysis Method:	160.3 Modified	**Units:**	Percent
Prep Method:	None	**Basis:**	As Received

Solids, Total

Sample Name	Lab Code	Result	MRL	Dil.	Date Analyzed	Q
BG1-6	K1510800-001	**72.9**	-	1	10/19/15 17:22	
BG2-6	K1510800-002	**72.4**	-	1	10/19/15 17:22	
BG3-6	K1510800-003	**78.4**	-	1	10/19/15 17:22	
BG4-6	K1510800-004	**75.4**	-	1	10/19/15 17:22	
BG5-6	K1510800-005	**77.1**	-	1	10/19/15 17:22	
BG6-6	K1510800-006	**76.2**	-	1	10/19/15 17:22	
BG7-6	K1510800-007	**78.3**	-	1	10/19/15 17:22	
BG8-6	K1510800-008	**76.1**	-	1	10/19/15 17:22	
BG9-6	K1510800-009	**79.7**	-	1	10/19/15 17:22	
BG10-6	K1510800-010	**78.3**	-	1	10/19/15 18:45	
BG3-6X	K1510800-011	**77.5**	-	1	10/19/15 18:45	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	Oneida Total Integrated Enterprises (OTIE)	**Service Request:**	K1510800
Project	Tetlin NWR Former Small Arms Range/2015270	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Analysis Method:	160.3 Modified	**Units:**	Percent
Prep Method:	None	**Basis:**	As Received

Replicate Sample Summary
Solids, Total

Sample Name:	Lab Code:	MRL	Sample Result	Duplicate Result	Average	RPD	RPD Limit	Date Analyzed
Batch QC	K1510797-001DUP	-	89.1	89.1	89.1	<1	20	10/19/15
Batch QC	K1510797-011DUP	-	90.1	90.1	90.1	<1	20	10/19/15
Batch QC	K1511452-004DUP	-	24.9	26.6	25.8	7	20	10/19/15
Batch QC	K1511643-001DUP	-	83.4	83.0	83.2	<1	20	10/19/15

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	Oneida Total Integrated Enterprises (OTIE)	**Service Request:**	K1510800
Project:	Tetlin NWR Former Small Arms Range/2015270	**Date Collected:**	09/22/15
Sample Matrix:	Soil	**Date Received:**	09/28/15
		Date Extracted:	NA
		Date Analyzed:	10/30/15

Bullet Fragments
Method: Gravimetric
Units: Percent (%)
As Received Basis

Sample Name	Lab Code	Result
BG1-6	K1510800-001	ND
BG2-6	K1510800-002	ND
BG3-6	K1510800-003	ND
BG4-6	K1510800-004	ND
BG5-6	K1510800-005	ND
BG6-6	K1510800-006	ND
BG7-6	K1510800-007	ND
BG8-6	K1510800-008	ND
BG9-6	K1510800-009	ND
BG10-6	K1510800-010	ND
BG3-6X	K1510800-011	ND

Metals

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Metals
- 1 -
INORGANIC ANALYSIS DATA PACKAGE

Client: Oneida Total Integrated Enterpri
Service Request: K1510800
Project No.: 2015270
Date Collected: 9/22/2015
Project Name: Tetlin NWR Former Small Arms Ran
Date Received: 9/28/2015
Matrix: SOIL
Units: mg/Kg
Basis: DRY

Sample Name: BG1-6
Lab Code: K1510800-001

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	6010C	4.7	2.0	10/22/15	10/23/15	4.7	U	N
Arsenic	6010C	4.7	2.0	10/22/15	10/23/15	12.4		
Copper	6010C	0.9	2.0	10/22/15	10/23/15	60.2		
Lead	6010C	2.3	2.0	10/22/15	10/23/15	10.8		
Zinc	6010C	1.2	2.0	10/22/15	10/23/15	52.1		

% Solids: 72.9

Comments:

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client:	Oneida Total Integrated Enterpri	**Service Request:**	K1510800
Project No.:	2015270	**Date Collected:**	9/22/2015
Project Name:	Tetlin NWR Former Small Arms Ran	**Date Received:**	9/28/2015
Matrix:	SOIL	**Units:**	mg/Kg
		Basis:	DRY

Sample Name: BG2-6 **Lab Code:** K1510800-002

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Lead	6010C	2.3	2.0	10/22/15	10/23/15	10.0		

% Solids: 72.4

Comments:

Metals
- 1 -
INORGANIC ANALYSIS DATA PACKAGE

Client:	Oneida Total Integrated Enterpri	**Service Request:**	K1510800
Project No.:	2015270	**Date Collected:**	9/22/2015
Project Name:	Tetlin NWR Former Small Arms Ran	**Date Received:**	9/28/2015
Matrix:	SOIL	**Units:**	mg/Kg
		Basis:	DRY

Sample Name: BG3-6 **Lab Code:** K1510800-003

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	6010C	4.2	2.0	10/22/15	10/23/15	4.2	U	N
Arsenic	6010C	4.2	2.0	10/22/15	10/23/15	9.4		
Copper	6010C	0.8	2.0	10/22/15	10/23/15	46.2		
Lead	6010C	2.1	2.0	10/22/15	10/23/15	9.4		
Zinc	6010C	1.1	2.0	10/22/15	10/23/15	44.4		

% Solids: 78.4

Comments:

Metals
- 1 -
INORGANIC ANALYSIS DATA PACKAGE

Client:	Oneida Total Integrated Enterpri	**Service Request:**	K1510800
Project No.:	2015270	**Date Collected:**	9/22/2015
Project Name:	Tetlin NWR Former Small Arms Ran	**Date Received:**	9/28/2015
Matrix:	SOIL	**Units:**	mg/Kg
		Basis:	DRY

Sample Name: BG4-6 **Lab Code:** K1510800-004

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Lead	6010C	2.3	2.0	10/22/15	10/23/15	9.9		

% Solids: 75.4

Comments:

Metals
- 1 -
INORGANIC ANALYSIS DATA PACKAGE

Client:	Oneida Total Integrated Enterpri	**Service Request:**	K1510800
Project No.:	2015270	**Date Collected:**	9/22/2015
Project Name:	Tetlin NWR Former Small Arms Ran	**Date Received:**	9/28/2015
Matrix:	SOIL	**Units:**	mg/Kg
		Basis:	DRY

Sample Name: BG5-6 **Lab Code:** K1510800-005

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	6010C	4.3	2.0	10/22/15	10/23/15	4.3	U	N
Arsenic	6010C	4.3	2.0	10/22/15	10/23/15	9.9		
Copper	6010C	0.9	2.0	10/22/15	10/23/15	50.5		
Lead	6010C	2.1	2.0	10/22/15	10/23/15	9.7		
Zinc	6010C	1.1	2.0	10/22/15	10/23/15	64.1		

% Solids: 77.1

Comments:

Metals
- 1 -
INORGANIC ANALYSIS DATA PACKAGE

Client:	Oneida Total Integrated Enterpri	**Service Request:**	K1510800
Project No.:	2015270	**Date Collected:**	9/22/2015
Project Name:	Tetlin NWR Former Small Arms Ran	**Date Received:**	9/28/2015
Matrix:	SOIL	**Units:**	mg/Kg
		Basis:	DRY

Sample Name: BG6-6 **Lab Code:** K1510800-006

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Lead	6010C	2.2	2.0	10/22/15	10/23/15	9.0		

% Solids: 76.2

Comments:

Metals
- 1 -
INORGANIC ANALYSIS DATA PACKAGE

Client: Oneida Total Integrated Enterpri
Service Request: K1510800
Project No.: 2015270
Date Collected: 9/22/2015
Project Name: Tetlin NWR Former Small Arms Ran
Date Received: 9/28/2015
Matrix: SOIL
Units: mg/Kg
Basis: DRY

Sample Name: BG7-6
Lab Code: K1510800-007

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	6010C	4.1	2.0	10/22/15	10/23/15	4.1	U	N
Arsenic	6010C	4.1	2.0	10/22/15	10/23/15	8.5		
Copper	6010C	0.8	2.0	10/22/15	10/23/15	48.4		
Lead	6010C	2.0	2.0	10/22/15	10/23/15	8.0		
Zinc	6010C	1.0	2.0	10/22/15	10/23/15	58.9		

% Solids: 78.3

Comments:

Metals
- 1 -
INORGANIC ANALYSIS DATA PACKAGE

Client:	Oneida Total Integrated Enterpri	**Service Request:**	K1510800
Project No.:	2015270	**Date Collected:**	9/22/2015
Project Name:	Tetlin NWR Former Small Arms Ran	**Date Received:**	9/28/2015
Matrix:	SOIL	**Units:**	mg/Kg
		Basis:	DRY

Sample Name: BG8-6 **Lab Code:** K1510800-008

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Lead	6010C	2.2	2.0	10/22/15	10/23/15	7.7		

% Solids: 76.1

Comments:

Metals
- 1 -
INORGANIC ANALYSIS DATA PACKAGE

Client:	Oneida Total Integrated Enterpri	**Service Request:**	K1510800
Project No.:	2015270	**Date Collected:**	9/22/2015
Project Name:	Tetlin NWR Former Small Arms Ran	**Date Received:**	9/28/2015
Matrix:	SOIL	**Units:**	mg/Kg
		Basis:	DRY

Sample Name: BG9-6 **Lab Code:** K1510800-009

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	6010C	4.3	2.0	10/22/15	10/23/15	4.3	U	N
Arsenic	6010C	4.3	2.0	10/22/15	10/23/15	9.5		
Copper	6010C	0.9	2.0	10/22/15	10/23/15	46.4		
Lead	6010C	2.2	2.0	10/22/15	10/23/15	7.6		
Zinc	6010C	1.1	2.0	10/22/15	10/23/15	54.3		

% Solids: 79.7

Comments:

Metals
- 1 -
INORGANIC ANALYSIS DATA PACKAGE

Client:	Oneida Total Integrated Enterpri	**Service Request:**	K1510800
Project No.:	2015270	**Date Collected:**	9/22/2015
Project Name:	Tetlin NWR Former Small Arms Ran	**Date Received:**	9/28/2015
Matrix:	SOIL	**Units:**	mg/Kg
		Basis:	DRY

Sample Name: BG10-6 **Lab Code:** K1510800-010

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Lead	6010C	2.2	2.0	10/22/15	10/23/15	7.9		

% Solids: 78.3

Comments:

Metals
- 1 -
INORGANIC ANALYSIS DATA PACKAGE

Client: Oneida Total Integrated Enterpri
Service Request: K1510800
Project No.: 2015270
Date Collected: 9/22/2015
Project Name: Tetlin NWR Former Small Arms Ran
Date Received: 9/28/2015
Matrix: SOIL
Units: mg/Kg
Basis: DRY

Sample Name: BG3-6X
Lab Code: K1510800-011

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	6010C	4.3	2.0	10/22/15	10/23/15	4.3	U	N
Arsenic	6010C	4.3	2.0	10/22/15	10/23/15	9.0		
Copper	6010C	0.9	2.0	10/22/15	10/23/15	47.0		
Lead	6010C	2.1	2.0	10/22/15	10/23/15	8.6		
Zinc	6010C	1.1	2.0	10/22/15	10/23/15	46.6		

% Solids: 77.5

Comments:

Metals
- 1 -
INORGANIC ANALYSIS DATA PACKAGE

Client: Oneida Total Integrated Enterpri
Service Request: K1510800
Project No.: 2015270
Date Collected:
Project Name: Tetlin NWR Former Small Arms Ran
Date Received:
Matrix: SOIL
Units: mg/Kg
Basis: DRY

Sample Name: Method Blank
Lab Code: KQ1512181-01

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	6010C	4.0	2.0	10/22/15	10/23/15	4.0	U	N
Arsenic	6010C	4.0	2.0	10/22/15	10/23/15	4.0	U	
Copper	6010C	0.8	2.0	10/22/15	10/23/15	0.8	U	
Lead	6010C	2.0	2.0	10/22/15	10/23/15	2.0	U	
Zinc	6010C	1.0	2.0	10/22/15	10/23/15	1.0	U	

% Solids: 100.0

Comments:

Metals
- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Oneida Total Integrated Enterpri **Service Request:** K1510800

Project No.: 2015270

Project Name: Tetlin NWR Former Small Arms Ran

ICV Source: Inorganic Ventures **CCV Source:** ALS MIXED

Concentration Units: ug/L

	Initial Calibration			Continuing Calibration					
Analyte	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	Method
Antimony	2500	2392	96	250	251	100	250	100	6010C
Arsenic	2500	2490	100	1000	1004	100	1004	100	6010C
Copper	625	591	95	250	249	100	250	100	6010C
Lead	2500	2427	97	250	252	101	253	101	6010C
Zinc	1250	1219	98	250	251	100	249	100	6010C

Metals
- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Oneida Total Integrated Enterpri **Service Request:** K1510800

Project No.: 2015270

Project Name: Tetlin NWR Former Small Arms Ran

ICV Source: Inorganic Ventures **CCV Source:** ALS MIXED

Concentration Units: ug/L

	Initial Calibration			Continuing Calibration					
Analyte	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	Method
Antimony				250	254	102	251	100	6010C
Arsenic				1000	1017	102	1017	102	6010C
Copper				250	251	100	251	100	6010C
Lead				250	249	100	252	101	6010C
Zinc				250	250	100	250	100	6010C

Metals
- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Oneida Total Integrated Enterpri **Service Request:** K1510800

Project No.: 2015270

Project Name: Tetlin NWR Former Small Arms Ran

ICV Source: Inorganic Ventures **CCV Source:** ALS MIXED

Concentration Units: ug/L

	Initial Calibration			Continuing Calibration					
Analyte	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	Method
Antimony				250	251	100	257	103	6010C
Arsenic				1000	1012	101	1031	103	6010C
Copper				250	246	98	256	102	6010C
Lead				250	256	102	257	103	6010C
Zinc				250	252	101	252	101	6010C

Metals
- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Oneida Total Integrated Enterpri **Service Request:** K1510800

Project No.: 2015270

Project Name: Tetlin NWR Former Small Arms Ran

ICV Source: Inorganic Ventures **CCV Source:** ALS MIXED

Concentration Units: ug/L

	Initial Calibration			Continuing Calibration					
Analyte	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	Method
Antimony				250	254	102	249	100	6010C
Arsenic				1000	1028	103	1012	101	6010C
Copper				250	250	100	248	99	6010C
Lead				250	251	100	252	101	6010C
Zinc				250	249	100	249	100	6010C

Metals
- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Oneida Total Integrated Enterpri **Service Request:** K1510800

Project No.: 2015270

Project Name: Tetlin NWR Former Small Arms Ran

ICV Source: Inorganic Ventures **CCV Source:** ALS MIXED

Concentration Units: ug/L

	Initial Calibration			Continuing Calibration					
Analyte	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	Method
Antimony				250	249	100	250	100	6010C
Arsenic				1000	1020	102	1020	102	6010C
Copper				250	248	99	246	98	6010C
Lead				250	251	100	253	101	6010C
Zinc				250	249	100	250	100	6010C

Metals
- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Oneida Total Integrated Enterpri **Service Request:** K1510800

Project No.: 2015270

Project Name: Tetlin NWR Former Small Arms Ran

ICV Source: Inorganic Ventures **CCV Source:** ALS MIXED

Concentration Units: ug/L

	Initial Calibration			Continuing Calibration					
Analyte	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	Method
Antimony				250	251	100			6010C
Arsenic				1000	1013	101			6010C
Copper				250	248	99			6010C
Lead				250	252	101			6010C
Zinc				250	251	100			6010C

Metals

- 2a -

LOW LEVEL INITIAL CALIBRATION AND LOW LEVEL CONTINUING CALIBRATION VERIFICATION

Client: Oneida Total Integrated Enterprises (OTIE) **SDG No.:** K1510800

Contract: 2015270 **Lab Code:** ALSK **Case No.:** **SAS No.:**

Initial Calibration Source: Inorganic Ventures

Continuing Calibration Source: ALS MIXED

Sample ID	Analyte	Result ug/L	True Value ug/L	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
LLICV1									
	Antimony	22.5	20.0	112	70.0 - 130.0	P	10/23/2015	13:39	102315AICP
	Arsenic	11.0	10.0	110	70.0 - 130.0	P	10/23/2015	13:39	102315AICP
	Copper	3.80	4.0	95	70.0 - 130.0	P	10/23/2015	13:39	102315AICP
	Lead	9.3	10.0	93	70.0 - 130.0	P	10/23/2015	13:39	102315AICP
	Zinc	4.0	4.0	100	70.0 - 130.0	P	10/23/2015	13:39	102315AICP
LLCCV1									
	Antimony	22.2	20.0	111	70.0 - 130.0	P	10/23/2015	14:48	102315AICP
	Arsenic	10.6	10.0	106	70.0 - 130.0	P	10/23/2015	14:48	102315AICP
	Copper	5.00	4.0	125	70.0 - 130.0	P	10/23/2015	14:48	102315AICP
	Lead	9.5	10.0	95	70.0 - 130.0	P	10/23/2015	14:48	102315AICP
	Zinc	4.3	4.0	108	70.0 - 130.0	P	10/23/2015	14:48	102315AICP
LLCCV2									
	Antimony	22.7	20.0	114	70.0 - 130.0	P	10/23/2015	15:32	102315AICP
	Arsenic	9.0	10.0	90	70.0 - 130.0	P	10/23/2015	15:32	102315AICP
	Copper	4.80	4.0	120	70.0 - 130.0	P	10/23/2015	15:32	102315AICP
	Lead	9.8	10.0	98	70.0 - 130.0	P	10/23/2015	15:32	102315AICP
	Zinc	4.2	4.0	105	70.0 - 130.0	P	10/23/2015	15:32	102315AICP
LLCCV3									
	Antimony	23.3	20.0	116	70.0 - 130.0	P	10/23/2015	16:39	102315AICP
	Arsenic	9.4	10.0	94	70.0 - 130.0	P	10/23/2015	16:39	102315AICP
	Copper	4.30	4.0	108	70.0 - 130.0	P	10/23/2015	16:39	102315AICP
	Lead	9.6	10.0	96	70.0 - 130.0	P	10/23/2015	16:39	102315AICP
	Zinc	4.3	4.0	108	70.0 - 130.0	P	10/23/2015	16:39	102315AICP
LLCCV4									
	Antimony	23.1	20.0	116	70.0 - 130.0	P	10/23/2015	17:17	102315AICP
	Arsenic	10.1	10.0	101	70.0 - 130.0	P	10/23/2015	17:17	102315AICP
	Copper	4.50	4.0	112	70.0 - 130.0	P	10/23/2015	17:17	102315AICP
	Lead	10.3	10.0	103	70.0 - 130.0	P	10/23/2015	17:17	102315AICP
	Zinc	4.2	4.0	105	70.0 - 130.0	P	10/23/2015	17:17	102315AICP

Metals

- 2a -

LOW LEVEL INITIAL CALIBRATION AND LOW LEVEL CONTINUING CALIBRATION VERIFICATION

Client: Oneida Total Integrated Enterprises (OTIE) **SDG No.:** K1510800

Contract: 2015270 **Lab Code:** ALSK **Case No.:** **SAS No.:**

Initial Calibration Source: Inorganic Ventures

Continuing Calibration Source: ALS MIXED

Sample ID	Analyte	Result ug/L	True Value ug/L	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
LLCCV									
	Antimony	22.4	20.0	112	70.0 - 130.0	P	10/23/2015	19:22	102315AICP
	Arsenic	10.0	10.0	100	70.0 - 130.0	P	10/23/2015	19:22	102315AICP
	Lead	9.8	10.0	98	70.0 - 130.0	P	10/23/2015	19:22	102315AICP
	Zinc	4.2	4.0	105	70.0 - 130.0	P	10/23/2015	19:22	102315AICP
LLCCV									
	Copper	5.10	4.0	128	70.0 - 130.0	P	10/23/2015	19:24	102315AICP

Metals

- 3 -

BLANKS

Client: Oneida Total Integrated Enterpri **Service Request:** K1510800

Project No.: 2015270

Project Name: Tetlin NWR Former Small Arms Ran

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): ug/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Method
Antimony	20.0	U	20.0	U	20.0	U	20.0	U	6010C
Arsenic	20.0	U	20.0	U	20.0	U	20.0	U	6010C
Copper	4.0	U	4.0	U	4.0	U	4.0	U	6010C
Lead	10.0	U	10.0	U	10.0	U	10.0	U	6010C
Zinc	5.00	U	5.00	U	5.00	U	5.00	U	6010C

Metals

- 3 -

BLANKS

Client: Oneida Total Integrated Enterpri **Service Request:** K1510800

Project No.: 2015270

Project Name: Tetlin NWR Former Small Arms Ran

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): ug/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Method
Antimony			20.0	U	20.0	U	20.0	U	6010C
Arsenic			20.0	U	20.0	U	20.0	U	6010C
Copper			4.0	U	4.0	U	4.0	U	6010C
Lead			10.0	U	10.0	U	10.0	U	6010C
Zinc			5.00	U	5.00	U	5.00	U	6010C

Metals

- 3 -

BLANKS

Client: Oneida Total Integrated Enterpri **Service Request:** K1510800

Project No.: 2015270

Project Name: Tetlin NWR Former Small Arms Ran

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): ug/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Method
Antimony			20.0	U	20.0	U	20.0	U	6010C
Arsenic			20.0	U	20.0	U	20.0	U	6010C
Copper			4.0	U	4.0	U	4.0	U	6010C
Lead			10.0	U	10.0	U	10.0	U	6010C
Zinc			5.00	U	5.00	U	5.00	U	6010C

Metals

- 3 -

BLANKS

Client: Oneida Total Integrated Enterpri **Service Request:** K1510800

Project No.: 2015270

Project Name: Tetlin NWR Former Small Arms Ran

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): ug/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Method
Antimony			20.0	U	20.0	U			6010C
Arsenic			20.0	U	20.0	U			6010C
Copper			4.0	U	4.0	U			6010C
Lead			10.0	U	10.0	U			6010C
Zinc			5.00	U	5.00	U			6010C

Metals

- 4 -

ICP INTERFERENCE CHECK SAMPLE

Client: Oneida Total Integrated Enterpri **Service Request:** K1510800

Project No.: 2015270

Project Name: Tetlin NWR Former Small Arms Ran

ICP ID Number: K-ICP-AES-03 **ICS Source:** Inorganic Ventures

Concentration Units): ug/L

Analyte	True		Initial Found			Final Found		
	Sol.A	Sol.AB	Sol.A	Sol.AB	%R	Sol.A	Sol.AB	%R
Antimony		1000	11	843	84			
Arsenic			2	-1				
Copper		500	-1	429	86			
Lead		1000	-14	833	83			
Zinc		1000	1	879	88			

Metals

- 5A -

SPIKE SAMPLE RECOVERY

Client: Oneida Total Integrated Enterpri **Service Request:** K1510800

Project No.: 2015270 **Units:** MG/KG

Project Name: Tetlin NWR Former Small Arms Ran **Basis:** DRY

Matrix: SOIL **% Solids:** 72.9

Sample Name: BG1-6S **Lab Code:** K1510800-001S

Analyte	Control Limit %R	Spike Result	C	Sample Result	C	Spike Added	%R	Q	Method
Antimony	75 - 125	55.9		4.7	U	114.03	49	N	6010C
Arsenic	75 - 125	123		12.4		114.03	97		6010C
Copper	75 - 125	116		60.2		57.01	98		6010C
Lead	75 - 125	116		10.8		114.03	92		6010C
Zinc	75 - 125	157		52.1		114.03	92		6010C

An empty field in the Control Limit column indicates the control limit is not applicable

Metals

- 5B -
POST SPIKE SAMPLE RECOVERY

Client: Oneida Total Integrated Enterpri **Service Request:** K1510800

Project No.: 2015270 **Units:** UG/L

Project Name: Tetlin NWR Former Small Arms Ran **Basis:** DRY

Matrix: WATER

Sample Name: BG1-6A **Lab Code:** K1510800-001A

Analyte	Control Limit %R	Spike Result	C	Sample Result	C	Spike Added	%R	Q	Method
Antimony	80 - 120	4524.0		20.0		5000	90		6010C
Arsenic	80 - 120	2430.0		53.2		2500	95		6010C
Copper	80 - 120	833.5		257.8		625	92		6010C
Lead	80 - 120	2253.0		46.3		2500	88		6010C
Zinc	80 - 120	1327.00		223.10		1250	88		6010C

Metals

- 6 -

DUPLICATES

Client: Oneida Total Integrated Enterpri **Service Request:** K1510800

Project No.: 2015270 **Units:** MG/KG

Project Name: Tetlin NWR Former Small Arms Ran **Basis:** DRY

Matrix: SOIL **% Solids:** 72.9

Sample Name: **BG1-6D** **Lab Code:** **K1510800-001D**

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	Method
Antimony		4.7	U	4.6	U			6010C
Arsenic		12.4		12.0		3.3		6010C
Copper	20	60.2		60.8		1.0		6010C
Lead		10.8		10.8		0.0		6010C
Zinc	20	52.1		53.0		1.7		6010C

An empty field in the Control Limit column indicates the control limit is not applicable.

Form VI - IN

Metals

- 7 -

LABORATORY CONTROL SAMPLE

Client: Oneida Total Integrated Enterpri **Service Request:** K1510800

Project No.: 2015270

Project Name: Tetlin NWR Former Small Arms Ran

Aqueous LCS Source: **Solid LCS Source:** **ERA D080-540**

Analyte	Aqueous (ug/L) True	Found	%R	Solid (mg/kg) True	Found	C Limits		%R
Antimony				88.8	70.7	22	259	80
Arsenic				139	142	70	140	102
Copper				168	172	76	125	102
Lead				133	129	73	128	97
Zinc				189	182	70	131	96

Metals

- 9 -

ICP SERIAL DILUTIONS

Client: Oneida Total Integrated Enterpri **Service Request:** K1510800

Project No.: 2015270 **Units:** UG/L

Project Name: Tetlin NWR Former Small Arms Ran

Sample Name: BG1-6L **Lab Code:** K1510800-001L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	M
Antimony	20.0	U	100.0	U			P
Arsenic	53.2		100.0	U	100.0		P
Copper	257.8		264.0		2.4		P
Lead	46.3		50.0		8.0		P
Zinc	223.10		237.50		6.5		P

Metals

- 10 -

DETECTION LIMITS

Client: Oneida Total Integrated Enterpri **Service Request:** K1510800

Project No.: 2015270

Project Name: Tetlin NWR Former Small Arms Ran

ICP/ICP-MS ID #:

GFAA ID #: **AA ID #:**

Analyte	Wave-length (nm)	Back-ground	MRL ug/L	MDL ug/L	M
Antimony	206.8		20.0	20.0	P
Arsenic	189.0		20.0	20.0	P
Copper	327.3		4.0	4.0	P
Lead	220.3		10.0	10.0	P
Zinc	206.2		5.00	5.00	P

Comments:

Metals

- 11A -

ICP INTERELEMENT CORRECTION FACTORS

Client: Oneida Total Integrated Enterpri **Service Request:** K1510800

Project No.: 2015270

Project Name: Tetlin NWR Former Small Arms Ran

ICP ID Number: **K-ICP-AES-03**

Analyte	Wave-length (nm)	Interelement Correction Factors for: Al	Ca	Fe	Mg	B
Aluminum	394.401	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Antimony	217.581	0.0000000	0.0000000	-0.0009010	0.0000000	0.0000000
Arsenic	189.042	0.0000330	0.0000000	0.0000000	0.0000000	0.0000000
Barium	455.403	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	234.861	0.0000000	0.0000000	0.0000080	0.0000000	0.0000000
Boron	249.678	0.0000000	0.0000000	-0.0006800	0.0000000	0.0000000
Cadmium	226.502	0.0000000	0.0000000	0.0001570	0.0000000	0.0000000
Calcium	393.366	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.716	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cobalt	228.616	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Copper	327.396	0.0000000	0.0000160	0.0000000	0.0000000	0.0000000
Iron	259.94	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Lead	220.353	-0.0000780	0.0000000	0.0000590	0.0000000	0.0000000
Lithium	670.784	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Magnesium	285.213	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	257.61	0.0000000	0.0000000	0.0000120	0.0000370	0.0000000
Molybdenum	202.03	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.604	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Phosphorus	214.914	-0.0007840	0.0000000	0.0006520	0.0000000	0.0000000
Potassium	766.491	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.0	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silicon	251.611	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silver	328.068	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Sodium	589.592	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Strontium	407.771	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.856	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Tin	189.989	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Titanium	336.121	0.0000000	0.0000110	0.0000000	0.0000440	0.0000000
Vanadium	292.402	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000

Comments:

Metals

- 11A -

ICP INTERELEMENT CORRECTION FACTORS

Client: Oneida Total Integrated Enterpri **Service Request:** K1510800

Project No.: 2015270

Project Name: Tetlin NWR Former Small Arms Ran

ICP ID Number: **K-ICP-AES-03**

Zinc	213.856	0.0000000	0.0000000	0.0001170	0.0000000	0.0000000

Comments:

Metals

- 11B -

ICP INTERELEMENT CORRECTION FACTORS

Client: Oneida Total Integrated Enterpri **Service Request:** K1510800

Project No.: 2015270

Project Name: Tetlin NWR Former Small Arms Ran

ICP ID Number: **K-ICP-AES-03**

Analyte	Wave-length (nm)	Interelement Correction Factors for: Ba	Cd	Co	Cr	Cu
Aluminum	394.401	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Antimony	217.581	0.0000000	0.0000000	0.0000000	0.0004650	-0.0009350
Arsenic	189.042	0.0000000	0.0000000	0.0000000	0.0005140	0.0000000
Barium	455.403	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	234.861	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Boron	249.678	0.0000000	0.0000000	0.0025890	0.0003110	0.0000000
Cadmium	226.502	0.0000000	0.0000000	-0.0000110	0.0000330	0.0000000
Calcium	393.366	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.716	0.0000000	-0.0001480	0.0000000	0.0000000	0.0000000
Cobalt	228.616	-0.0001220	0.0000000	0.0000000	0.0000000	0.0000000
Copper	327.396	0.0000000	0.0000000	0.0002590	0.0000000	0.0000000
Iron	259.94	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Lead	220.353	0.0000000	0.0000000	0.0001270	0.0000000	0.0003500
Lithium	670.784	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Magnesium	285.213	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	257.61	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Molybdenum	202.03	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.604	0.0000000	0.0000000	-0.0001870	0.0000000	0.0000000
Phosphorus	214.914	0.0000000	-0.0015740	0.0000000	0.0000000	0.0052080
Potassium	766.491	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.0	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silicon	251.611	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silver	328.068	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Sodium	589.592	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Strontium	407.771	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.856	0.0000000	0.0000000	0.0031300	0.0003080	0.0000000
Tin	189.989	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Titanium	336.121	0.0000000	0.0000000	0.0000270	0.0000000	0.0000000
Vanadium	292.402	0.0000000	0.0000000	0.0000000	-0.0058770	0.0000000

Comments:

Metals

- 11B -

ICP INTERELEMENT CORRECTION FACTORS

Client: Oneida Total Integrated Enterpri **Service Request:** K1510800

Project No.: 2015270

Project Name: Tetlin NWR Former Small Arms Ran

ICP ID Number: **K-ICP-AES-03**

Zinc	213.856	0.0000000	0.0000000	0.0000000	0.0000000	0.0010410

Comments:

Metals

- 11B -

ICP INTERELEMENT CORRECTION FACTORS

Client: Oneida Total Integrated Enterpri **Service Request:** K1510800

Project No.: 2015270

Project Name: Tetlin NWR Former Small Arms Ran

ICP ID Number: **K-ICP-AES-03**

Analyte	Wave-length (nm)	Interelement Correction Factors for: Mn	Mo	Ni	Sb	Si
Aluminum	394.401	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Antimony	217.581	-0.0007640	0.0000000	0.0000000	0.0000000	0.0000000
Arsenic	189.042	-0.0002720	0.0015570	0.0000000	0.0000000	0.0000000
Barium	455.403	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	234.861	-0.0000630	-0.0004470	-0.0000170	0.0000000	0.0000000
Boron	249.678	0.0000000	-0.0019240	0.0000000	0.0000000	0.0000000
Cadmium	226.502	0.0000000	-0.0000110	-0.0000150	0.0000000	0.0000000
Calcium	393.366	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.716	0.0000000	0.0000620	0.0000000	0.0000000	0.0000000
Cobalt	228.616	0.0000000	-0.0012500	0.0001140	0.0000000	0.0000000
Copper	327.396	0.0000000	-0.0002610	0.0000000	0.0000000	0.0000000
Iron	259.94	0.0000000	-0.0002450	0.0000000	0.0000000	0.0000000
Lead	220.353	0.0000000	-0.0007250	0.0002650	0.0000000	0.0000000
Lithium	670.784	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Magnesium	285.213	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	257.61	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Molybdenum	202.03	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.604	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Phosphorus	214.914	-0.0006320	0.0105360	0.0000000	0.0000000	0.0000000
Potassium	766.491	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.0	0.0004420	0.0000000	0.0000000	0.0000000	0.0000000
Silicon	251.611	0.0000000	0.0731890	0.0000000	0.0000000	0.0000000
Silver	328.068	0.0001350	0.0001470	0.0000000	0.0000000	0.0000000
Sodium	589.592	0.0000000	0.0023580	0.0000000	0.0000000	0.0000000
Strontium	407.771	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.856	0.0006530	0.0000000	0.0000000	0.0000000	0.0000000
Tin	189.989	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Titanium	336.121	0.0000000	0.0000400	0.0001110	0.0000000	0.0000000
Vanadium	292.402	-0.0011210	-0.0000900	0.0000000	0.0000000	0.0000000

Comments:

Metals

- 11B -

ICP INTERELEMENT CORRECTION FACTORS

Client: Oneida Total Integrated Enterpri **Service Request:** K1510800

Project No.: 2015270

Project Name: Tetlin NWR Former Small Arms Ran

ICP ID Number: **K-ICP-AES-03**

Zinc	213.856	0.0000000	0.0000000	0.0056230	0.0000000	0.0000000

Comments:

Metals

- 11B -

ICP INTERELEMENT CORRECTION FACTORS

Client: Oneida Total Integrated Enterpri **Service Request:** K1510800

Project No.: 2015270

Project Name: Tetlin NWR Former Small Arms Ran

ICP ID Number: **K-ICP-AES-03**

Analyte	Wave-length (nm)	Interelement Correction Factors for: Ti	V			
Aluminum	394.401	0.0000000	0.0000000			
Antimony	217.581	0.0000000	0.0021710			
Arsenic	189.042	0.0000000	0.0001150			
Barium	455.403	0.0000000	0.0000000			
Beryllium	234.861	0.0000000	0.0000000			
Boron	249.678	0.0000000	-0.0005070			
Cadmium	226.502	0.0001270	0.0000000			
Calcium	393.366	0.0000000	0.0000000			
Chromium	267.716	0.0000000	-0.0000640			
Cobalt	228.616	0.0024440	0.0000000			
Copper	327.396	0.0001170	-0.0000910			
Iron	259.94	0.0000000	0.0000000			
Lead	220.353	0.0000000	0.0000000			
Lithium	670.784	0.0000000	0.0000000			
Magnesium	285.213	0.0000000	0.0000000			
Manganese	257.61	0.0000000	0.0000000			
Molybdenum	202.03	0.0000000	0.0000000			
Nickel	231.604	0.0000000	0.0000000			
Phosphorus	214.914	0.0000000	-0.0020860			
Potassium	766.491	0.0000000	0.0000000			
Selenium	196.0	0.0000000	0.0000000			
Silicon	251.611	0.0000000	0.0000000			
Silver	328.068	0.0000000	0.0000780			
Sodium	589.592	0.0000000	0.0000000			
Strontium	407.771	0.0000000	0.0000000			
Thallium	190.856	-0.0005060	0.0002630			
Tin	189.989	0.0000000	0.0000000			
Titanium	336.121	0.0000000	0.0000000			
Vanadium	292.402	0.0004260	0.0000000			

Comments:

Metals

- 11B -

ICP INTERELEMENT CORRECTION FACTORS

Client: Oneida Total Integrated Enterpri **Service Request:** K1510800

Project No.: 2015270

Project Name: Tetlin NWR Former Small Arms Ran

ICP ID Number: **K-ICP-AES-03**

Zinc	213.856	0.0000000	0.0000000			

Comments:

Metals
-12-
ICP LINEAR RANGES (QUARTERLY)

Client: Oneida Total Integrated Enterpri **Service Request:** K1510800

Project No.: 2015270

Project Name: Tetlin NWR Former Small Arms Ran

ICP ID Number: **K-ICP-AES-03**

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Antimony	15.000	90000	6010C
Arsenic	15.000	90000	6010C
Copper	15.000	90000	6010C
Lead	15.000	22500	6010C
Zinc	15.000	18000	6010C

Comments:

Metals
-13-
PREPARATION LOG

Client: Oneida Total Integrated Enterpri **Service Request:** K1510800

Project No.: 2015270

Project Name: Tetlin NWR Former Small Arms Ran

Method: P

Sample ID	Preparation Date	Initial Weight (g)	Final Volume(mL)
K1510800-001	10/22/2015	1.17	100.0
K1510800-001D	10/22/2015	1.19	100.0
K1510800-001S	10/22/2015	1.20	100.0
K1510800-002	10/22/2015	1.21	100.0
K1510800-003	10/22/2015	1.22	100.0
K1510800-004	10/22/2015	1.15	100.0
K1510800-005	10/22/2015	1.22	100.0
K1510800-006	10/22/2015	1.18	100.0
K1510800-007	10/22/2015	1.26	100.0
K1510800-008	10/22/2015	1.17	100.0
K1510800-009	10/22/2015	1.17	100.0
K1510800-010	10/22/2015	1.16	100.0
K1510800-011	10/22/2015	1.20	100.0
KQ1512181-01	10/22/2015	1.00	100.0
KQ1512181-02	10/22/2015	1.05	100.0

ALS Group USA, Corp.
dba ALS Environmental

Metals
- 14 -
ANALYSIS RUN LOG

Client: Oneida Total Integrated Enterpri **Service Request:** K1510800

Project No.: 2015270 **Run Number:** 102315AICP03

Project Name: Tetlin NWR Former Small Arms Ran

Instrument ID Number: K-ICP-AES-03 **Method:** P

Start Date: 10/23/2015 **End Date:** 10/23/2015

Sample No.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
BLK	1.0	13:25			X	X							X		X											X	
STD A	1.0	13:27			X								X		X											X	
STD B	1.0	13:29				X																					
ICV1	1.0	13:32																									
ICV1	1.0	13:35			X	X							X		X											X	
ICB1	1.0	13:37			X	X							X		X											X	
LLICV1	1.0	13:39			X	X							X		X											X	
ZZZZZZ	1.0	13:42																									
ZZZZZZ	1.0	13:44																									
CCV1	1.0	13:47				X																					
CCV1	1.0	13:49			X								X		X											X	
CCB1	1.0	13:51			X	X							X		X											X	
ICS-A1	1.0	13:54			X	X							X		X											X	
ICS-AB1	1.0	13:57			X	X							X		X											X	
ZZZZZZ	1.0	14:00																									
CCV2	1.0	14:02				X																					
CCV2	1.0	14:05			X								X		X											X	
CCB2	1.0	14:08			X	X							X		X											X	
ZZZZZZ	1.0	14:13																									
ZZZZZZ	1.0	14:16																									
ZZZZZZ	1.0	14:18																									
ZZZZZZ	1.0	14:20																									
ZZZZZZ	1.0	14:23																									
ZZZZZZ	1.0	14:25																									
ZZZZZZ	1.0	14:28																									
ZZZZZZ	1.0	14:30																									
ZZZZZZ	1.0	14:35																									
ZZZZZZ	1.0	14:38																									
CCV3	1.0	14:40				X																					
CCV3	1.0	14:43			X								X		X											X	
CCB3	1.0	14:45			X	X							X		X											X	
LLCCV1	1.0	14:48			X	X							X		X											X	

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

Metals
- 14 -
ANALYSIS RUN LOG

Client: Oneida Total Integrated Enterpri **Service Request:** K1510800

Project No.: 2015270 **Run Number:** 102315AICP03

Project Name: Tetlin NWR Former Small Arms Ran

Instrument ID Number: K-ICP-AES-03 **Method:** P

Start Date: 10/23/2015 **End Date:** 10/23/2015

Sample No.	D/F	Time	% R	Analytes																							
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	1.0	14:52																									
ZZZZZZ	1.0	14:55																									
ZZZZZZ	1.0	14:58																									
ZZZZZZ	1.0	15:00																									
ZZZZZZ	1.0	15:03																									
ZZZZZZ	1.0	15:05																									
ZZZZZZ	2.0	15:08																									
ZZZZZZ	2.0	15:10																									
ZZZZZZ	2.0	15:12																									
ZZZZZZ	10.0	15:15																									
ZZZZZZ	2.0	15:17																									
ZZZZZZ	2.0	15:19																									
CCV4	1.0	15:22				X																					
CCV4	1.0	15:24			X								X		X											X	
CCB4	1.0	15:27			X	X							X		X											X	
LLCCV2	1.0	15:32			X	X							X		X											X	
ZZZZZZ	1.0	15:34																									
ZZZZZZ	1.0	15:37																									
ZZZZZZ	2.0	15:40																									
ZZZZZZ	2.0	15:42																									
ZZZZZZ	2.0	15:44																									
ZZZZZZ	2.0	15:46																									
ZZZZZZ	2.0	15:49																									
ZZZZZZ	2.0	15:51																									
ZZZZZZ	2.0	15:53																									
ZZZZZZ	2.0	15:56																									
ZZZZZZ	2.0	15:58																									
CCV5	1.0	16:00				X																					
CCV5	1.0	16:03			X								X		X											X	
CCB5	1.0	16:05			X	X							X		X											X	
ZZZZZZ	2.0	16:08																									
ZZZZZZ	2.0	16:10																									

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

Metals
- 14 -
ANALYSIS RUN LOG

Client: Oneida Total Integrated Enterpri **Service Request:** K1510800

Project No.: 2015270 **Run Number:** 102315AICP03

Project Name: Tetlin NWR Former Small Arms Ran

Instrument ID Number: K-ICP-AES-03 **Method:** P

Start Date: 10/23/2015 **End Date:** 10/23/2015

Sample No.	D/F	Time	% R	Analytes																							
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	2.0	16:13																									
ZZZZZZ	2.0	16:15																									
ZZZZZZ	10.0	16:17																									
ZZZZZZ	2.0	16:20																									
ZZZZZZ	2.0	16:22																									
ZZZZZZ	2.0	16:24																									
ZZZZZZ	2.0	16:27																									
ZZZZZZ	2.0	16:29																									
CCV6	1.0	16:31				X																					
CCV6	1.0	16:34			X								X		X											X	
CCB6	1.0	16:36			X	X							X		X											X	
LLCCV3	1.0	16:39			X	X							X		X											X	
ZZZZZZ	1.0	16:41																									
ZZZZZZ	2.0	16:44																									
ZZZZZZ	2.0	16:47																									
ZZZZZZ	2.0	16:49																									
ZZZZZZ	2.0	16:51																									
ZZZZZZ	2.0	16:54																									
ZZZZZZ	2.0	16:56																									
ZZZZZZ	2.0	16:59																									
ZZZZZZ	2.0	17:01																									
ZZZZZZ	50.0	17:03																									
KQ1512181-01	2.0	17:06			X	X							X		X											X	
CCV7	1.0	17:09				X																					
CCV7	1.0	17:11			X								X		X											X	
CCB7	1.0	17:14			X	X							X		X											X	
LLCCV4	1.0	17:17			X	X							X		X											X	
ZZZZZZ	1.0	17:19																									
KQ1512181-02	2.0	17:24			X	X							X		X											X	
K1510800-001	2.0	17:27			X	X							X		X											X	
K1510800-001L	10.0	17:29			X	X							X		X											X	
K1510800-001D	2.0	17:31			X	X							X		X											X	

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

Metals
- 14 -

ANALYSIS RUN LOG

Client: Oneida Total Integrated Enterpri **Service Request:** K1510800

Project No.: 2015270 **Run Number:** 102315AICP03

Project Name: Tetlin NWR Former Small Arms Ran

Instrument ID Number: K-ICP-AES-03 **Method:** P

Start Date: 10/23/2015 **End Date:** 10/23/2015

Sample No.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
K1510800-001S	2.0	17:34			X	X							X		X											X	
K1510800-001A	2.0	17:36			X	X							X		X											X	
K1510800-002	2.0	17:39													X												
K1510800-003	2.0	17:41			X	X							X		X											X	
K1510800-004	2.0	17:43													X												
K1510800-005	2.0	17:46			X	X							X		X											X	
CCV8	1.0	17:48				X																					
CCV8	1.0	17:51			X								X		X											X	
CCB8	1.0	17:53			X	X							X		X											X	
K1510800-006	2.0	17:56													X												
K1510800-007	2.0	17:58			X	X							X		X											X	
K1510800-008	2.0	18:00													X												
K1510800-009	2.0	18:03			X	X							X		X											X	
K1510800-010	2.0	18:05													X												
K1510800-011	2.0	18:07			X	X							X		X											X	
ZZZZZZ	2.0	18:10																									
ZZZZZZ	2.0	18:12																									
ZZZZZZ	2.0	18:15																									
ZZZZZZ	10.0	18:17																									
CCV9	1.0	18:19				X																					
CCV9	1.0	18:22			X								X		X											X	
CCB9	1.0	18:24			X	X							X		X											X	
ZZZZZZ	2.0	18:27																									
ZZZZZZ	2.0	18:29																									
ZZZZZZ	2.0	18:31																									
ZZZZZZ	2.0	18:34																									
ZZZZZZ	2.0	18:36																									
ZZZZZZ	2.0	18:39																									
ZZZZZZ	2.0	18:41																									
ZZZZZZ	2.0	18:43																									
ZZZZZZ	2.0	18:46																									
ZZZZZZ	2.0	18:48																									

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

Metals
- 14 -

ANALYSIS RUN LOG

Client: Oneida Total Integrated Enterpri **Service Request:** K1510800

Project No.: 2015270 **Run Number:** 102315AICP03

Project Name: Tetlin NWR Former Small Arms Ran

Instrument ID Number: K-ICP-AES-03 **Method:** P

Start Date: 10/23/2015 **End Date:** 10/23/2015

Sample No.	D/F	Time	% R	Analytes																							
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
CCV10	1.0	18:50				X																					
CCV10	1.0	18:53			X								X		X											X	
CCB10	1.0	18:55			X	X							X		X											X	
ZZZZZZ	2.0	18:58																									
ZZZZZZ	2.0	19:00																									
ZZZZZZ	2.0	19:02																									
ZZZZZZ	2.0	19:05																									
ZZZZZZ	2.0	19:07																									
ZZZZZZ	2.0	19:09																									
CCV11	1.0	19:12				X																					
CCV11	1.0	19:14			X								X		X											X	
CCB11	1.0	19:17			X	X							X		X											X	
ZZZZZZ	1.0	19:19																									
LLCCV5	1.0	19:22			X	X									X											X	
LLCCV5	1.0	19:24											X														

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

APPENDIX B

Site Photo Log

1. Background Sampling Location

2. Background Sampling Location

3. View of Range Floor and Impact Berm looking southeast

4. View of Range Floor and Impact Berm looking southeast

5. View of the Range Floor and Impact Berm looking southwest

6. View of the Range Floor and Impact Berm looking northwest. Makeshift targets and debris shown.

7. View of Impact Berm and makeshift targets looking to the southeast

8. View of makeshift targets and Impact Berm in the background looking to the south-east

9. View of Impact Berm looking to the southeast

10. View of Impact Berm looking to the southeast

11. View of Impact Berm (left) and Range Floor (right) looking to the west-southwest

12. View of range floor looking to the northwest

13. View of range floor northeastern boundary looking to the northwest

14. View of Range Floor and Impact berm looing toward the southeast

15. View of Impact Berm looking toward the northeast

16. View of Impact Berm looking east-southeast

17. View of shell casings on the Range Floor

18. View of debris on the Range Floor

19. View of Impact Berm sampling at sampling unit G1

20. View of Impact Berm sampling

21. Impact Berm—G1 Sampling Unit

22. Impact Berm—G2 Sampling Unit

23. Impact Berm—G3 Sampling Unit

24. Impact Berm—G4 Sampling Unit

25. Impact Berm—G5 Sampling Unit

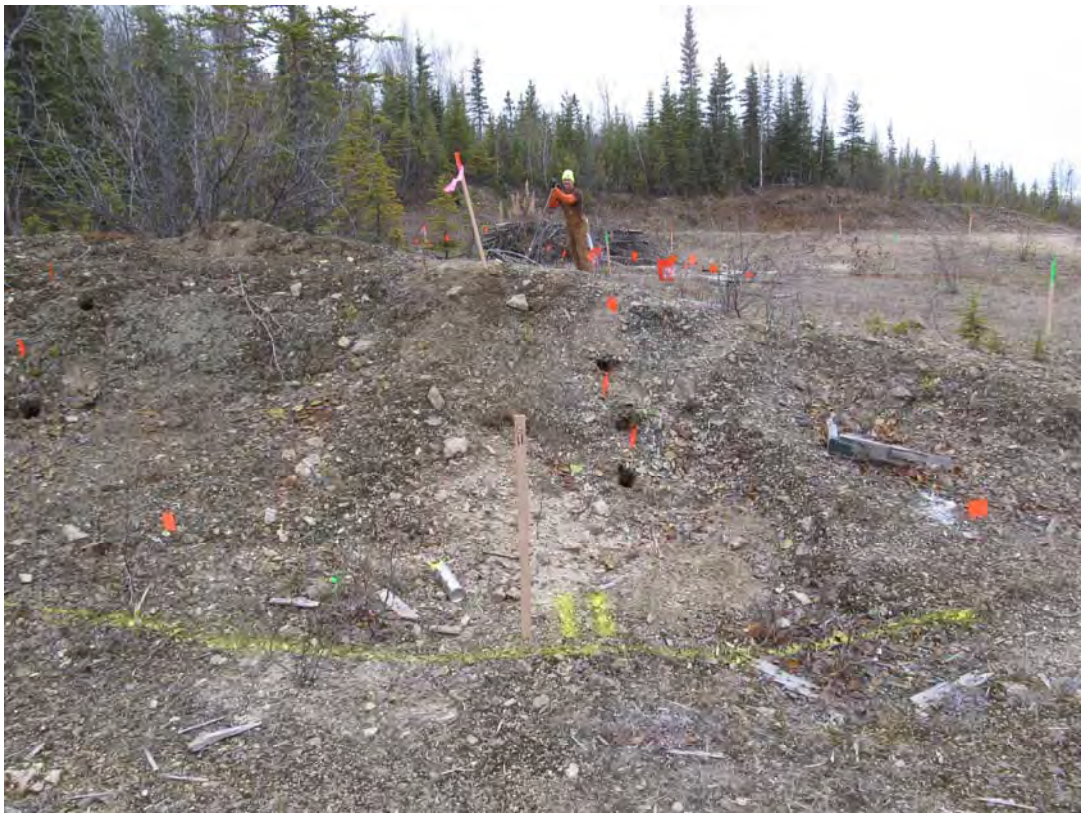
26. Impact Berm—G6 Sampling Unit

27. Impact Berm—G7 Sampling Unit

28. Impact Berm—G8 Sampling Unit

29. Impact Berm—G9 Sampling Unit

30. Impact Berm—G10 Sampling Unit



31. Impact Berm—G11 Sampling Unit

32. Impact Berm—G12 Sampling Unit

33. Impact Berm—G13 Sampling Unit

34. Impact Berm—G14 Sampling Unit

35. Impact Berm—G15 Sampling Unit

36. Impact Berm—G16 Sampling Unit

37. Impact Berm—G17 Sampling Unit

38. Impact Berm—G17 Sampling Unit and debris pile