Measured Concentrations of Metals and Polycyclic Aromatic Hydrocarbons in Plants, Berries and Soil Located in the Oil Sands Region North of Fort McMurray, Alberta

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Oil Sands Research and Information Network

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Citation

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REPORT SUMMARY

The objective of this study is to measure and characterize concentrations of chemicals in plants, berries and soil predominantly located north of Fort McMurray, Alberta. Methods included opportunistic sampling via collection of root vegetables, above ground vegetables, berries and soil and corresponding laboratory analysis to determine the concentrations of metals and polycyclic aromatic hydrocarbons (PAHs) in each environmental media. As well, the methods utilized for laboratory analysis, quality assurance and quality control are discussed. The results of the laboratory analysis for the chemical concentrations in each of the environmental media samples collected are presented.

ACKNOWLEDGEMENTS

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1 INTRODUCTION

Alberta Environment and Sustainable Resource Development (ESRD) and the Oil Sands Research and Information Network (OSRIN) co-funded a study to collect, measure and characterize concentrations of metals and polycyclic aromatic hydrocarbons (PAHs) in plants, berries and soil predominantly located north of Fort McMurray. This report includes:

- The sampling methodologies used for data collection;
- The laboratory analysis;
- Quality assurance and quality control procedures; and,
- The raw data sets.

As part of this report, quality of the data was not evaluated.

2 SAMPLING DESIGN

2.1 Sampling Area

The sampling area is within the Regional Municipality of Wood Buffalo (RMWB), which is located in the northeastern part of Alberta and borders the province of Saskatchewan on the east and the Northwest Territories on the north (Regional Municipality of Wood Buffalo n.d.). This region contains the urban centre of Fort McMurray and nine rural communities: Anzac, Conklin, Draper, Fort Chipewyan, Fort Fitzgerald, Fort Mackay, Gregoire Lake Estates, Janvier, Mariana Lake and Saprae Creek (Regional Municipality of Wood Buffalo 2014). Field samples were predominantly located north of Fort McMurray. Figure 1 shows the area for the sample collection.

2.2 Environmental Media Sampled

Plants, berries and soil were the environmental media types sampled for this work. It is important to recognize that vegetation is likely to accumulate different contaminants at different rates depending upon:

- The exposure concentration in air, water, soil or sediment
- The partitioning rates between various inorganic media
- The biodegradation rates of the contaminants; and
- The species-specific variation in bioconcentration and bioaccumulation.

Since these processes are complex and highly variable between species and sites, the representative vegetation from each of the following environmental media types and their associated exposure medium were collected throughout the sampling area:

- Root plants (soil contamination);
- Above ground plants (aerial deposition); and,

- Berries/fruits (aerial and soil contamination).

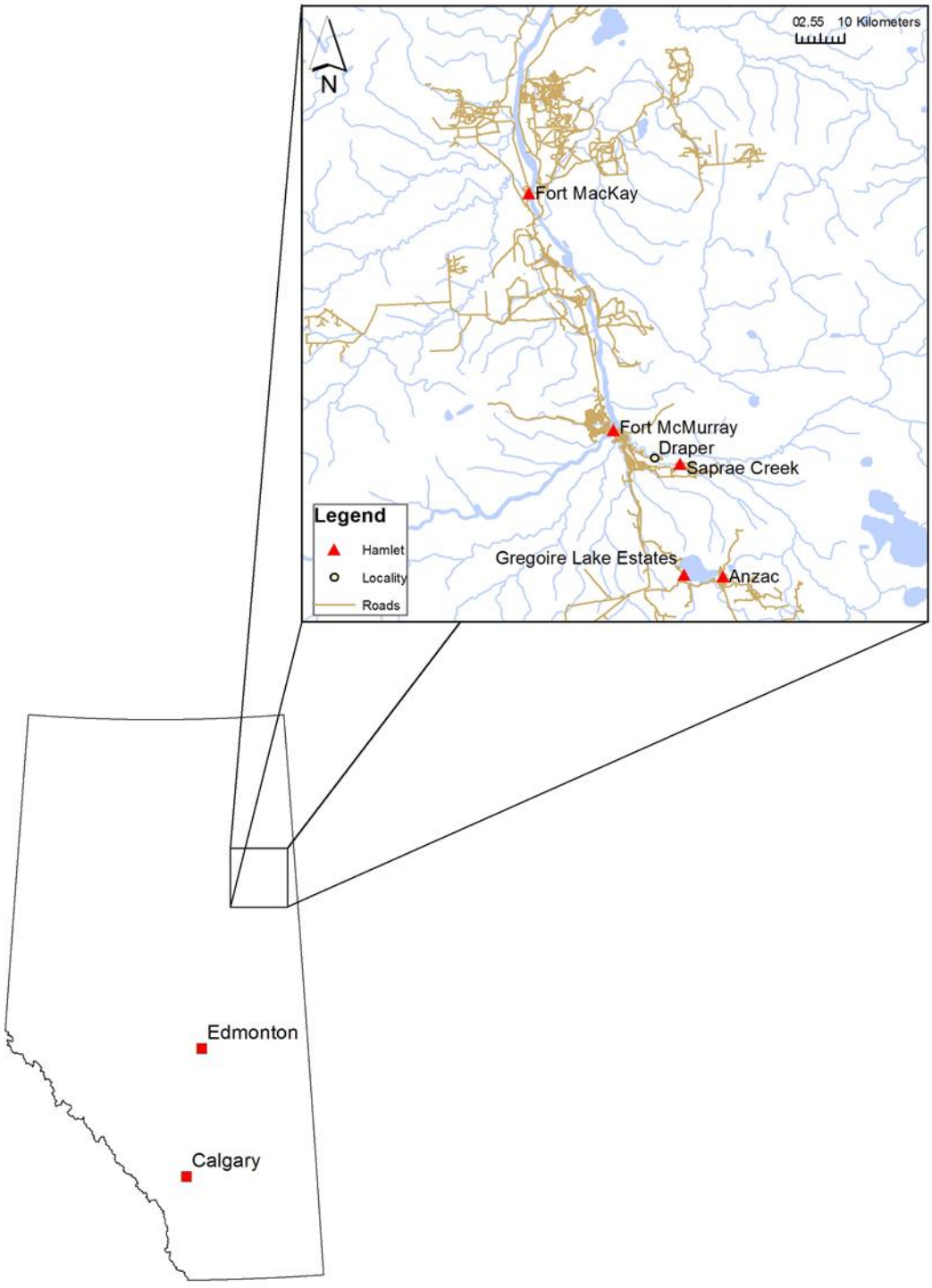

Figure 1. Sample collection area.

Based on the literature (Alberta Health and Wellness 1999, Chan and Lawn 2008, Fort McKay Environmental Services 1997, Golder Associates Ltd. 2003, McKillop 2002, Wein et al. 1991) the following vegetation was collected:

- Root plants – rat root;
- Above ground plants – Labrador tea leaf; and,
- Berries – blueberry.

Soil was also collected at most plant collection sites.

Table 1 lists the types of plants collected and their medium of exposure to environmental contaminants.

Table 1. Plant samples and exposure medium.

Plant Type	**Scientific Name**[1]	**Common Name**	**Exposure Medium**
Root plants (rhizome)	*Acorus americanus*	Rat root	Soil contamination
Above ground plants (foliage)	*Ledum groenlandicum*-	Labrador tea leaf	Aerial deposition[2]
Berries (berry)	*Vaccinium myrtilloides*	Blueberry	Aerial and soil contamination

2.3 Chemicals Assessed

A full list of the metals and PAHs analyzed in samples are shown in Table 2 and outlined further in Section 2.4. In addition to these chemicals, soil samples were also assessed for texture and particle size. Moisture content was included for both plants and soil.

[1] For more information on these plants see Smreciu, A., K. Gould and S. Wood, 2013. Boreal Plant Species for Reclamation of Athabasca Oil Sands Disturbances – Updated December 2014. OSRIN Report No. TR-44. 23 pp. plus appendices. http://hdl.handle.net/10402/era.37533

[2] For information on PAH deposition in snow see Birks, S.J., Y. Yi, S. Cho, J.J. Gibson and R. Hazewinkel, 2013. Characterizing the Organic Composition of Snow and Surface Water in the Athabasca Region. OSRIN Report No. TR-40. 62 pp. http://hdl.handle.net/10402/era.36643

Table 2. Metals and PAHs assessed in collected samples.

Metals		PAHs
Aluminum	Mercury	Acenaphthene
Antimony	Methyl Mercury	Acenaphthylene
Arsenic	Molybdenum	Anthracene
Barium	Nickel	Benzo(a)anthracene
Beryllium	Phosphorus	Benzo(a)pyrene
Bismuth	Potassium	Benzo(b)fluoranthene
Boron	Selenium	Benzo(g,h,i)perylene
Cadmium	Silicon	Benzo(k)fluoranthene
Calcium	Silver	Chrysene
Chromium	Sodium	Dibenzo(a,h)anthracene
Chromium (VI)	Strontium	Fluoranthene
Chromium (III)	Sulphur	Fluorene
Cobalt	Thallium	Indeno(1,2,3-c,d)pyrene
Copper	Tin	2-Methylnaphthalene
Iron	Titanium	Naphthalene
Lead	Vanadium	Phenanthrene
Lithium	Zinc	Pyrene
Magnesium	Zirconium	2-Methylnapthalene
Manganese	Uranium	

2.4 Sample Collection

Owing to the uneven distribution of vegetation species spatially in the study area and ease of access to sampling locations on leased sites, sampling was undertaken opportunistically. The experimental design should not be considered to be a random sample.

The field samples were collected by technicians from Wild Rose Consulting Inc. between July 26 and September 18, 2012. Vegetation samples were harvested in compliance with standard operating procedures from *Samples and Laboratory Analysis of Country Foods* (Health Canada 2011) with some modifications made by ESRD and in accordance with requirements provided by EXOVA Laboratories (Edmonton, Alberta) (See Appendix 1 and Appendix 2). Soil samples were collected using the standard operating procedure outlined in Appendix 1. Once

collected, samples were stored between 1 to 10°C for up to 10 days and delivered to the laboratory storage sites in Fort McMurray. The storage practices used were in accordance with the standard operating procedures developed by Health Canada (2011) (See Appendix 1).

In total, 19 sites were visited and 362 samples were collected – 10% of which were quality control samples (38 samples). A quality control sample was collected every trip (trip blank) and at each sampling site (location blank). The 324 samples were tested for metals and PAHs. This group was comprised of 12 rat root samples, 60 Labrador tea leaf samples, 60 blueberries samples and 192 soil samples. A map of the sample site locations is shown in Figure 2.

Table 3 lists the quantity and types of samples collected at each site and what chemicals the samples were analyzed for. The following samples were collected:

Rat root (12 rhizome samples collected in total):

- samples collected from sites 10 and 19 (6 each)
  - 5 samples assessed for metals and PAHs at each site
  - 1 sample assessed for methyl mercury at each site

Labrador tea (60 foliage samples collected in total):

- samples collected from sites 4, 5, 8, 11, 12, 13, 15, 16, 17, and 18 (6 each)
  - 5 samples assessed for metals and PAHs at each site
  - 1 sample assessed for methyl mercury at each site

Blueberry (60 berry samples collected in total):

- samples collected from sites 1, 2, 3, 6, 7, 9, 11, 12, 13 and 14 (6 each)
  - 5 samples assessed for metals and PAHs at each site
  - 1 sample assessed for methyl mercury at each site

Two soil samples were taken from each location where a berry, Labrador tea, or rat root sample was collected, given that different sampling methodologies were required for metals and PAHs (See Appendix 1). At site 7 the soil sample AENV-WRC-08-005-Soil-Metals was not provided by the lab. This means only 4 soil samples at this location were tested for metals at site 7. At site 10, one soil sample was taken for each plant sample instead of 2. The sample was split in two at the lab and analyzed for metals and PAHs. Soil samples were collected within the first 10 cm near the roots of the plants. No soil samples were taken from site 19 where 6 rat root samples were taken, since rat root is typically found in water.

For site verification purposes, each sampling location was documented in the field using a hand-held global positioning system (GPS) device. Details regarding site characterization, location, GPS coordinates, and sample types collected at each site are described in Appendix 3.

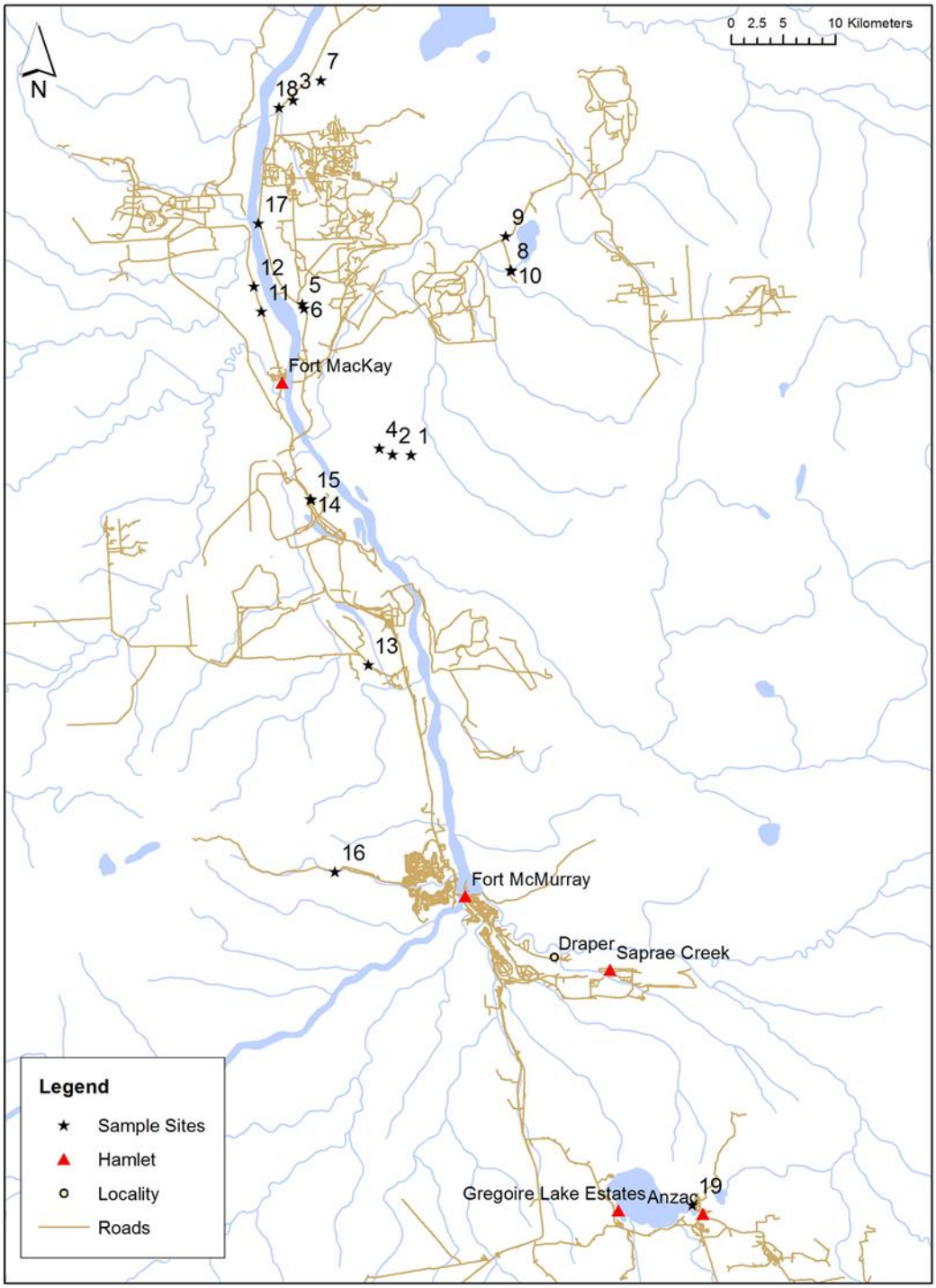

Figure 2. Sampling locations and site assigned numbers.

Table 3. Quantity of samples collected from each site and analysis performed.

Site	Number of Samples	Sample Type	Chemicals Analyzed
1	5	Berry	Metals and PAHs
	5	Soil	Metals
	5	Soil	PAHs
	1	Berry	Methyl mercury
	1	Soil	Methyl mercury
2	5	Berry	Metals and PAHs
	5	Soil	Metals
	5	Soil	PAHs
	1	Berry	Methyl mercury
	1	Soil	Methyl mercury
3	5	Berry	Metals and PAHs
	5	Soil	Metals
	5	Soil	PAHs
	1	Berry	Methyl mercury
	1	Soil	Methyl mercury
4	5	Foliage	Metals and PAHs
	5	Soil	Metals
	5	Soil	PAHs
	1	Soil	Methyl mercury
	1	Foliage	Methyl mercury
5	5	Foliage	Metals and PAHs
	5	Soil	Metals
	5	Soil	PAHs
	1	Foliage	Methyl mercury
	1	Soil	Methyl mercury
6	5	Berry	Metals and PAHs
	5	Soil	Metals
	5	Soil	PAHs
	1	Berry	Methyl Mercury
	1	Soil	Methyl Mercury
7	5	Berry	Metals and PAHs
	4	Soil	Metals
	5	Soil	PAHs
	1	Berry	Methyl mercury
	1	Soil	Methyl mercury

Site	Number of Samples	Sample Type	Chemicals Analyzed
8	5	Foliage	Metals and PAHs
	5	Soil	Metals
	5	Soil	PAHs
	1	Foliage	Methyl mercury
	1	Soil	Methyl mercury
9	5	Berry	Metals and PAHs
	5	Soil	Metals
	5	Soil	PAHs
	1	Berry	Methyl mercury
	1	Soil	Methyl mercury
10	5	Rhizomes	Metals and PAHs
	5	Soil	Metals and PAHs
	1	Rhizomes	Methyl mercury
	1	Soil	Methyl mercury
11	5	Berry	Metals and PAHs
	5	Foliage	Metals and PAHs
	5	Soil	Metals
	5	Soil	PAHs
	1	Berry	Methyl mercury
	1	Foliage	Methyl mercury
	1	Soil	Methyl mercury
12	5	Berry	Metals and PAHs
	5	Foliage	Metals and PAHs
	5	Soil	Metals
	5	Soil	PAHs
	1	Berry	Methyl mercury
	1	Foliage	Methyl mercury
	1	Soil	Methyl mercury
13	5	Berry	Metals and PAHs
	5	Foliage	Metals and PAHs
	5	Soil	Metals
	5	Soil	PAHs
	1	Berry	Methyl mercury
	1	Foliage	Methyl mercury
	1	Soil	Methyl mercury
14	5	Berry	Metals and PAHs
	5	Soil	Metals
	5	Soil	PAHs
	1	Berry	Methyl mercury
	1	Soil	Methyl mercury

Site	Number of Samples	Sample Type	Chemicals Analyzed
15	5	Foliage	Metals and PAHs
	5	Soil	Metals
	5	Soil	PAHs
	1	Foliage	Methyl mercury
	1	Soil	Methyl mercury
16	5	Foliage	Metals and PAHs
	5	Soil	Metals and PAHs
	1	Foliage	Methyl mercury
	1	Soil	Methyl mercury
17	5	Foliage	Metals and PAHs
	5	Soil	Metals
	5	Soil	PAHs
	1	Foliage	Methyl mercury
	1	Soil	Methyl mercury
18	5	Foliage	Metals and PAHs
	5	Soil	Metals
	5	Soil	PAHs
	1	Foliage	Methyl mercury
	1	Soil	Methyl mercury
19	5	Rhizomes	Metals and PAHs
	1	Rhizomes	Methyl mercury

3 LABORATORY ANALYSIS

EXOVA was contracted to perform the laboratory analysis of the collected environmental samples. The analysis of methyl mercury and PAHs in plant tissues was subcontracted to Flett Research Ltd. and Pacific Rim Laboratories, respectively.

EXOVA assessed metals in soil and plant tissue based on the United States Environmental Protection Agency Method 6010C (http://www.epa.gov/osw/hazard/testmethods/sw846/pdfs/6010c.pdf). This method is considered to be modified, as metals not included in the reference method were tested for and their wavelengths chosen. Further method details can be found in Appendix 2.

The PAH analysis performed by EXOVA was modified from Section D of the *British Columbia Environmental Laboratory Manual: 2013* (British Columbia Ministry of the Environment, 2013). The changes made to the original method primarily relate to the use of soil extraction, which was performed by the cold shake rather than the soxhlet method. A methanol solvent mix was used for extraction, and the silica gel procedure was not performed. More detail can be found in Appendix 2.

Pacific Rim Laboratories assessed PAHs in plant tissues by gas chromatography/mass spectrometry. The methods were based on the United States Environmental Protection Agency Methods 8270C (http://www.caslab.com/EPA-Methods/PDF/8270c.pdf). Lab specific standard

operating procedures were used for quality assurance. No documentation of these standard operating practices was provided by Pacific Rim.

The laboratory method utilized by Flett Research Ltd.[3] was based on the United States Environmental Protection Agency Methods 1630 (http://water.epa.gov/scitech/methods/cwa/metals/mercury/upload/2007_07_10_methods_method_mercury_1630.pdf). Alterations were made to this method as outlined in Appendix 2.

3.1 Quality Assurance and Quality Control of Data

Standardized quality assurance and quality control procedures were followed by the three contracted laboratories to ensure data consistency, comparability and transparency

Polycyclic aromatic hydrocarbon (PAH) concentrations in soil samples and metal concentrations in soil, foliage, berry, and rhizome samples were analyzed by EXOVA. The lab performed several quality control measures to ensure the integrity of their analyses, described in Appendix 4.

Polycyclic aromatic hydrocarbons (PAHs) for the solid materials (i.e., vegetation) were analyzed by Pacific Rim Laboratories Inc. through Isotope Dilution High Resolution Mass Spectrometry (HRMS). The lab performed several quality control measures that are described in Appendix 5.

Methyl mercury concentrations for vegetation (i.e., foliage, rhizome and berry) and soil samples were analyzed by Flett Research Ltd. Appendix 6 provides a description of the quality control procedures performed.

4 RAW DATA SETS

Refer to Appendix 7 for raw data sets including those for concentrations of metals and PAHs in vegetation and soil. Soil characteristic data are available from the authors upon request.

5 CONCLUSIONS AND RECOMMENDATIONS

Samples of vegetation and soil were collected at various sites predominantly located north of Fort McMurray. Laboratory testing was conducted on each sample to determine the concentration of metal and PAH concentrations. This report does not make any conclusions or recommendations regarding these results, but rather provides data that could potentially be used to support further study. As well, the quality of the data was not evaluated.

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[3] See http://www.flettresearch.ca/hgmethods.html

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7 ACRONYMS

CVAS	Cold-Vapour Atomic Fluorescence Spectrometer
ESRD	Environment and Sustainable Resource Development
GC	Gas Chromatography
GPS	Global Positioning System
HC	Health Canada
HRMS	High Resolution Mass Spectrometry
MDL	Method Detection Limit
ML	Method Limit
OSRIN	Oil Sands Research and Information Network
PAH	Polycyclic Aromatic Hydrocarbon
QA	Quality Assurance
QC	Quality Control
RMWB	Regional Municipality of Wood Buffalo
SEE	School of Energy and the Environment
UHP	Ultra High Purity
US EPA	United States Environmental Protection Agency

APPENDIX 1: Standard Operating Procedure for Sample Collection

Vegetation Sampling

The standard operating procedure for sample collection for vegetation was primarily sourced from the Health Canada (2011) document entitled *Samples and Laboratory Analysis of Country Foods*. In particular, Appendix A – Standard Operating Procedures, pages A-5 to A-12. The following modifications were made:

- Samples were collected using disposable nitrile gloves.
- Samples were stored in glass jars provided by EXOVA.
- Samples were split at the EXOVA lab for analysis of metals and PAHs, respectively.
- A ceramic knife was used, if needed, to obtain the samples (no metal or plastic tools were utilized)

Soil Sampling

Outlined below is the standard operating procedure that was used for soil collection at the sampling sites.

Supplies: Clean zip-lock sample bags. Glass jars provided by EXOVA. Disposable nitrile gloves. Metal and plastic rulers. Ceramic knife. Plastic (nylon) and metal trowels. Dry J-cloths. Cooler. Digital camera. GPS rover. Distilled water. Pre-printed labels and extra labels. Chain-of-custody forms. Field note forms.

Sampling Instructions:

1. Label zip-lock bags (for metals) and glass jars (for PAHs) with the sample number (as identified in the sample number list), location and date.
2. Use nitrile gloves for all contact with soil and change gloves between samples.
3. Clean trowel (plastic trowel for metals, metal trowel for PAHs) with a J-cloth soaked with distilled water. Dry the trowel with a clean J-cloth.
4. Select an area (same area as vegetation samples) and collect three soil samples within this area preferably close to the vegetation samples (the lab will mix together for one composite sample). Three separate samples will should be collected for the metal analysis and three separate samples for the PAH analysis around each vegetation sample. This will be collected from the first 0 to 10cm. One additional soil sample will need to be collected at each overall site sample location for methylmercury analysis and placed in the appropriate receiving container.
5. For sample collection use the trowel and ruler, as per chemical type (see point 3). Take a sample from the soil, within a 10 cm depth, once approximately the 2 cm humus layer is removed before sample collection. Push the trowel to the desired depth into the soil. Then push the handle forward, with the trowel still in the soil, to make a wide opening. Cut a thin slice from the side of the opening that is of uniform

thickness – about 2 cm thick and 5cm wide, extending from the top of the ground to the depth of the cut. Scrape away any grass thatch or mulch. If the soil depth is greater than 10 cm, take the sample from the top 10 cm layer. Record the soil characteristics. Fill the zip-lock bag at least ½ full with soil (at least 200 g). It is important to collect the same amount of soil from all soil depths so the sample is not biased with more soil from the top 7.5 cm compared to the bottom 7.5 cm especially since soil biological properties vary with depth.

6. For sample collection of vegetation that is in wet soils, no soil or sediment will be collected.
7. Squeeze air out of the bag and seal closed. Place inside another zip-lock bag for metal analysis, place a more detailed paper label inside the out bag and seal close. For the samples to be analysed for PAHs place in glass jars.
8. In between samples, clean the trowel with a J-cloth soaked with distilled water. Dry the trowel with a clean J-cloth.
9. If possible bring a cooler and ice packs with you in the field to store the samples during the day. Soil samples must be packed in a cooler with ice packs for transport to the lab.
10. Obtain a GPS location for each sampling location.

Precautions: Make sure soil is always handled by gloved hands and never be made of anything metal (for metals analysis). Change gloves between samples.

Chain of Custody:

1. Fill out the chain of custody form and tick appropriate analysis to be completed as indicated in the table.
2. Chain of custody must have a quote number clearly identified.

APPENDIX 2: Analytical Methodologies and Standard Operating Procedures

Polycyclic Aromatic Hydrocarbons in Soil and Water Methodology Summary:

Exova

Polycyclic Aromatic Hydrocarbons in Soil and Water
Method Summary

1. METHOD

1.1 **Reference Method**

1.1.1 B.C. Environmental Laboratory Manual: 2013 "Polycyclic Aromatic Hydrocarbons in Water by GC/MS – PBM", March 31, 2005. **Modified**

1.1.2 B.C. Environmental Laboratory Manual: 2013, "Polycyclic Aromatic Hydrocarbons in Solids by GC/MS/SIM", November 2002. **Modified**

1.1.3 USEPA 8270D, "Semivolatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)", February 2007. **Modified**

1.2 **Modifications**

1.2.1 Soil extraction is performed by the cold shake method not soxhlet.

1.2.2 For soil extraction a DCM:methanol solvent mix is used.

1.2.3 Silica gel procedure is not performed.

2. SIGNIFICANCE AND SCOPE

2.1 **Applicable Matrices:**

Liquids/Waters
Solids/Soils

2.2 **Analytes and detection limits**:

Analyte	DL (Liquids/Waters)(ug/L)	DL (Solids/Soils)(ug/g)
Acenapthalene	0.1	0.03
Acenapthylene	0.1	0.03
Acridine (in waters only)	0.05	N/A
Anthracene	0.1	0.03
Benzo(a)anthracene	0.01	0.03
Benzo(a)pyrene	0.01	0.03
Benzo(b)fluoranthene	0.01	0.03
Benzo(j)fluoranthene	0.02	0.03
Benzo(k)fluoranthene	0.02	0.03
Benzo(ghi)perylene	0.1	0.03
Chrysene	0.1	0.03
Dibenzo(a,h)anthracene	0.01	0.03
Fluoranthene	0.1	0.03
Fluorene	0.1	0.03
Ideno(1,2,3-cd)pyrene	0.1	0.03
2-Methylnapthalene	0.1	0.03
Napthalene	0.1	0.03
Phenanthrene	0.1	0.03
Pyrene	0.02	0.03
Quinoline (in waters only)	0.34	N/A

2.3 The analytical range of the MS instrument is from 10 to 2000 ng/mL. Concentrations >2000 ng/mL require dilutions into the working range of calibration.

3. PRINCIPLE

This method involves extraction of PAHs and surrogates with dichloromethane (DCM) from solids by wrist action shaker and liquids by liquid-liquid extraction. The extracts are cleaned up if necessary, and then analyzed by gas chromatography - mass spectroscopy using selected ion monitoring (SIM) to separate the individual isomers for identification and quantitation.

4. SAMPLE REQUIREMENTS

Exova

Polycyclic Aromatic Hydrocarbons in Soil and Water
Method Summary

4.1 Minimum quantity: Soil: 100 g, water: 1 L
4.2 Container: Soil: 125 mL glass jar with a Teflon-lined screw cap, water: 1L amber glass bottle with a Teflon-lined screw cap
4.3 Transportation and storage conditions: iced or refrigerated at 4 ± 3 °C from time of collection to the time of sample preparation. Store samples away from direct sunlight.
4.4 Holding time: Solid samples should be extracted within 14 days after sampling and analyzed within 40 days after extraction as referenced in the B.C. Environmental Laboratory Manual. Water samples should be extracted within 7 days after sampling and analyzed within 40 days after extraction as referenced in the B.C. Environmental Laboratory Manual.
4.5 Chemical preservation: none
4.6 Sample pre-treatment: none

5. CALCULATION OF RESULTS

5.1 *Internal Standard Calculation*

5.1.1 Results are obtained by comparison between the sample and the matrix working standards, and expressed in µg/L or µg/g:

Waters are reported as mass per volume and sludge on an as-received (wet weight) basis, calculated as follows:

$$C_a = \frac{A_{spl}}{A_{std}} \times \frac{A_{IS\text{-}std}}{A_{IS\text{-}spl}} \times C_R \times \frac{V_{spl}}{V_{sol}}$$

where
A_{spl} = area of analyte in the sample
A_{std} = area of analyte in the working standard
$A_{IS\text{-}std}$ = area of internal standard in the working standard
$A_{IS\text{-}spl}$ = area of internal standard in the sample
C_R = concentration of matrix working standard (ug/mL)
C_a = concentration of analyte in the sample (ug/L) on an *as-received basis*
V_{spl} = final volume of sample extract (mL)
V_{spl} = volume (or mass) of sample extracted in L (or kg)

5.1.2. The data are reported in mg/kg for soils and in µg/L for waters. Results are not blank corrected nor corrected for recovery data. Spiked recovery samples are reported with the sample results.

6. QUALITY CONTROL AND DATA ACCEPTANCE

AQC	Material	Frequency	Insertion	Criteria	Actions for Failure
Calib. Check	Mid-level	1 per batch of up to 20 samples	At analysis	80-120 %	Recalculate the data and/or reanalyze the extract. If the repeated recovery is still outside the limits, the samples from the same batch must be repeated
Method Blank – water	Deionized water	1 per batch		< Reported DL	Eliminate contamination and reanalyze QC sample
Method Blank – soil	Sand	1 per batch		< Reported DL	Eliminate contamination and reanalyze batch

Exova

Polycyclic Aromatic Hydrocarbons in Soil and Water
Method Summary

Matrix Spike	DI water or sand	1 per batch		60 – 130 %	Recalculate the data and/or reanalyze the extract. If the repeated recovery is still outside the limits, the samples from the same batch must be repeated
Duplicates	Samples or matrix spike	1 per batch, every 10 samples		20%	Repeated with thorough mixing of the sample to achieve homogeneity
Surrogates: - Naphthalene-d8 - Quinoline-d7 - 2-Fluorobiphenyl		Every sample	spiked into all blanks, standards, samples, matrix spikes and duplicates prior to extraction to monitor the extraction efficiency	50 - 130 %	Surrogate recoveries are monitored for each sample but the sample results are not corrected for recoveries.
Surrogate: - p-terphenyl-d14		Every sample	spiked into all blanks, standards, samples, matrix spikes and duplicates prior to extraction to monitor the extraction efficiency	60-130 %	Surrogate recoveries are monitored for each sample but the sample results are not corrected for recoveries.
Reference Material		1 per batch		80 - 120 %	Repeat with fresh std or recalibrate

Based on TM ENV004(15)-60 Polycyclic Aromatic Hydrocarbons in Soil and Water method

Approved by , Operations Manager.

EXOVA Polycyclic aromatic Hydrocarbons Methodology:

Exova

Metals - Solids - ICP-OES Method Summary

1. METHOD

1.1 **Reference Method**
1.1.1 EPA, Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846, V3, 2007. - Method EPA 6010C. **Modified**

1.2 **Modifications**
1.2.1 Method contains elements not included in the reference methods
1.2.2 Wavelengths chosen may not be the same as the reference method, but are validated for purpose.

2. SIGNIFICANCE AND SCOPE

2.1 The term "metals" or "heavy metals" is defined here as the 70 elements which can be determined by ICP and AAS and includes non-metals such as phosphorus and sulfur.

2.2 Soils and sediments constitute sinks for pollutants such as toxic metals, and their analysis presents special problems depending on the precise questions being asked. Some studies require the total heavy metal content of a soil or sediment. In other cases, a distinction between the heavy metal in the primordial minerals and those added by man-made pollution is required. The preparation and decomposition steps in the analysis of soils and sediments are most important and affect the final measured concentration far more than the analytical step.

2.3 Animals accumulate heavy metals mostly through ingestion. These metal concentrations tend to increase up through the food chain to levels many orders of magnitude in excess of the levels in the biosphere. The trend in biological sampling is to choose a species of animal, which can be used as an indicator of man-induced environmental changes. Benthic biota appear to be major concentrators of a wide range of heavy metals because of the enhanced available quantities which are associated with the sediments as compared with those quantities associated with the over-lying waters. There are many regulatory and guideline limits for metals in foods and pharmaceuticals. Most of these limits can be found in Health Canada and Fisheries publications.

2.4 Plants, terrestrial and aquatic, accumulate heavy metals from their surroundings. Some algae, for example, can concentrate metals to 5,000 times the metal levels surrounding them. Lichens have been used as indicators of pollution and other plants have been used to absorb metals from waste streams prior to discharge into the environment. Grasses have been used to reclaim mine-tailing areas and the analysis of these grasses for metals is indispensable in the reclamation process. Plants or more specifically herbs, are used extensively world wide for medicinal purposes. Herbs and mineral supplements are routinely analyzed for minerals to confirm label claims and to confirm the absence of toxic metals.

2.5 The type of metals reported (soluble, acid extractable, total) is dependant on the digest and sample preparation methods used not the analytical instrument method. Refer to the various work instructions for this information.

2.6 This method is applicable to the analysis of soils, sediments, and sludges for strong acid extractable metals for the British Columbia Contaminated Sites guideline regulations. This method is limited to those elements expected to be extracted from soil with *aqua regia* and are analysable by ICP. Guidelines are available on the BC Government website.

2.7 This method is not applicable to the analysis of mineral content in waters or waste water.

2.8 This method is applicable to the analysis of strong acid extractable metals in various matrix:
- Air monitoring filters
- stack monitoring filters
- paints
- Wastes - Liquid and Solid
- Oil
- Miscellaneous Liquid samples, digested using WI DIG 002 Hotblock Digest- Metals

2.9 This method is also applicable to the analysis of a variety of different matrix for analysis of total metals, including

2.9.1 Plant tissues – as nutraceuticals
- As food
- As animal feeds
- As indicators of environmental contamination

2.9.2 Animals tissues – as food
- As indicators of environmental contamination

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Metals - Solids - ICP-OES Method Summary

2.9.3 Mineral and vitamin supplements
- for toxic trace metals
- to assay for mineral content

2.10 Detection limits for the elements most commonly requested follow. Units in µg/dry g based on 1.0 g to 50 mL.

Element	Wavelength	MDL (mg/L)	Linear range	MDL (µg/g)
Ag	328.068	0.008	0.01 – 2.0	0.4
Ag	338.068	0.008	0.01 – 2.0	0.4
Al	396.152	0.01	0.05 -600	0.5
As	193.759	0.007	0.01 – 6.0	0.4
B[1]	208.959	0.002	0.005 – 60	0.1
Ba	233.527	0.004	0.01 – 1.0	0.2
Ba	455.403		1.0 – 20	
Be	313.042	0.0002	0.001 – 6.0	0.01
Bi	223.061	0.03	0.05 6.0	2
Ca	183.801		100 – 1200	
Ca	315.887	0.01	0.01 – 100	0.5
Cd	228.802	0.001	0.005 – 6.0	0.05
Co	228.616	0.002	0.005 – 12	0.1
Cr	205.552	0.002	0.005 – 20	0.1
Cu	324.754	0.002	0.005 – 15	0.1
Fe	259.940	0.004	0.01 – 25	0.02
Fe	271.441		25 – 500	
K	766.491	0.04	0.1 – 500	2
Li	670.784	0.003	0.005 – 12	0.2
Mg	279.079	0.02	0.05 – 1200	1
Mn	257.610	0.001	0.005 – 1	0.05
Mn	293.306		1 – 25	
Mo	202.030	0.002	0.005 – 6.0	0.1
Na	589.592	0.1	0.5 – 75	5
Na	818.326		75 -800	
Ni	221.647	0.005	0.01 – 15	0.3
P	213.618	0.02	0.1 – 600	1
Pb	220.353	0.01	0.05 – 25	0.5
S[2]	180.731	0.02	0.05 – 600	1
Sb	217.581	0.03	0.05 – 6.0	2
Se	196.090	0.01	0.05 – 6.0	0.5
Si[3]	212.412	0.005	0.01 – 300	0.3
Sn	189.989	0.01	0.03 -6.0	0.5
Sr	407.771	0.0001	0.001 – 6.0	0.05
Te	214.281	0.07	0.1 – 6.0	3
Ti	323.452	0.002	0.005 – 20	0.1
Tl	190.864	0.01	0.05 – 6.0	0.5
U	409.014	0.1	0.3 – 10	5
V	292.402	0.004	0.01 – 15	0.2
Zn	213.856	0.001	0.005 – 25	0.05
Zr	339.198	0.002	0.005 – 6.0	0.1

[1] Measured as water soluble B in soil
[2] Only reported for some matrixes
[3] Only reported as an acid extractable element, unless analyzed as fusion.

3. PRINCIPLE

3.1. Preparation – Refer to WI INORG 003 - 60

3.1.1 Soil or sediment samples are taken from a site with the goal of determining the extent of any contamination. The person sampling must choose sample positions and sample sizes that are representative of the whole site. An aliquot or subsample is removed from each sample for analysis.

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Metals - Solids - ICP-OES Method Summary

Samples for the determination of metals are dried prior to other steps. B.C. recommends 55 ℃. This temperature minimizes the loss of volatile organometallics such as mercury. Soils are defined as containing particles < 2 mm or -10 mesh, therefore samples are usually sieved and the -10 mesh fraction analyzed.

3.1.2 Other solid samples may be analyzed or reported wet or dry weight, depending on client requirements. Most samples require grinding to ensure a small particle size to aid in digestion.

3.2. Decomposition / Extraction

3.2.1. Decomposition of samples can be classed into two major parts: total destruction or leaches. For environmental purposes, strong acid leaches are used routinely since they have the advantage of speed, low cost and superior reproducibility. A portion of the prepared solid sample is heated with a concentrated acid or an acid combination in an open vessel, usually of plastic, or in a closed vessel, usually of Teflon. A hot plate, hot block, autoclave, oven or microwave oven supplies heat.

3.2.2. Total destruction techniques such as fusions or acid combinations that include hydrofluoric acid, attack the silica matrix to "open out" the sample and present a stable, soluble solution for analysis.

3.3. Analysis is performed via:

3.3.1. Inductively Coupled Argon Plasma - Atomic Emission Spectrometry (ICP-AES)

4. SAMPLE REQUIREMENTS

4.1 Minimum quantity:

4.1.1 Soils and sediments: 50 g sample in jar or plastic bag. Enough sample is required for proper preparation by the selected preparation method. A sample size of 10-25 g is ideal but not always possible. Usually a 1.0 g (dry weight) portion is taken for digest. Homogenized powders can be analyzed with only 1 g, but for nonhomogeneous samples or samples requiring grinding, a minimum of 10 g is required.

4.1.2 Tissue samples can consist of hard tissue (bone, teeth, shell), soft tissue (muscle, organ, hair), or body fluid (blood, urine). For analytical purposes, an optimum sample size is 20 to 30 grams.

4.1.3 Pharmaceutical powders are digested as received. Tablets / capsules are weighed if required to determine weight then ground (10 tablets) or emptied (10 capsules) prior to digest. Capsule contents are weighed to determine the capsule fill weight. For capsules containing liquid (vitamin E for example) the capsule fill weight is obtained from the manufacturer. Only the capsule contents are digested and analysed unless specified by the client.

4.2 Container: Samples are collected in plastic (bags, jars). Glass is recommended for Mercury analysis.

4.3 Transportation and storage conditions: Samples maybe stored frozen or at 4 ℃. All dried, ground samples can be kept at room temperature in a sealed plastic vial or tube until digest and analysis. Freeze the prepared sample at -15 ℃ if the samples are to be stored for greater than 6 months.

4.4 Holding time: BCMOE regulations state holding time prior to digestion must not exceed 28 days for mercury and 6 months for other metals. Digestions that cannot be analyzed within 4 hours are filtered or decanted. Digestions with solids removed must be analyzed within 7 days.

4.5 Chemical preservation: none

4.6 Sample pre-treatment: Freeze-thaw cycles must be avoided. Homogenize the sample before and/or after freezing the sample. Depending on the sample and its size, grinding and/or sieving steps may also be necessary. Use high quality stainless steel or ceramic grinders. Muscle or other fibrous tissue may have to be blended before drying as well as after drying; otherwise obtaining a representative portion and achieving total decomposition will be difficult. Dry at 55 to 60 ℃ to prevent Hg loss.

5. CALCULATION OF RESULTS

5.1 Final element concentrations are determined by multiplying the solution element concentration by the digest volume (mL) and dividing by the sample digest weight (g). Results are reported on a wet or dry basis depending on the requirements of the client.

Exova

Metals - Solids - ICP-OES Method Summary

16. QUALITY CONTROL AND DATA ACCEPTANCE

AQC	Material	Frequency	Insertion	Criteria	Actions for Failure
Method Blank	DI Water, digested & filtered	Every batch	At analysis	< DL	Systematically check analytical system for contamination. Typical sources are reagents, environment, labware, analyst, supplies. Look specifically at the differences between this blank and the method blank, in processing. Eliminate source of contamination. Rerun all samples associated with method blank batch. If samples cannot be rerun, report as nonconforming data. Apply blank correction **ONLY IF** the source of contamination is known and blank is demonstrably in control, this means that all instrument blanks and method blanks show the same blank reading before and after the batch of samples.
Calib Check, Second source std	Initial Calibration Checks	1 per batch	At analysis	± 10 - 15% of certified value	Check analytical system for source of deviation. Typical sources are response drift, non-linear calibration curve, change in conditions or background, contamination. Replace all standards in the autosampler tubes with fresh aliquots of standard. Check wavelengths, Instrument performance and recalibrate on fresh aliquots of standards. Do not start running samples till criteria are satisfied.
Control	Continuing Calibration Checks	Mid-point of batch and every 20 samples	At analysis	10 – 15% of certified value	The instrument will automatically recalibrate to correct the drift. Eliminate or minimize source of calibration shift. All measurements to last control standard demonstrably in control may need to be repeated unless there is other in control QC within the batch. If samples cannot be rerun, report as nonconforming data. The samples maybe reprocessed with the instrument recalibrated curve and reported if this brings all QC within range.
Low level and high calibration Check	QHigh-ICPS and QMid-ICPS	Every batch of solid digested samples	At analysis	± 10%	Eliminate or minimize source of calibration shift. Recalibrate if appropriate. Reanalyze all measurements to last control standard demonstrably in control. If samples cannot be reanalyzed, report as nonconforming data
CRM standards	S0525, S0529, S0167, S0157, S0136, S0139, S0703, SS20XX, PT20XX		At Digestion	± 65 - 120% of certified value	Examine analytical process from the point of introduction. Typical sources are method calibration, process conditions, equipment function, background, analyst technique. If control limit is exceeded, rerun all samples to method control sample demonstrably in control. If only the warning limit is exceeded, proceed with analysis after elimination of source. If samples cannot be rerun, report as non-conforming data.
Duplicate	Samples	1 per batch and every 10-15 samples	At Digestion	Within ± 30% of each other at greater than 5x the detection limit.	Examine measurement process from the point of replicate split. Typical sources are variable measurement conditions, incomplete digestion, equipment malfunction, analyst technique. Duplicate failures are only acceptable if the sample duplicated is obviously non-heterogeneous. If control limit is exceeded, redigest and rerun all samples to last sample demonstrably in control.

Metals - Solids - ICP-OES Method Summary

Based on TM INS 003(8)-60 Metals – Solids – ICP-OES

Approved by , Operations Manager.

Pacific Rim Laboratories Polycyclic Aromatic Hydrocarbons Methodology:

Pacific Rim Laboratories assessed PAHs in plant tissue by gas chromatography/mass spectrometry. The methods were based on the EPA Methods 8270C which is available online. Lab specific standard operating procedures were used for quality assurance. No documentation of these standard operating practices could be provided by Pacific Rim. The detection limit for each compound is described below.

Table 1. Detection limits for polycyclic aromatic hydrocarbon compounds.

Compound	**Detection Limit µg/kg**
Naphthalene	1.00
Acenaphthylene	0.24
Acenaphthene	0.15
Fluorene	0.16
Phenanthrene	0.20
Anthracene	0.24
Fluoranthene	0.20
Pyrene	0.16
Benz(a)anthracene	0.36
Chrysene	0.20
Benzo(b+j)fluoranthene	0.30
Benzo(k)fluoranthene	0.20
Benzo(a)pyrene	0.30
Indeno(1,2,3-cd)pyrene	0.50
Dibenz(a,h)anthracene	0.40
Benzo(ghi)perylene	0.40

Flett Research Ltd. Methyl Mercury Methodology:

The following text was provided by Flett Research Ltd (2013) in regards to their analysis technique. The Environmental Protection Agency Method 1630 is available online. This method was used for both soil and tissue.

Flett Research Ltd. Methodology:

The analytical methodology used by Flett Research Ltd. to analyze methyl mercury levels is a modification of the draft EPA Method 1630 (US EPA 2001) for the determination of methyl mercury in aqueous samples. Adaptations have been made to the method for use of distillation based on peer-reviewed, published procedures for the determination of CH_3Hg (Horvat et al. 1993a,b) and work completed by the Florida Department of Environmental Protection Bureau of Laboratories (Yu et al. 2011). The modifications to draft EPA method 1630 implemented are listed below:

- Use of Tenax trapping media instead of Carbotrap,
- Automation of sample analysis,
- Use of potassium chloride/sulphuric acid as a distillation reagent,
- Use of citrate buffer as an alternate to acetate buffer,
- Use of a silicone-based anti-foaming agent in the buffer,
- Inclusion of a surrogate spiking standard, and
- Allows for use of temperature programmed chromatography when required.

Sediment samples are first extracted by distillation. The non-volatile methyl mercury in a subsample of the distillate is converted to volatile ethylmethyl mercury and purged with argon, collected on a Tenax adsorbent trap, and then thermally desorbed onto a gas chromatography (GC) column where the ethylmethyl mercury is separated from several other volatile Hg species. The exiting species are sequentially reduced to Hg^0 while passing through a pyrolytic furnace and finally they are detected by an atomic fluorescence detector (which is connected to an electronic integrator).

During the extraction and digestion stage, a subsample of wet or dry sediment is placed in a Teflon distillation vessel. After adding reagent water and an aliquot of KCl/H_2SO_4, the sample is distilled. After distillation, a subsample is adjusted to ~pH 4.9 with a citrate or acetate buffer, a surrogate standard (n-propyl Hg) is added, and the solution is ethylated in a closed purge vessel by the addition of sodium tetraethyl borate ($NaBEt_4$).

To separate the ethylated subsample, it is purged under Hg-free Ultra High Purity (UHP) Argon flow onto a Tenax trap. Following a brief drying period, the trap is desorbed once again under Hg-free Ar flow. The various ethylated Hg species are swept through the GC column and are thereby separated.

As the various Hg species leave the column they pass through a pyrolyser, by which they are reduced to Hg^0 and are now visible to the atomic fluorescence detector (CVAFS: cold-vapour atomic fluorescence spectrometer).

Table 1. Methyl mercury analytical method used by Flett Research Ltd.

Method	**Methyl mercury in sediment**
Sample Preparation	Wet or Dry. Sieving or grinding as specified by client.
Extraction / Digestion	Distillation/Ethylation
Separation	Purge & Trap, GC
Detection	Cold-vapour atomic fluorescence spectrometry (CVAFS)
Detection limit	50 mg dry sample: Method Detection Limit (MDL) 0.4 ng/g and Method Limit (ML 1.3) ng/g At Flett, results below detection limit are reported and flagged as below the ML

APPENDIX 3: Sampling Site Characterization

Table 1 lists the descriptions regarding site characterization, locations, GPS coordinates and samples collected at each site.

Table 1. Sampling site information.

Site	Site Name	Dates Sampled	Description	GPS Coordinates							
1	AENV-WRC-01	July 27, 2012	100 m from East Athabasca Highway near roadside turnout Old jackpine site, partially open *Pinus banksiana* *Vaccinium vitis-idaea* *Ledum groenlandicum* *Maianthemum canadense* *Geocaulon lividum* Reindeer lichen	57	6	46.4	N	111	26	14.2	W
2	AENV-WRC-02	July 27, 2012	100 m from East Athabasca Highway near Mile 12 Jackpine stand with relatively open canopy *Pinus banksiana* *Arctostaphylos uva-ursi* *Vaccinium vitis-idaea* *Vaccinium myrtilloides* *Geocaulon lividum* *Apocynum androsaemifolium* *Maianthemum canadense* Reindeer lichen	57	6	50.5	N	111	28	1	
3	AENV-WRC-03	July 28, 2012	Off FRD Roads East of Highway 6 Jackpine stand with some aspen *Pinus banksiana* *Populus tremuloides* *Arctostaphylos uva-ursi* *Vaccinium myrtilloides* *Vaccinium vitis-idaea* Reindeer lichen	57	25	22.6	N	111	35	45.9	W
4	AENV-WRC-05	September 18, 2012	East Athabasca Highway (Canterra Road) 10 m x 10 m *Pinus banksiana* *Populus tremuloides* *Picea glauca* *Ledum groenlandicum* *Cornus canadensis* *Vaccinium vitis-idaea* *Vaccinium myrtilloides* *Maianthemum canadense* Reindeer lichen *Sphagnum spp*	57	7	10.9	N	111	29	13.1	W

Site	Site Name	Dates Sampled	Description	GPS Coordinates
5	AENV-WRC-06	September 18, 2012	Creeburn archaeological reserve, east of Highway 63 100 m x 20 m *Pinus banksiana* *Alnus viridis* *Populus tremuloides* *Vaccinium myrtilloides* *Arctostaphylos uva-ursi* *Vaccinium vitis-idaea* *Ledum groenlandicum* *Maianthemum canadense* *Schizacne purpurascens* *Cornus canadensis*	57 14 50.4 N 111 35 49.6 W
6	AENV-WRC-07	August 7, 2012	Creeburn archaeological reserve, east of Highway 63 50 m x 20 m Open jackpine stand with aspen *Pinus banksiana* *Populus tremuloides* *Arctostaphylos uva-ursi* *Vaccinium myrtilloides* *Shepherdia canadensis* *Oryzopsis spp.* *Solidago simplex*	57 14 36.6 N 111 35 41.1 W
7	AENV-WRC-08	August 7, 2012	Off FRD Roads, East of Highway 63 20 m x 10 m Jackpine stand burned in 2012 *Pinus banksiana* *Apocynum androsaemifolium* *Rosa acicularis* *Fragaria virginiana* *Pulsatilla patens* *Schizacne purpurascens* *Sibbaldiopsis tridentata*	57 26 19.7 N 111 33 1.5 W
9	AENV-WRC-15	July 26, 2012	100 m from Canterra road near an old campsite 75m x 10 m Old burned jackpine stand with many new stems (1.5 to 2 m) *Pinus banksiana* *Betula papyrifera* *Prunus pensylvanica* *Vaccinium myrtilloides* *Vaccinium vitis-idaea* *Rubus idaeus* *Geocaulon lividum* Grasses *Maianthemum canadense* Reindeer lichen	57 17 46.9 N 111 16 8.5 W

Site	Site Name	Dates Sampled	Description	GPS Coordinates
8	AENV-WRC-14	September 18, 2012	Near Kearl Lake Outlet 10 m x 15 m Picea glauca Populus tremuloides Viburnum edule Shepherdia canadensis Linnaea borealis Ledum groenlandicum Petasites frigida Lycopodium clavatum Lycopodium annotinum Sphagnum spp	57 16 1.4 N 111 15 51.3 W
10	AENV-WRC-16	September 18, 2012	Kearl Lake outlet 20 m x 5 m *Salix spp* *Betula papyrifera* *Populus tremuloides* *Calamagrostis canadensis* *Larix laricina* *Typha latifolia* *Acorus americanus* *Carex spp*	57 15 58.4 N 111 15 45.9 W
11	AENV-WRC-17	August 8, 2012	NW of Fort McKay, 10 m from low use road Open canopy burned in 2011, dead jackpine and aspen still standing *Populus tremuloides* *Rosa acicularis* *Ledum groenlandicum* *Vaccinium myrtilloides* *Cornus canadensis* *Trifolium hybridum* *Salix spp* *Dasiphora floribunda* *Calamagrostis canadensis* *Symphyotrichum laeve* *Leymus innovatus*	57 14 33.8 N 111 39 45.2 W
12	AENV-WRC-18	August 8, 2012	NW of Fort McKay, 10 m from low use road 100 m x 25 m Partially open aspen *Populus tremuloides* *Picea glauca* *Dasiphora floribunda* *Rosa acicularis* *Shepherdia canadensis* *Ledum groenlandicum* *Calamagrostis canadensis* *Leymus innovatus* *Galium boreale*	57 15 52.7 N 111 40 22.5 W

Site	Site Name	Dates Sampled	Description	GPS Coordinates							
13	AENV-WRC-19	August 9, 2012	AOSTRA Road west of Highway 63, 50 m off road Site occasionally used as campsite Open jackpine stand *Pinus banksiana* *Alnus viridis* *Arctostaphylos uva-ursi* *Cladonia spp* *Maianthemum canadense* *Vaccinium myrtilloides* *Ledum groenlandicum* *Geocaulon lividum*	56	56	2.9	N	111	31	19.8	W
14	AENV-WRC-35	August 8, 2012	Off Highway 63 just north of Syncrude Mildred Lake, once used as a campsite 50 m x 10 m Open area burned over 10 years prior *Pinus banksiana* *Populus tremuloides* *Prunus pensylvanica* *Amelanchier alnifolia* *Arctostaphylos uva-ursi* *Aralia nudicaulis* *Schizacne purpurascens* *Elymus trachycaulus ssp-subsecundus* *Cladonia spp* *Maianthemum canadense*	57	4	42.7	N	111	35	57.4	
15	AENV-WRC-36	September 18, 2012	East side of Highway 63 North of Mildred Lake 5 m x 10 m *Pinus banksiana* *Populus tremuloides* *Ledum groenlandicum* *Alnus viridis* *Vaccinium vitis-idaea* *Picea glauca* *Cornus canadensis* *Trientalis borealis* *Lycopodium obscurum* *Lycopodium annotinum* *Chamerion angustifolium*	57	4	45.2	N	111	36	0.7	W

Site	Site Name	Dates Sampled	Description	GPS Coordinates							
16	AENV-WRC-40	September 17, 2012	Tower road leading West out of Fort McMurray 15 m x 5 m with thick moss layer *Picea mariana* *Salix spp* *Larix laricina* *Petasites frigida* *Cornus canadensis* *Ledum groenlandicum* *Vaccinium vitis-idaea* *Sphagnum spp*	56	45	28.7	N	111	35	26.1	W
17	AENV-WRC-50	September 17, 2012	West side of Highway 63, North of Fort Hills 2 m x 20 m *Picea mariana* *Ledum groenlandicum* *Petasites frigida* *Arctostaphylos uva-ursi* *Vaccinium vitis-idaea* *Salix spp* *Shepherdia canadensis* *Populus balsamifera* *Arctostaphylos rubra* *Sphagnum spp*	57	19	6.3	N	111	39	39.4	W
18	AENV-WRC-58	August 9, 2012	West side of Highway 63 north of FRD roads, 50 m off road Mixed wood with thick deadfall, no recent burn 10 m x 10 m *Populus tremuloides* *Picea glauca* *Salix spp* *Viburnum edule* *Vaccinium myrtilloides* *Cornus canadensis* Moss layer	57	25	1.5	N	111	37	6.9	W
19	AENV-WRC-59	September 17, 2012	Floating mats along Gregoire/Willow Lake 2 discrete mats, each 5 m x 20 m Lakeshore and water contaminate with trash (bottles, cans, etc.) *Picea glauca* *Populus tremuloides* *Larix laricina* *Ledum groenlandicum* *Vaccinium vitis-idaea* *Viburnum edule* *Cornus canadensis* Mosses in water: *Typha latifolia* *Sium suave* *Acorus americanus* *Bidens cernua* *Calla palustris* *Mentha arvense* *Carex spp*	56	27	18.3	N	111	3	42.7	W

APPENDIX 4: EXOVA Quality Assurance and Quality Control Protocol for Analysis

Quality Control Procedures for Metals Strong Acid Digestion and Metals Total Methods

Please see Appendix 2 for the specifics on EXOVA's Quality control. The method provided was used for both metals strong acid digestion and metals total methods.

Quality Control Notes:

The quality control samples provided by EXOVA (i.e., blanks and surrogate recovery) can be found in the raw data. Duplicates were not provided by EXOVA.

The following notes compiled from all the reports indicate limitations in samples which increased the detectable limit of the analyses:

- Measurement Limit for PAH reported on a Dry Weight basis, increases with increased moisture content for:
  - Report 1767652 for sample 894583 – 1, 4, 10, and 25.
- Measurement limits for PAH, reported on a Dry Weight Basis, increases with decreased sample weight for:
  - Report 1769448 for samples 895939 - 2, 20, and 21.
  - Report 1769887 for samples 896208 – 1, 2, 5, 7, 9, 11, 13, 15, and 16.
  - Report 1767652 for sample 894583 – 13, 14, 21, and 22.
  - Measurement limit for PAH increased due to low sample mass:
  - Report 1758087 for samples 887081 – 1, 2, 20, 21, 45, and 46.
  - Report 1758371 for samples 886745 – 1, 26, and 27.
- The analyses of the different isotopes of chromium were not performed for the following samples for the reasons provided below.
  - Analysis had commenced before instructions were finalized for blank samples. Therefore Chromium VI and III could not be analyzed in samples.

    In report number 1778070 for samples 884901 – 1, 2, 20, 21, 39, and 40.

    In report number 1778708 for samples 885598 – 1 and 2
  - Due to matrix interference Chromium VI and III could not be performed on:

    Report 1778070 for sample 884901-16.

    Report 1767652 for sample 894583 – 2, 3, 5, 6, 8, 9, 11, 12, 17, 18, 20, and 27.

    Report 1778708 for samples 885598 – 6, 9, and 15.

Report 1769448 for samples 895939 – 6, 9, 12, 15, 16, 18, 19, 26, 29, 32, 35, and 38.

Report 1758087 for samples 887081 – 7, 12, 16, 26, 30, 34, 36, 42, 51, 53, 55, 57, 61, 63, 67, and 69.

Report 1769887 for samples 896208 – 5, 7, 8, 12, 20, 21, 24, 27, 29, 30, 32, and 33.

Report 1758371 for samples 886745 – 6, 8, 14, 16, 18, 22, 30, 33, 36, 39, and 42.

- Chromium VI and III analysis could not be performed because color interference would have positively biased the results for chromium.1 In addition the moisture analysis was not performed for these samples as it is normally performed in conjunction with the chromium analysis. This means that we were lacking some moisture data for the tissue samples. For the foliage from lot 886745 (sample 6, 10, 14, 18, 22, 30, 33, 36, 39, 42) and lot 887081 (sample 26, 30, 34, 38, 42, 51, 55, 59, 63, and 67) moisture for these samples assessed by Pacific Rim Laboratories Ltd. was used instead.

Quality Assurance for EXOVA Data

EXOVA provided the data to ESRD in a CSV file format for each report. All the data had to be compiled into one spreadsheet. Data regarding the testing of Surrogate Recovery, Physical Aggregate Properties, Soil Acidity, Subcontracted Analysis, and Water Solubility Properties were not included but are available from the authors upon request.

Due to the large amount of samples, two were chosen from each report for re-assessment (n = 18). Results of the testing are shown in Table 1.

Table 1. Recheck of EXOVA data to ensure accuracy of data entry.

Report	Sample-Subsample	Sample Type	Analysis Type	Sample Date	Sample Location	Detected Levels	Match in Moisture
1778769	886741-30	Tissues/ Berry	Metals (Default)	Match	Match	Match	Match
1778769	886741-1	Miscellaneous/ Blank	PAH	Match	Match	Match	NA
1778708	885598-2	Miscellaneous/ Location	PAH	Match	Match	Match	NA
1778708	885598-10	Tissues/ Berry	Metals (Default)	Match	Match	Match	Match
1778070	884901-38	Tissues/ Berry	Metals (Default)	Match	Match	Match	Match
1778070	884901-47	Soil	PAH (Default)	Match	Match	Match	NA
1769887	896208-13	Soil	PAH	Match	Match	Match	NA

Report	Sample-Subsample	Sample Type	Analysis Type	Sample Date	Sample Location	Detected Levels	Match in Moisture
1769887	896208-16	Miscellaneous/ Location	PAH	Match	Match	Match	NA
1769616	896047-38	Tissues/ Foliage	Metals	Match	Match	Match	Match
1769616	896047-4	Miscellaneous/ Location	Metals	Match	Match	Match	NA
1769448	895939-14	Soil	PAH	Match	Match	Match	NA
1769448	895939-36	Soil	PAH	Match	Match	Match	NA
1767652	894583-3	Tissues/ Foliage	Metals	Match	Match	Match	Match
1767652	894583-27	Tissues/ Foliage	Metals	Match	Match	Match	Match
1759371	886745-27	Miscellaneous/ Location Blank	PAH	Match	Match	Match	NA
1759371	886745-42	Tissues/ Foliage	Metals	Match	Match	Match	Match
1758087	887081-52	Soil	PAH	Match	Match	Match	NA
1758087	887081-13	Soil	Metal	Match	Match	Match	NA

A count of the reports entered in the Excel database corresponds to the number of reports received from EXOVA. A second dataset complied by another analyst confirms the number of lines of data in the data sheet. These steps ensured that the data present is an accurate representation of the results provided by EXOVA.

To explore the data further the analysis performed at each site were determined. Table 2 lists the results. In addition to these, trip and location blanks were assessed for both PAHs and metals at each site.

Table 2. Location, number of samples and type of analysis performed by EXOVA.

Site Number	Wild Rose Site Code	Site Description	Number of Samples	Type of Analysis Performed and Sample
1	**01**	EA Hwy	5	Metal and PAHs in Berries
			5	PAHs in soil
			5	Metals in Soil
2	**02**	EA Hwy	5	Metal in Berries
			5	PAHs in soil
			5	Metals in soil
3	**03**	FRD Road	5	Metal in Berries
			5	PAHs in soil
			5	Metals in soil
4	**05**	East AH	5	Metal in Foliage
			5	PAHs in soil
			5	Metals in soil

Site Number	Wild Rose Site Code	Site Description	Number of Samples	Type of Analysis Performed and Sample
5	**06**	Creeburn	5	Metal in Foliage
			5	PAHs in soil
			5	Metals in soil
6	**07**	Creeburn	5	Metal in Berries
			5	PAHs in soil
			5	Metals in soil
7	**08**	FRD	5	Metal in Berries
			5	PAHs in soil
			4	Metals in soil
8	**14**	Cantena	5	Metal in Foliage
			5	PAHs in soil
			5	Metals in soil
9	**15**	Cantena	5	Metal in Berries
			5	PAHs in soil
			5	Metals in soil
10	**16**	Cantena	5	Metals in Rhizome
			5	PAH/Metals in Soil (Split Sample)
11	**17**	McKay	5	Metal in Berries
			5	Metal in Foliage
			5	PAHs in soil
			5	Metals in soil
12	**18**	McKay	5	Metal in Berries
			5	Metal in Foliage
			5	PAHs in soil
			5	Metals in soil
13	**19**	AOSTRA	5	Metal in Berries
			5	Metal in Foliage
			5	PAHs in soil
			5	Metals in soil
14	**35**	Forestry	5	Metal in Berries
			5	PAHs in soil
			5	Metals in soil
15	**36**	Hwy 63	5	Metal in Foliage
			5	PAHs in soil
			5	Metals in soil
16	**40**	Tower Rd.	5	Metal in Foliage
			5	PAHs in soil
			5	Metals in soil
17	**50**	Hwy 63	5	Metal in Foliage
			5	PAHs in soil
			5	Metals in soil
18	**58**	FRD	5	Metal in Foliage
			5	PAHs in soil
			5	Metals in soil
19	**59**	Gregoire	5	Metals in Rhizome

APPENDIX 5: Pacific Rim Laboratories Inc. Quality Assurance and Quality Control Protocol for Sampling and Analysis

Quality Control Procedures of Pacific Rim Laboratories Inc.

Please see Appendix 2 for specifics on lab quality control practices. Surrogate recoveries for the samples are shown in Tables 1 and 2. A note from Pacific Rim identified interference with the surrogate recoveries (13C6–Fluorene, 13C6-Phenanthrene, and 13C6-Anthracene) in sample PR121438. This was due to a compound causing a suppressed signal for labeled standard. Correspondence with individuals from Pacific Rim Labs indicates that they feel there is no reason to believe that interference will have any effect on the detected native PAH concentrations.

Table 1. Surrogate recoveries (%) for samples analyzed (13C6-Naphthalene to 13C3-Pyrene).

Lab and Lot Number	Pacific Rim ID	Sample Description	Matrix	Site Number	Location	13C6-Naphthalene (%)	13C6-Acenaphthylene	13C6-Acenaphthene (%)	13C6-Fluorene (%)	13C6-Phenanthrene (%)	13C6-Anthracene (%)	13C6-Fluoranthene (%)	13C3-Pyrene(%)
886745-6	PR121511	AE NV-WRC 19-001-Foliage	Foliage	13	12V 468223 6310175	51	64	89	16	44	37	62	58
884901-10	PR121425	AENV-WRC-01-002-Berry	Berry	1	12V 473533 6329987	46	47	24	47	43	45	54	54
884901-13	PR121426	AENV-WRC-01-003-Berry	Berry	1	12V 473528 6329993	53	48	50	42	38	40	51	52
884901-16	PR121427	AENV-WRC-01-004-Berry	Berry	1	12V 473530 6329996	56	49	48	44	42	43	55	58
884901-19	PR121428	AENV-WRC-01-005-Berry	Berry	1	12V 473528 6329990	59	52	52	43	39	41	52	53
884901-26	PR121429	AENV-WRC-02-001-Berry	Berry	2	12V 471715 6330175	62	54	56	48	41	45	54	57
884901-29	PR121430	AENV-WRC-02-002-Berry	Berry	2	12V 471721 6330163	55	42	22	37	33	34	44	48
884901-29	PR121430 D	AENV-WRC-02-002-Berry	Berry	2	12V 471721 6330163	64	51	52	49	45	46	47	52
884901-32	PR121431	AENV-WRC-02-003-Berry	Berry	2	12V 471704 6330163	61	49	49	55	49	55	61	62
884901-35	PR121432	AENV-WRC-02-004-Berry	Berry	2	12V 471692 6330169	61	54	51	45	39	45	52	51
884901-38	PR121433	AENV-WRC-02-005-Berry	Berry	2	12V 471690 6330160	56	57	53	52	46	53	56	54
884901-45	PR121434	AENV-WRC-03-001-Berry	Berry	3	12V 464201 6364624	56	47	46	44	42	50	52	50
884901-48	PR121435	AENV-WRC-03-002-Berry	Berry	3	12V 464196 6364624	64	56	57	49	40	46	51	52
884901-51	PR121436	AENV-WRC-03-003-Berry	Berry	3	12V 464204 6364621	37	49	49	44	37	45	54	54
884901-54	PR121437	AENV-WRC-03-004-Berry	Berry	3	12V 464196 6364621	52	47	48	40	35	42	52	54
884901-57	PR121438	AENV-WRC-03-005-Berry	Berry	3	12V 464191 6364615	53	55	54	INT	INT	INT	48	48
884901-7	PR121424	AENV-WRC-01-001-Berry	Berry	1	12V 473516 6330037	40	48	45	41	38	40	53	52
885598-10	PR121440	AENV-WRC-15-002-Berry	Berry	9	12V 483777 6350392	44	58	63	34	32	35	46	45
885598-13	PR121441	AENV-WRC-15-003-Berry	Berry	9	12V 483772 6350399	37	59	62	33	32	34	47	44
885598-16	PR121442	AENV-WRC-15-004-Berry	Berry	9	12V 483772 6350392	59	80	85	43	52	55	77	74
885598-19	PR121443	AENV-WRC-15-005-Berry	Berry	9	12V 483772 6350399	53	60	67	32	35	36	53	52
885598-7	PR121439	AENV-WRC-15-001-Berry	Berry	9	12V 483787 6350408	46	62	66	37	37	39	52	50
886741-11	PR121469	AENV-WRC-07-003-Berry	Berry	6	12V 464116 6344663	19	45	44	30	30	31	42	40
886741-14	PR121470	AENV-WRC-07-004-Berry	Berry	6	12V 464123 6344672	23	42	44	31	30	31	50	45
886741-17	PR121471	AENV-WRC-07-005-Berry	Berry	6	12V 464108 6344676	35	57	57	31	31	34	44	42
886741-24	PR121472	AENV-WRC-08-001-Berry	Berry	7	12V 466958 6366367	31	59	64	31	32	33	49	45

Lab and Lot Number	Pacific Rim ID	Sample Description	Matrix	Site Number	Location	13C6-Naphthalene (%)	13C6-Acenaphthylene	13C6-Acenaphthene (%)	13C6-Fluorene (%)	13C6-Phenanthrene (%)	13C6-Anthracene (%)	13C6-Fluoranthene (%)	13C3-Pyrene(%)
886741-27	PR121473	AENV-WRC-08-002-Berry	Berry	7	12V 466953 6366364	30	56	58	31	30	33	50	46
886741-30	PR121474	AENV-WRC-08-003-Berry	Berry	7	12V 466951 6366361	18	38	37	31	30	32	51	43
886741-33	PR121475	AENV-WRC-08-004-Berry	Berry	7	12V 466946 6366357	31	54	58	30	31	34	43	40
886741-36	PR121476	AENV-WRC-08-005-Berry	Berry	7	12V 466949 6366364	60	106	110	55	59	62	88	82
886741-5	PR121467	AENV-WRC-07-001-Berry	Berry	6	12V 464106 6344648	22	45	44	31	30	32	47	43
886741-5	PR121467 D	AENV-WRC-07-001-Berry	Berry	6	12V 464106 6344648	30	51	51	30	30	32	45	43
886741-8	PR121468	AENV-WRC-07-002-Berry	Berry	6	12V 464123 6344645	37	57	58	30	34	35	49	46
886745-10	PR121513	AENV-WRC 19-002-Foliage	Foliage	13	12V 468123 6310152	84	115	117	67	74	65	90	96
886745-13	PR121514	AENV-WRC 19-003-Fruit	Berry	13	12V 468079 6310127	68	62	64	46	41	47	64	63
886745-14	PR121515	AENV-WRC 19-003-Foliage	Foliage	13	12V 468079 6310127	59	56	59	52	79	62	52	51
886745-17	PR121516	AENV-WRC 19-004-Fruit	Berry	13	12V 468066 6310130	87	20	28	62	65	75	33	37
886745-17	PR121516 D	AENV-WRC 19-004-Fruit	Berry	13	12V 468066 6310130	31	71	69	63	57	61	68	66
886745-18	PR121517	AENV-WRC 19-004-Foliage	Foliage	13	12V 468066 6310130	64	69	82	69	57	45	50	45
886745-21	PR121518	AENV-WRC 19-005-Fruit	Berry	13	12V 468106 6310087	83	71	74	62	52	60	46	79
886745-22	PR121519	AENV-WRC 19-005-Foliage	Foliage	13	12V 468106 6310087	55	69	90	38	65	52	58	50
886745-30	PR121520	AENV-WRC-58-001-Foliage	Foliage	18	12V 462844 6363984	70	77	117	32	86	75	79	74
886745-33	PR121521	AENV-WRC-58-002-Foliage	Foliage	18	12V 462848 6363962	58	70	95	37	35	30	67	64
886745-36	PR121522	AENV-WRC-58-003-Foliage	Foliage	18	12V 462847 6363962	47	35	39	71	76	65	67	41
886745-39	PR121523	AENV-WRC-58-004-Foliage	Foliage	18	12V 462828 6363971	55	58	91	49	88	57	62	58
886745-42	PR121524	AENV-WRC-58-005-Foliage	Foliage	18	12V 462838 6363971	71	102	122	122	105	90	98	92
886745-5	PR121510	AENV-WRC 19-001-Fruit	Berry	13	12V 468223 6310175	40	62	69	39	34	37	58	54
886745-9	PR121512	AENV-WRC 19-002-Fruit	Berry	13	12V 468123 6310152	68	66	70	42	44	47	62	60
887081-11	PR121483	AENV-WRC-35-003-Fruit	Berry	14	12V 463646 6326280	29	62	69	17	25	26	41	39
887081-14	PR121484	AENV-WRC-35-004-Fruit	Berry	14	12V 463677 6326271	21	41	45	12	18	18	27	25
887081-17	PR121485	AENV-WRC-35-005-Fruit	Berry	14	12V 463682 6326265	23	42	48	12	15	16	23	25
887081-25	PR121486	AENV-WRC-17-001-Fruit	Berry	11	12V 460013 6344599	22	46	52	13	19	19	34	31
887081-26	PR121487	AENV-WRC-17-001-Foliage	Foliage	11	12V 460013 6344599	12	47	67	9	52	24	39	33
887081-29	PR121488	AENV-WRC-17-002-Fruit	Berry	11	12V 460012 6344596	20	48	50	13	19	20	35	32

Lab and Lot Number	Pacific Rim ID	Sample Description	Matrix	Site Number	Location	13C6-Naphthalene (%)	13C6-Acenaphthylene	13C6-Acenaphthene (%)	13C6-Fluorene (%)	13C6-Phenanthrene (%)	13C6-Anthracene (%)	13C6-Fluoranthene (%)	13C3-Pyrene(%)
887081-29	PR121488 D	AENV-WRC-17-002-Fruit	Berry	11	12V 460012 6344596	20	46	50	13	22	21	35	34
887081-30	PR121489	AENV-WRC-17-002-Foliage	Foliage	11	12V 460012 6344596	17	37	72	48	39	107	64	42
887081-33	PR121490	AENV-WRC-17-003-Fruit	Berry	11	12V 460010 6344596	94	63	71	66	65	76	62	54
887081-34	PR121491	AENV-WRC-17-003-Foliage	Foliage	11	12V 460010 6344596	88	65	130	72	110	47	42	42
887081-37	PR121492	AENV-WRC-17-004-Fruit	Berry	11	12V 460005 6344593	64	48	81	51	56	54	53	64
887081-38	PR121493	AENV-WRC-17-004-Foliage	Foliage	11	12V 460005 6344593	39	63	82	68	124	85	79	50
887081-41	PR121494	AENV-WRC-17-005-Fruit	Berry	11	12V 460003 6344596	58	59	59	25	32	41	40	39
887081-42	PR121495	AENV-WRC-17-005-Foliage	Foliage	11	12V 460003 6344596	39	83	122	12	95	62	82	86
887081-5	PR121481	AENV-WRC-35-001-Fruit	Berry	14	12V 463672 6326286	45	55	53	32	51	40	42	42
887081-50	PR121496	AENV-WRC-18-001-Fruit	Berry	12	12V 459412 6347045	28	62	69	38	48	53	55	60
887081-51	PR121497	AENV-WRC-18-001-Foliage	Foliage	12	12V 459412 6347045	16	56	74	58	40	31	46	40
887081-54	PR121498	AENV-WRC-18-002-Fruit	Berry	12	12V 459416 6347054	47	49	57	26	32	34	35	35
887081-55	PR121499	AENV-WRC-18-002-Foliage	Foliage	12	12V 459416 6347054	31	55	48	36	53	39	49	40
887081-58	PR121500	AENV-WRC-18-003-Fruit	Berry	12	12V 459422 6347054	58	72	80	39	44	42	55	56
887081-59	PR121501	AENV-WRC-18-003-Foliage	Foliage	12	12V 459422 6347054	34	INT	INT	36	45	33	57	41
887081-62	PR121502	AENV-WRC-18-004-Fruit	Berry	12	12V 459426 6347060	42	57	54	32	39	44	55	52
887081-63	PR121503	AENV-WRC-18-004-Foliage	Foliage	12	12V 459426 6347060	46	INT	INT	27	39	32	49	41
887081-66	PR121504	AENV-WRC-18-005-Fruit	Berry	12	12V 459427 6347060	48	58	66	38	48	53	55	60
887081-66	PR121504 D	AENV-WRC-18-005-Fruit	Berry	12	12V 459427 6347060	34	48	53	32	40	42	46	45
887081-67	PR121505	AENV-WRC-18-005-Foliage	Foliage	12	12V 459427 6347060	57	76	70	67	56	51	57	61
887081-8	PR121482	AENV-WRC-35-002-Fruit	Berry	14	12V 463668 6326271	21	36	39	22	34	30	34	30
894583-12	PR121868	AENV-WRC-40-005-Foliage	Foliage	16	12V 463896 6290603	29	16	65	97	64	46	64	64
894583-16	PR121869	AENV-WRC-59-001-Rhizome	Rhizome	19	12V 496187 6256732	41	76	38	50	66	65	62	66
894583-17	PR121870	AENV-WRC-59-002-Rhizome	Rhizome	19	12V 496245 6256692	21	50	32	63	101	57	66	66
894583-18	PR121871	AENV-WRC-59-003-Rhizome	Rhizome	19	12V 496245 6256689	50	75	31	96	108	88	71	72
894583-19	PR121872	AENV-WRC-59-004-Rhizome	Rhizome	19	12V 496245 6256686	53	83	43	87	93	68	71	73
894583-20	PR121873	AENV-WRC-59-005-Rhizome	Rhizome	19	12V 496243 6256689	39	29	27	53	72	45	64	64
894583-27	PR121874	AENV-WRC-40-001-Foliage	Foliage	16	12V 463891 6290600	58	60	22	67	69	53	66	68

Lab and Lot Number	Pacific Rim ID	Sample Description	Matrix	Site Number	Location	13C6-Naphthalene (%)	13C6-Acenaphthylene	13C6-Acenaphthene (%)	13C6-Fluorene (%)	13C6-Phenanthrene (%)	13C6-Anthracene (%)	13C6-Fluoranthene (%)	13C3-Pyrene(%)
894583-27	PR121874D	AENV-WRC-40-001-Foliage	Foliage	16	12V 463891 6290600	60	106	110	55	59	62	88	82
894583-3	PR121865	AENV-WRC-40-002-Foliage	Foliage	16	12V 463892 6290600	41	76	74	30	99	56	72	70
894583-6	PR121866	AENV-WRC-40-003-Foliage	Foliage	16	12V 463892 6290603	21	24	57	44	70	41	63	65
894583-9	PR121867	AENV-WRC-40-004-Foliage	Foliage	16	12V 463902 6290606	27	25	80	95	54	47	64	66
895939-12	PR121956	AENV-WRC-05-003-Foliage	Foliage	4	12V 470519 6330808	37	19	32	39	126	80	77	74
895939-16	PR121957	AENV-WRC-05-004-Foliage	Foliage	4	12V 470515 6330808	44	52	46	33	74	58	58	62
895939-19	PR121958	AENV-WRC-05-005-Foliage	Foliage	4	12V 470512 6330812	24	53	46	36	129	97	107	81
895939-26	PR121959	AENV-WRC-14-001-Foliage	Foliage	8	12V 484062 6347144	45	56	45	44	127	112	93	105
895939-29	PR121960	AENV-WRC-14-002-Foliage	Foliage	8	12V 484069 6347138	38	34	32	61	127	106	73	71
895939-32	PR121961	AENV-WRC-14-003-Foliage	Foliage	8	12V 484072 6347157	35	53	50	38	83	72	54	57
895939-35	PR121962	AENV-WRC-14-004-Foliage	Foliage	8	12V 484059 6347160	29	42	73	33	111	95	67	72
895939-35	PR121962D	AENV-WRC-14-004-Foliage	Foliage	8	12V 484059 6347160	23	17	65	33	33	42	79	75
895939-38	PR121963	AENV-WRC-14-005-Foliage	Foliage	8	12V 484052 6347151	121	73	101	122	128	101	42	42
895939-6	PR121954	AENV-WRC-5-001-Foliage	Foliage	4	12V 470512 6330815	61	39	19	138	137	94	70	74
895939-9	PR121955	AENV-WRC-05-002-Foliage	Foliage	4	12V 470514 6330812	43	34	37	75	94	73	71	79
896047-10	PR121965	AENV-WRC-50-002-Foliage	Foliage	17	12V 460189 6353024	18	93	91	40	47	35	44	39
896047-13	PR121966	AENV-WRC-50-003-Foliage	Foliage	17	12V 460192 6353027	19	76	88	67	51	31	45	43
896047-16	PR121967	AENV-WRC-50-004-Foliage	Foliage	17	12V 460198 6353030	40	80	62	84	33	34	32	38
896047-19	PR121968	AENV-WRC-50-005-Foliage	Foliage	17	12V 460204 6353030	23	75	68	78	50	42	57	51
896047-26	PR121969	AENV-WRC-06-001-Foliage	Foliage	5	12V 463968 6345076	16	113	126	74	84	73	97	84
896047-29	PR121970	AENV-WRC-06-002-Foliage	Foliage	5	12V 463974 6345085	15	107	58	58	71	68	90	70
896047-32	PR121971	AENV-WRC-06-003-Foliage	Foliage	5	12V 463973 6345088	15	88	127	64	36	36	55	43
896047-35	PR121972	AENV-WRC-06-004-Foliage	Foliage	5	12V 463973 6345088	43	22	20	56	113	90	112	101
896047-35	PR121972D	AENV-WRC-06-004-Foliage	Foliage	5	12V 463973 6345088	INT	INT	37	121	100	84	56	65
896047-38	PR121973	AENV-WRC-06-005-Foliage	Foliage	5	12V 463895 6344999	39	88	91	INT	83	77	34	36
896047-7	PR121964	AENV-WRC-50-001-Foliage	Foliage	17	12V 460192 6353024	13	98	26	78	42	39	54	46
896208-10	PR121978	AENV-WRC-16-003-Rhizome	Rhizome	10	12V 484150 6347051	17	96	59	65	30	32	31	32
896208-12	PR121979	AENV-WRC-16-004-Rhizome	Rhizome	10	12V 484149 6347051	19	113	109	47	54	67	58	52

Lab and Lot Number	Pacific Rim ID	Sample Description	Matrix	Site Number	Location	13C6-Naphthalene (%)	13C6-Acenaphthylene	13C6-Acenaphthene (%)	13C6-Fluorene (%)	13C6-Phenanthrene (%)	13C6-Anthracene (%)	13C6-Fluoranthene (%)	13C3-Pyrene(%)
896208-14	PR121980	AENV-WRC-16-005-Rhizome	Rhizome	10	12V 484127 6347048	25	91	30	110	78	90	84	72
896208-21	PR121981	AENV-WRC-36-001-Foliage	Foliage	15	12V 463617 6326364	27	18	31	24	76	49	62	48
896208-21	PR121981 D	AENV-WRC-36-001-Foliage	Foliage	15	12V 463617 6326364	70	15	29	112	76	59	79	67
896208-24	PR121982	AENV-WRC-36-002-Foliage	Foliage	15	12V 463620 6326361	31	15	107	120	61	55	70	58
896208-27	PR121983	AENV-WRC-36-003-Foliage	Foliage	15	12V 463647 6326364	20	70	72	99	59	54	66	55
896208-30	PR121894	AENV-WRC-36-004-Foliage	Foliage	15	12V 463617 6326367	60	30	25	37	66	66	88	76
896208-33	PR121985	AENV-WRC-36-005-Foliage	Foliage	15	12V 463617 6326370	INT	21	29	58	77	75	81	66
896208-6	PR121976	AENV-WRC-16-001-Rhizome	Rhizome	10	12V 484152 6347051	15	120	86	120	59	83	86	66
896208-8	PR121977	AENV-WRC-16-002-Rhizome	Rhizome	10	12V 484164 6347051	45	78	31	72	39	53	38	33
BLANK	PH120628 B	Lab Blank	-	-	-	11	58	38	54	85	92	66	63
BLANK	PH120608 B	Lab Blank	-	-	-	35	31	34	27	40	34	50	32
BLANK	PH120611 B	Lab Blank	-	-	-	65	68	79	18	29	41	38	41
BLANK	PH120605 B	Lab Blank	-	-	-	32	55	51	53	52	52	53	54
BLANK	PH120602 B	Lab Blank	-	-	-	59	69	70	57	60	58	62	59
BLANK	PH120600 B	Lab Blank	-	-	-	58	55	30	59	49	52	52	51
BLANK	PH120601 B	Lab Blank	-	-	-	79	57	58	60	45	57	58	59
BLANK	PH120641 B	Lab Blank	-	-	-	76	23	20	108	47	71	75	70
BLANK	PH120637 B	Lab Blank	-	-	-	34	78	91	30	32	60	74	68
BLANK	PH120630 B	Lab Blank	-	-	-	72	66	75	59	39	62	58	61
BLANK	PH120633 B	Lab Blank	-	-	-	61	64	63	56	57	65	52	50
BLANK	PH120635 B	Lab Blank	-	-	-	75	75	73	83	74	84	73	74
BLANK	PH120636 B	Lab Blank	-	-	-	81	85	73	108	79	99	76	80
BLANK	PH120631 B	Lab Blank	-	-	-	49	49	62	70	54	89	85	84

Table 2. Surrogate recoveries (%) for samples analyzed (13C6-Benz(a)anthracene to 13C12-Benzo(ghi)perylene).

Lab and Lot Number	Pacific Rim ID	Sample Description	Matrix	Site Number	Location	13C6-Benz(a) anthracene (%)	13C6-Chrysene (%)	13C6-Benzo(b+j) fluoranthene (%)	13C6-Benzo(k) fluoranthene (%)	13C4-Benzo(a) pyrene (%)	13C6-Indeno (1,2,3-cd) pyrene (%)	13C6-Dibenz(a,h) anthracene (%)	13C12-Benzo(ghi) perylene (%)
886745-6	PR121511	AE NV-WRC 19-001-Foliage	Foliage	13	12V 468223 6310175	63	68	60	81	49	68	58	73
884901-10	PR121425	AENV-WRC-01-002-Berry	Berry	1	12V 473533 6329987	69	70	63	71	46	64	70	80
884901-13	PR121426	AENV-WRC-01-003-Berry	Berry	1	12V 473528 6329993	69	67	61	68	47	64	69	75
884901-16	PR121427	AENV-WRC-01-004-Berry	Berry	1	12V 473530 6329996	68	69	60	69	46	65	64	74
884901-19	PR121428	AENV-WRC-01-005-Berry	Berry	1	12V 473528 6329990	69	71	61	67	47	63	65	78
884901-26	PR121429	AENV-WRC-02-001-Berry	Berry	2	12V 471715 6330175	76	81	65	75	48	65	71	82
884901-29	PR121430	AENV-WRC-02-002-Berry	Berry	2	12V 471721 6330163	50	50	47	63	42	52	52	87
884901-29	PR121430D	AENV-WRC-02-002-Berry	Berry	2	12V 471721 6330163	65	71	60	65	62	66	68	88
884901-32	PR121431	AENV-WRC-02-003-Berry	Berry	2	12V 471704 6330163	64	77	55	68	47	60	64	68
884901-35	PR121432	AENV-WRC-02-004-Berry	Berry	2	12V 471692 6330169	67	76	58	69	45	57	64	66
884901-38	PR121433	AENV-WRC-02-005-Berry	Berry	2	12V 471690 6330160	63	75	54	67	45	55	63	68
884901-45	PR121434	AENV-WRC-03-001-Berry	Berry	3	12V 464201 6364624	59	69	55	68	47	55	59	69
884901-48	PR121435	AENV-WRC-03-002-Berry	Berry	3	12V 464196 6364624	65	71	61	79	54	56	57	71
884901-51	PR121436	AENV-WRC-03-003-Berry	Berry	3	12V 464204 6364621	67	69	66	84	51	55	61	69
884901-54	PR121437	AENV-WRC-03-004-Berry	Berry	3	12V 464196 6364621	64	65	63	75	46	61	63	74
884901-57	PR121438	AENV-WRC-03-005-Berry	Berry	3	12V 464191 6364615	53	53	45	46	61	59	65	54
884901-7	PR121424	AENV-WRC-01-001-Berry	Berry	1	12V 473516 6330037	67	64	65	73	50	75	77	82
885598-10	PR121440	AENV-WRC-15-002-Berry	Berry	9	12V 483777 6350392	64	56	71	68	66	70	66	47
885598-13	PR121441	AENV-WRC-15-003-Berry	Berry	9	12V 483772 6350399	55	51	59	56	64	60	49	44

Lab and Lot Number	Pacific Rim ID	Sample Description	Matrix	Site Number	Location	13C6-Benz(a) anthracene (%)	13C6-Chrysene (%)	13C6-Benzo(b+j) fluoranthene (%)	13C6-Benzo(k) fluoranthene (%)	13C4-Benzo(a) pyrene (%)	13C6-Indeno (1,2,3-cd) pyrene (%)	13C6-Dibenz(a,h) anthracene (%)	13C12-Benzo(ghi) perylene (%)
885598-16	PR121442	AENV-WRC-15-004-Berry	Berry	9	12V 483772 6350392	78	76	88	97	72	66	58	49
885598-19	PR121443	AENV-WRC-15-005-Berry	Berry	9	12V 483772 6350399	57	48	67	65	48	47	38	30
885598-7	PR121439	AENV-WRC-15-001-Berry	Berry	9	12V 483787 6350408	64	58	69	72	69	60	49	41
886741-11	PR121469	AENV-WRC-07-003-Berry	Berry	6	12V 464116 6344663	49	36	64	53	43	48	42	35
886741-14	PR121470	AENV-WRC-07-004-Berry	Berry	6	12V 464123 6344672	44	34	52	46	45	44	42	33
886741-17	PR121471	AENV-WRC-07-005-Berry	Berry	6	12V 464108 6344676	45	33	54	53	49	38	39	30
886741-24	PR121472	AENV-WRC-08-001-Berry	Berry	7	12V 466958 6366367	51	35	65	54	60	53	43	34
886741-27	PR121473	AENV-WRC-08-002-Berry	Berry	7	12V 466953 6366364	43	36	58	49	71	84	68	55
886741-30	PR121474	AENV-WRC-08-003-Berry	Berry	7	12V 466951 6366361	47	35	67	57	48	83	72	63
886741-33	PR121475	AENV-WRC-08-004-Berry	Berry	7	12V 466946 6366357	47	32	67	52	47	98	81	65
886741-36	PR121476	AENV-WRC-08-005-Berry	Berry	7	12V 466949 6366364	102	73	126	111	141	90	78	59
886741-5	PR121467	AENV-WRC-07-001-Berry	Berry	6	12V 464106 6344648	47	38	56	52	44	55	50	40
886741-5	PR121467D	AENV-WRC-07-001-Berry	Berry	6	12V 464106 6344648	42	34	52	50	43	41	38	31
886741-8	PR121468	AENV-WRC-07-002-Berry	Berry	6	12V 464123 6344645	48	33	66	60	46	43	42	34
886745-10	PR121513	AENV-WRC 19-002-Foliage	Foliage	13	12V 468123 6310152	44	46	40	51	38	41	34	64
886745-13	PR121514	AENV-WRC 19-003-Fruit	Berry	13	12V 468079 6310127	87	86	93	112	80	100	120	115
886745-14	PR121515	AENV-WRC 19-003-Foliage	Foliage	13	12V 468079 6310127	60	62	42	49	37	61	45	78
886745-17	PR121516	AENV-WRC 19-004-Fruit	Berry	13	12V 468066 6310130	37	47	50	90	77	40	35	33
886745-17	PR121516D	AENV-WRC 19-004-Fruit	Berry	13	12V 468066 6310130	102	122	70	112	69	74	64	95
886745-18	PR121517	AENV-WRC 19-004-Foliage	Foliage	13	12V 468066 6310130	45	63	33	58	35	43	35	55

Lab and Lot Number	Pacific Rim ID	Sample Description	Matrix	Site Number	Location	13C6-Benz(a) anthracene (%)	13C6-Chrysene (%)	13C6-Benzo(b+j) fluoranthene (%)	13C6-Benzo(k) fluoranthene (%)	13C4-Benzo(a) pyrene (%)	13C6-Indeno (1,2,3-cd) pyrene (%)	13C6-Dibenz(a,h) anthracene (%)	13C12-Benzo(ghi) perylene (%)
886745-21	PR121518	AENV-WRC 19-005-Fruit	Berry	13	12V 468106 6310087	87	134	75	115	91	32	47	93
886745-22	PR121519	AENV-WRC 19-005-Foliage	Foliage	13	12V 468106 6310087	55	67	46	54	52	65	57	78
886745-30	PR121520	AENV-WRC-58-001-Foliage	Foliage	18	12V 462844 6363984	54	72	55	85	53	47	70	78
886745-33	PR121521	AENV-WRC-58-002-Foliage	Foliage	18	12V 462848 6363962	59	64	59	79	37	66	59	81
886745-36	PR121522	AENV-WRC-58-003-Foliage	Foliage	18	12V 462847 6363962	40	51	58	95	64	34	30	89
886745-39	PR121523	AENV-WRC-58-004-Foliage	Foliage	18	12V 462828 6363971	57	71	61	89	57	88	76	93
886745-42	PR121524	AENV-WRC-58-005-Foliage	Foliage	18	12V 462838 6363971	103	120	96	128	102	128	111	120
886745-5	PR121510	AENV-WRC 19-001-Fruit	Berry	13	12V 468223 6310175	81	88	91	114	103	94	93	96
886745-9	PR121512	AENV-WRC 19-002-Fruit	Berry	13	12V 468123 6310152	90	84	66	69	91	95	87	92
887081-11	PR121483	AENV-WRC-35-003-Fruit	Berry	14	12V 463646 6326280	40	41	50	58	54	36	33	42
887081-14	PR121484	AENV-WRC-35-004-Fruit	Berry	14	12V 463677 6326271	36	39	43	49	43	30	34	33
887081-17	PR121485	AENV-WRC-35-005-Fruit	Berry	14	12V 463682 6326265	37	43	40	47	45	32	34	34
887081-25	PR121486	AENV-WRC-17-001-Fruit	Berry	11	12V 460013 6344599	38	39	43	58	47	32	43	39
887081-26	PR121487	AENV-WRC-17-001-Foliage	Foliage	11	12V 460013 6344599	21	22	33	37	37	26	32	33
887081-29	PR121488	AENV-WRC-17-002-Fruit	Berry	11	12V 460012 6344596	35	40	41	51	49	37	45	42
887081-29	PR121488D	AENV-WRC-17-002-Fruit	Berry	11	12V 460012 6344596	37	39	45	54	48	31	40	39
887081-30	PR121489	AENV-WRC-17-002-Foliage	Foliage	11	12V 460012 6344596	54	44	37	43	34	71	73	68
887081-33	PR121490	AENV-WRC-17-003-Fruit	Berry	11	12V 460010 6344596	89	79	64	57	58	80	76	73
887081-34	PR121491	AENV-WRC-17-003-Foliage	Foliage	11	12V 460010 6344596	91	83	70	70	68	101	93	98
887081-37	PR121492	AENV-WRC-17-004-Fruit	Berry	11	12V 460005 6344593	69	77	76	82	64	81	59	62

Lab and Lot Number	Pacific Rim ID	Sample Description	Matrix	Site Number	Location	13C6-Benz(a) anthracene (%)	13C6-Chrysene (%)	13C6-Benzo(b+j) fluoranthene (%)	13C6-Benzo(k) fluoranthene (%)	13C4-Benzo(a) pyrene (%)	13C6-Indeno (1,2,3-cd) pyrene (%)	13C6-Dibenz(a,h) anthracene (%)	13C12-Benzo(ghi) perylene (%)
887081-38	PR121493	AENV-WRC-17-004-Foliage	Foliage	11	12V 460005 6344593	79	85	55	60	55	93	75	91
887081-41	PR121494	AENV-WRC-17-005-Fruit	Berry	11	12V 460003 6344596	71	86	69	93	81	73	98	68
887081-42	PR121495	AENV-WRC-17-005-Foliage	Foliage	11	12V 460003 6344596	53	52	55	72	50	73	56	78
887081-5	PR121481	AENV-WRC-35-001-Fruit	Berry	14	12V 463672 6326286	51	46	71	71	63	41	46	64
887081-50	PR121496	AENV-WRC-18-001-Fruit	Berry	12	12V 459412 6347045	51	48	63	76	68	45	50	51
887081-51	PR121497	AENV-WRC-18-001-Foliage	Foliage	12	12V 459412 6347045	32	33	48	51	56	44	44	43
887081-54	PR121498	AENV-WRC-18-002-Fruit	Berry	12	12V 459416 6347054	50	60	55	72	62	55	63	49
887081-55	PR121499	AENV-WRC-18-002-Foliage	Foliage	12	12V 459416 6347054	29	35	35	42	39	30	33	32
887081-58	PR121500	AENV-WRC-18-003-Fruit	Berry	12	12V 459422 6347054	93	88	80	84	87	82	80	84
887081-59	PR121501	AENV-WRC-18-003-Foliage	Foliage	12	12V 459422 6347054	37	42	38	44	40	33	38	33
887081-62	PR121502	AENV-WRC-18-004-Fruit	Berry	12	12V 459426 6347060	58	69	55	74	62	55	57	43
887081-63	PR121503	AENV-WRC-18-004-Foliage	Foliage	12	12V 459426 6347060	43	47	45	55	49	44	46	41
887081-66	PR121504	AENV-WRC-18-005-Fruit	Berry	12	12V 459427 6347060	69	71	66	77	73	66	77	69
887081-66	PR121504 D	AENV-WRC-18-005-Fruit	Berry	12	12V 459427 6347060	88	100	78	96	85	77	82	86
887081-67	PR121505	AENV-WRC-18-005-Foliage	Foliage	12	12V 459427 6347060	62	79	49	74	47	51	56	57
887081-8	PR121482	AENV-WRC-35-002-Fruit	Berry	14	12V 463668 6326271	56	61	50	72	52	40	33	38
894583-12	PR121868	AENV-WRC-40-005-Foliage	Foliage	16	12V 463896 6290603	32	55	50	60	52	39	52	65
894583-16	PR121869	AENV-WRC-59-001-Rhizome	Rhizome	19	12V 496187 6256732	42	72	51	62	51	45	42	62
894583-17	PR121870	AENV-WRC-59-002-Rhizome	Rhizome	19	12V 496245 6256692	54	67	55	50	41	43	56	73
894583-18	PR121871	AENV-WRC-59-003-Rhizome	Rhizome	19	12V 496245 6256689	49	74	36	45	46	57	36	44

Lab and Lot Number	Pacific Rim ID	Sample Description	Matrix	Site Number	Location	13C6-Benz(a) anthracene (%)	13C6-Chrysene (%)	13C6-Benzo(b+j) fluoranthene (%)	13C6-Benzo(k) fluoranthene (%)	13C4-Benzo(a) pyrene (%)	13C6-Indeno (1,2,3-cd) pyrene (%)	13C6-Dibenz(a,h) anthracene (%)	13C12-Benzo(ghi) perylene (%)
894583-19	PR121872	AENV-WRC-59-004-Rhizome	Rhizome	19	12V 496245 6256686	42	53	50	55	58	59	37	45
894583-20	PR121873	AENV-WRC-59-005-Rhizome	Rhizome	19	12V 496243 6256689	31	36	51	52	47	40	32	32
894583-27	PR121874	AENV-WRC-40-001-Foliage	Foliage	16	12V 463891 6290600	55	71	56	66	61	55	32	47
894583-27	PR121874D	AENV-WRC-40-001-Foliage	Foliage	16	12V 463891 6290600	102	73	126	111	141	90	78	59
894583-3	PR121865	AENV-WRC-40-002-Foliage	Foliage	16	12V 463892 6290600	55	52	44	55	45	50	38	52
894583-6	PR121866	AENV-WRC-40-003-Foliage	Foliage	16	12V 463892 6290603	37	49	46	48	39	39	56	70
894583-9	PR121867	AENV-WRC-40-004-Foliage	Foliage	16	12V 463902 6290606	35	80	60	73	43	33	46	58
895939-12	PR121956	AENV-WRC-05-003-Foliage	Foliage	4	12V 470519 6330808	104	80	47	44	47	87	73	77
895939-16	PR121957	AENV-WRC-05-004-Foliage	Foliage	4	12V 470515 6330808	66	60	49	57	51	68	61	70
895939-19	PR121958	AENV-WRC-05-005-Foliage	Foliage	4	12V 470512 6330812	61	51	58	55	47	74	70	86
895939-26	PR121959	AENV-WRC-14-001-Foliage	Foliage	8	12V 484062 6347144	90	75	59	60	47	78	86	96
895939-29	PR121960	AENV-WRC-14-002-Foliage	Foliage	8	12V 484069 6347138	77	70	53	67	47	88	99	106
895939-32	PR121961	AENV-WRC-14-003-Foliage	Foliage	8	12V 484072 6347157	59	51	43	61	49	64	66	95
895939-35	PR121962	AENV-WRC-14-004-Foliage	Foliage	8	12V 484059 6347160	56	49	43	51	47	74	80	93
895939-35	PR121962D	AENV-WRC-14-004-Foliage	Foliage	8	12V 484059 6347160	32	42	48	63	41	36	48	56
895939-38	PR121963	AENV-WRC-14-005-Foliage	Foliage	8	12V 484052 6347151	120	135	68	83	51	71	77	97
895939-6	PR121954	AENV-WRC-5-001-Foliage	Foliage	4	12V 470512 6330815	71	73	37	39	35	72	63	79
895939-9	PR121955	AENV-WRC-05-002-Foliage	Foliage	4	12V 470514 6330812	73	62	35	34	34	63	57	58
896047-10	PR121965	AENV-WRC-50-002-Foliage	Foliage	17	12V 460189 6353024	118	113	89	77	72	105	85	99
896047-13	PR121966	AENV-WRC-50-003-Foliage	Foliage	17	12V 460192 6353027	77	74	63	56	53	65	68	76

Lab and Lot Number	Pacific Rim ID	Sample Description	Matrix	Site Number	Location	13C6-Benz(a) anthracene (%)	13C6-Chrysene (%)	13C6-Benzo(b+j) fluoranthene (%)	13C6-Benzo(k) fluoranthene (%)	13C4-Benzo(a) pyrene (%)	13C6-Indeno (1,2,3-cd) pyrene (%)	13C6-Dibenz(a,h) anthracene (%)	13C12-Benzo(ghi) perylene (%)
896047-16	PR121967	AENV-WRC-50-004-Foliage	Foliage	17	12V 460198 6353030	72	95	84	72	45	63	63	82
896047-19	PR121968	AENV-WRC-50-005-Foliage	Foliage	17	12V 460204 6353030	74	109	77	93	46	62	75	102
896047-26	PR121969	AENV-WRC-06-001-Foliage	Foliage	5	12V 463968 6345076	78	79	67	72	53	70	64	72
896047-29	PR121970	AENV-WRC-06-002-Foliage	Foliage	5	12V 463974 6345085	60	60	59	51	42	38	41	49
896047-32	PR121971	AENV-WRC-06-003-Foliage	Foliage	5	12V 463973 6345088	72	71	65	56	44	54	55	57
896047-35	PR121972	AENV-WRC-06-004-Foliage	Foliage	5	12V 463973 6345088	54	74	49	63	37	43	36	68
896047-35	PR121972D	AENV-WRC-06-004-Foliage	Foliage	5	12V 463973 6345088	52	72	44	60	40	39	33	49
896047-38	PR121973	AENV-WRC-06-005-Foliage	Foliage	5	12V 463895 6344999	115	130	48	68	35	42	53	44
896047-7	PR121964	AENV-WRC-50-001-Foliage	Foliage	17	12V 460192 6353024	58	58	61	53	44	51	42	60
896208-10	PR121978	AENV-WRC-16-003-Rhizome	Rhizome	10	12V 484150 6347051	63	67	58	69	42	57	50	67
896208-12	PR121979	AENV-WRC-16-004-Rhizome	Rhizome	10	12V 484149 6347051	61	69	57	58	50	62	53	77
896208-14	PR121980	AENV-WRC-16-005-Rhizome	Rhizome	10	12V 484127 6347048	65	66	57	56	45	49	43	58
896208-21	PR121981	AENV-WRC-36-001-Foliage	Foliage	15	12V 463617 6326364	50	60	49	51	41	46	42	55
896208-21	PR121981D	AENV-WRC-36-001-Foliage	Foliage	15	12V 463617 6326364	62	67	47	48	43	51	47	53
896208-24	PR121982	AENV-WRC-36-002-Foliage	Foliage	15	12V 463620 6326361	52	57	45	50	36	36	38	48
896208-27	PR121983	AENV-WRC-36-003-Foliage	Foliage	15	12V 463647 6326364	46	49	41	49	33	37	35	48
896208-30	PR121894	AENV-WRC-36-004-Foliage	Foliage	15	12V 463617 6326367	63	79	48	52	36	43	47	47
896208-33	PR121985	AENV-WRC-36-005-Foliage	Foliage	15	12V 463617 6326370	61	75	54	57	39	49	51	63
896208-6	PR121976	AENV-WRC-16-001-Rhizome	Rhizome	10	12V 484152 6347051	77	89	70	71	50	65	50	57
896208-8	PR121977	AENV-WRC-16-002-Rhizome	Rhizome	10	12V 484164 6347051	55	62	54	57	44	60	58	66

Lab and Lot Number	Pacific Rim ID	Sample Description	Matrix	Site Number	Location	13C6-Benz(a) anthracene (%)	13C6-Chrysene (%)	13C6-Benzo(b+j) fluoranthene (%)	13C6-Benzo(k) fluoranthene (%)	13C4-Benzo(a) pyrene (%)	13C6-Indeno (1,2,3-cd) pyrene (%)	13C6-Dibenz(a,h) anthracene (%)	13C12-Benzo(ghi) perylene (%)
BLANK	PH120628B	Lab Blank	-	-	-	56	65	52	52	41	43	63	91
BLANK	PH120608B	Lab Blank	-	-	-	33	47	47	46	48	39	58	42
BLANK	PH120611B	Lab Blank	-	-	-	59	78	75	102	86	69	96	75
BLANK	PH120605B	Lab Blank	-	-	-	60	54	53	53	48	56	51	43
BLANK	PH120602B	Lab Blank	-	-	-	80	75	82	75	50	83	74	64
BLANK	PH120600B	Lab Blank	-	-	-	71	71	69	74	73	66	58	65
BLANK	PH120601B	Lab Blank	-	-	-	59	68	54	66	43	51	46	55
BLANK	PH120641B	Lab Blank	-	-	-	70	90	61	78	57	51	50	61
BLANK	PH120637B	Lab Blank	-	-	-	33	71	68	86	30	56	59	58
BLANK	PH120630B	Lab Blank	-	-	-	39	73	43	56	44	151	141	139
BLANK	PH120633B	Lab Blank	-	-	-	67	81	79	84	46	88	79	91
BLANK	PH120635B	Lab Blank	-	-	-	85	103	90	95	52	82	77	95
BLANK	PH120636B	Lab Blank	-	-	-	44	51	42	55	38	116	108	114
BLANK	PH120631B	Lab Blank	-	-	-	40	77	52	74	30	31	54	50

Matrix Spike

The matrix spikes performed by Pacific Rim are shown in Tables 3 and 4. Please see Appendix 2 for more information on Pacific Rim's quality control protocol.

Table 3. Matrix spike recovery results for naphthalene to pyrene in percent recovery.

Analysis	Pacific Rim ID	Naphthalene	Acenaphthylene	Acenaphthene	Fluorene	Phenanthrene	Anthracene	Fluoranthene	Pyrene
Matrix Spike	PR121874MS	81%	113%	96%	108%	62%	102%	86%	90%
Matrix Spike	PR121518MS	63%	112%	94%	68%	73%	116%	116%	100%
Matrix Spike	PR121490S	100%	116%	107%	99%	93%	84%	123%	120%
Matrix Spike	PR121476MS	113%	93%	84%	101%	106%	95%	97%	94%
Matrix Spike	PR121433MS	81%	89%	100%	88%	106%	108%	109%	110%
Matrix Spike	PR121982MS	96%	85%	119%	65%	114%	118%	87%	104%

Analysis	Pacific Rim ID	Naphthalene	Acenaphthylene	Acenaphthene	Fluorene	Phenanthrene	Anthracene	Fluoranthene	Pyrene
Matrix Spike	PR121972MS	77%	85%	107%	112%	81%	96%	74%	90%
Matrix Spike	PR121963MS	100%	87%	116%	105%	97%	129%	102%	94%
Matrix Spike	PH121921MS	68%	94%	98%	83%	83%	101%	101%	101%

Table 4. Matrix spike recovery results for benz(a)anthracene to benzo(ghi)perylene in percent recovery.

Analysis	Pacific Rim ID	Benz(a)anthracene	Chrysene	Benzo(b+j)fluoranthene	Benzo(k)fluoranthene	Benzo(a)pyrene	Indeno(1,2,3-cd)pyrene	Dibenz(a,h)anthracene	Benzo(ghi)perylene
Matrix Spike	PR121874MS	88%	87%	77%	99%	107%	101%	99%	106%
Matrix Spike	PR121518MS	107%	109%	99%	107%	112%	93%	84%	106%
Matrix Spike	PR121490S	97%	95%	89%	94%	94%	96%	102%	78%
Matrix Spike	PR121476MS	85%	85%	86%	87%	97%	97%	73%	84%
Matrix Spike	PR121433MS	91%	107%	99%	102%	130%	102%	81%	109%
Matrix Spike	PR121982MS	105%	130%	103%	110%	100%	101%	94%	110%
Matrix Spike	PR121972MS	107%	111%	79%	98%	105%	113%	90%	85%
Matrix Spike	PR121963MS	140%	126%	100%	111%	117%	109%	93%	122%
Matrix Spike	PH121921MS	98%	101%	94%	102%	108%	98%	106%	83%

Duplicates in the Data Reports

Please see Appendix 2 for more information on the Pacific Rim's quality control practices. No duplicates exceeded quality control standards. Duplicates were provided with the raw data in Appendix 7.

Notes

This analysis and its quality assurance techniques are based on:

- SOP LAB03 – a Pacific Rim Laboratories Inc.-specific technique, which ESRD could not obtain, and
- US EPA Method 8270C.

Data Quality Assurance for Pacific Rim Laboratories Inc.

The data received via EXOVA from Pacific Rim Laboratories Inc. were in a Microsoft Excel template format. This meant that they had to be manually entered into a database. Extra care was taken by rechecking samples after they were moved. Once entered, Microsoft Excel commands were used to count the samples to ensure there were the correct amount (n = 110).

After the data were input into the database, a selection of the samples was checked for accuracy. A total of 18 samples were randomly chosen for a 15% reassessment of the samples. An extra sample was added from lot 884901 to ensure that one sample from each lot was evaluated. The individual sample analyzed from the lot was also chosen using the random number generator. The results are shown in Table 6.

The data were checked against the reports provided by EXOVA.

Table 6. Samples rechecked for quality assurance and the fields they were assessed for.

Sample Number	Pacific Rim Data	Moisture	Trip Blank	Location Blank	Location	Was the data complete?
895939-32	Match	Match	Match	Match	Match	Yes
887081-41	Match	Match	Match	Match	Match	Yes
886745-22	Match	Match	Match	Match	Match	Yes
885598-19	Match	Match	Match	Match	Match	Yes
886741-36	Match	Match	Match	Match	Match	Yes
885598-16	Match	Match	Match	Match	Match	Yes
886745-42	Match	Match	Match	Match	Match	Yes
894583-16	Match	Match	Match	Match	Match	Yes
887081-25	Match	Match (Average)	Match	Match	Match	Yes
894583-12	Match	Match	Match	Match	Match	Yes
887081-29	Match	Match	Match	Match	Match	Yes
896208-10	Match	Match	Match	Match	Match	Yes
894583-27	Match	Match	Match	Match	Match	Yes
8861741-5	Match	Match	Match	Match	Match	Yes
886745-13	Match	Match	Match	Match	Match	Yes
887081-34	Match	Match	Match	Match	Match	Yes

Sample Number	Pacific Rim Data	Moisture	Trip Blank	Location Blank	Location	Was the data complete?
896047-7	Match	Match	Match	Match	Match	Yes
895939-26	Match	Match	Match	Match	Match	Yes
884901-19	Match	Match	Match	Match	Match	Yes

Table 7 lists the type of tissue analyzed at each site. For each unique site and tissue combination, 5 samples were assessed.

Table 7. The site code from which the samples were taken and the type of tissue analyzed from it.

Site Number	Type of Solid
1	Berry
2	Berry
3	Berry
4	Foliage
5	Foliage
6	Berry
7	Berry
8	Foliage
9	Berry
10	Rhizome
11	Berry
11	Foliage
12	Berry
12	Foliage
13	Berry
13	Foliage

14	Berry
15	Foliage
16	Foliage
17	Foliage
18	Foliage
19	Rhizome

APPENDIX 6: Flett Research Ltd. Quality Assurance and Quality Control Protocol for Sampling and Analysis

Methyl Mercury Quality Control Procedures by Flett Research Ltd.

Please see Appendix 2 for details on Flett Research Ltd's quality control.

Quality Control Notes:

No violations in quality control measures were reported by Flett Research Ltd. via EXOVA. Quality control data available from the authors upon request.

Quality Assurance of Methyl Mercury Analysis

The lot number, sample number, and wet weight concentrations were entered by hand from PDFs provided from EXOVA. Due to the limited amount of samples that were tested for methyl mercury all samples were rechecked against the results received via EXOVA to ensure their accuracy. Sample information, including site number, latitude, and sample type was added using Excel code from the EXOVA data.

The data included 10 analyses of methyl mercury in berries samples from 10 locations, 10 foliage samples from 10 locations, 18 soil samples from 18 locations, and 2 rhizome samples from 2 locations. The samples tested for methyl mercury at each location are shown in Table 1. It should be noted that these 40 samples are a subset of a larger set of data. Due to budget constraints all samples could not be analyzed for methyl mercury, therefore a subset was randomly chosen.

Table 1. Location codes with the number of samples and sample types analyzed at each.

Site Number	Sample Quantity and Type
1	1 Soil 1 Berry
2	1 Soil 1 Berries
3	1 Soil 1 Berries
4	1 Soil 1 Foliage
5	1 Soil 1 Foliage

Site Number	Sample Quantity and Type
6	1 Soil 1 Berries
7	1 Soil 1 Berries
8	1 Soil 1 Foliage
9	1 Soil 1 Berries
10	1 Soil 1 Rhizome
11	1 Soil 1 Foliage 1 Berries
12	1 Soil 1 Foliage 1 Berries
13	1 Soil 1 Foliage 1 Berries
14	1 Soil 1 Berries
15	1 Soil 1 Foliage
16	1 Soil 1 Foliage
17	1 Soil 1 Foliage

Site Number	Sample Quantity and Type
18	1 Soil 1 Foliage
19	1 Rhizome

APPENDIX 7: Raw Data Sets

Metals

The results of EXOVA's metals analysis are shown in Tables 1 to 3 along with sample information (i.e., media type, site number, and fine sampling location). The locations listed are specific to the sample but not to the site (locations projected in NAD83). The suite of metals was so extensive that the raw data were divided into three tables. Concentrations marked with a "<" are below the method or sample detection limit. Method detection limits can be found in Appendix 2.

Aluminum to Copper

Table 1. The sample ID, media type, site number, and sampling location provided for each sample along with the laboratory results of aluminum to copper.

					Metal Concentration in (ug/g dry weight)													
Sample ID	**EXOVA Sample ID**	**Media**	**Site Number**	**Location (UTM 12)**	**Aluminum**	**Antimony**	**Arsenic**	**Barium**	**Beryllium**	**Bismuth**	**Boron**	**Cadmium**	**Calcium**	**Chromium**	**Chrom-ium(III)**	**Chrom-ium (VI)**	**Cobalt**	**Copper**
AENV-WRC-01-001-Berry	884901-7	Berry	01	12V 473516 6330037	16	<0.5	<0.2	8.17	<0.01	<0.5	4.3	<0.05	-	0.07	0.07	<6	<0.05	3.1
AENV-WRC-01-002-Berry	884901-10	Berry	01	12V 473533 6329987	13	<0.5	<0.2	9.78	<0.01	<0.5	4.7	<0.05	-	<0.03	<0.0009	<6	<0.05	3.9
AENV-WRC-01-003-Berry	884901-13	Berry	01	12V 473528 6329993	13	<0.5	<0.2	8.25	<0.01	0.55	5.24	<0.05	-	0.07	0.07	<7	<0.05	4.2
AENV-WRC-01-004-Berry	884901-16	Berry	01	12V 473530 6329996	16	<0.5	<0.2	13.4	<0.01	<0.5	4	<0.05	-	<0.03	-	-	<0.05	3.2
AENV-WRC-01-005-Berry	884901-19	Berry	01	12V 473528 6329990	15	<0.5	<0.2	11.1	<0.01	<0.5	4.8	<0.05	-	<0.03	<0.0009	<6	<0.05	3.2
AENV-WRC-02-001-Berry	884901-26	Berry	02	12V 471715 6330175	23	0.58	<0.2	10.2	<0.01	<0.5	3.2	<0.05	-	<0.03	<0.0009	<6	<0.05	3.1
AENV-WRC-02-002-Berry	884901-29	Berry	02	12V 471721 6330163	21	<0.5	<0.2	10.5	<0.01	0.68	4.5	<0.05	-	0.15	0.2	<7	<0.05	3.3
AENV-WRC-02-003-Berry	884901-32	Berry	02	12V 471704 6330163	19	<0.5	<0.2	9.16	<0.01	<0.5	4.5	<0.05	-	0.33	0.3	<7	<0.05	3.5
AENV-WRC-02-004-Berry	884901-35	Berry	02	12V 471692 6330169	15	<0.5	<0.2	11.8	<0.01	<0.5	5.23	<0.05	-	<0.03	<0.0009	<7	<0.05	3.1
AENV-WRC-02-005-Berry	884901-38	Berry	02	12V 471690 6330160	14	0.61	<0.2	11.3	<0.01	<0.5	4.4	<0.05	-	0.1	0.1	<6	<0.05	3.8
AENV-WRC-03-001-Berry	884901-45	Berry	03	12V 464201 6364624	9.2	<0.5	<0.2	11.2	<0.01	<0.5	2.1	<0.05	-	<0.03	<0.0009	<7	<0.05	2.6
AENV-WRC-03-002-Berry	884901-48	Berry	03	12V 464196 6364624	12	<0.5	<0.2	13.4	<0.01	0.62	1.8	<0.05	-	0.32	0.3	<7	<0.05	2.7

					Metal Concentration in (ug/g dry weight)												
Sample ID	**EXOVA Sample ID**	**Media**	**Site Number**	**Location (UTM 12)**	**Aluminum**	**Antimony**	**Arsenic**	**Barium**	**Beryllium**	**Bismuth**	**Boron**	**Cadmium**	**Calcium**	**Chromium**	**Chrom-ium(III)**	**Chrom-ium (VI)**	**Cobalt**	**Copper**
AENV-WRC-03-003-Berry	884901-51	Berry	03	12V 464204 6364621	9.7	<0.5	<0.2	12.8	<0.01	<0.5	2.1	<0.05	-	<0.03	<0.0009	<7	<0.05	2.7
AENV-WRC-03-004-Berry	884901-54	Berry	03	12V 464196 6364621	16	<0.5	<0.2	14.2	<0.01	<0.5	2.7	<0.05	-	0.09	0.09	<7	<0.05	3.2
AENV-WRC-03-005-Berry	884901-57	Berry	03	12V 464191 6364615	10	0.8	<0.2	14.8	<0.01	<0.5	2	<0.05	-	0.075	0.08	<6	<0.05	2.8
AENV-WRC-07-001-Berry	886741-5	Berry	06	12V 464106 6344648	11	<0.5	<0.2	12.8	<0.01	<0.5	4.2	<0.05	-	<0.03	<0.0009	<5	<0.05	2.8
AENV-WRC-07-002-Berry	886741-8	Berry	06	12V 464123 6344645	16	<0.5	<0.2	10.8	<0.01	<0.5	5	<0.05	-	0.065	0.06	<6	<0.05	3
AENV-WRC-07-003-Berry	886741-11	Berry	06	12V 464116 6344663	18	<0.5	<0.2	13.6	<0.01	<0.5	5.9	<0.05	-	0.075	0.08	<6	<0.05	3.4
AENV-WRC-07-004-Berry	886741-14	Berry	06	12V 464123 6344672	16	<0.5	<0.20	11.3	<0.01	<0.5	4.2	<0.05	-	0.06	0.06	<6.7	<0.05	2.3
AENV-WRC-07-005-Berry	886741-17	Berry	06	12V 464108 6344676	15	<0.50	<0.2	13.7	<0.01	0.58	4.2	<0.05	-	0.15	0.15	<6.4	<0.05	2.3
AENV-WRC-08-001-Berry	886741-24	Berry	07	12V 466958 6366367	18	<0.5	<0.2	21.4	<0.01	<0.5	4.1	<0.05	-	0.23	0.23	<7.0	<0.05	2.4
AENV-WRC-08-002-Berry	886741-27	Berry	07	12V 466953 6366364	17	<0.5	<0.2	21	<0.01	<0.5	4.2	<0.05	-	0.084	0.084	<6.5	<0.05	2.5
AENV-WRC-08-003-Berry	886741-30	Berry	07	12V 466951 6366361	20	<0.5	<0.20	23.2	<0.01	<0.5	4.2	<0.05	-	0.558	0.6	<7	<0.05	2.6
AENV-WRC-08-004-Berry	886741-33	Berry	07	12V 466946 6366357	13	<0.50	<0.20	21.8	<0.01	<0.5	4.6	<0.05	-	0.09	0.9	<6.3	<0.05	2.4
AENV-WRC-08-005-Berry	886741-36	Berry	07	12V 466949 6366364	18	<0.5	<0.2	23.7	<0.01	<0.5	4	<0.05	-	0.29	0.3	<6	<0.05	2.7
AENV-WRC-15-001-Berry	885598-7	Berry	09	12V 483787 6350408	21	<0.5	<0.20	10.3	<0.01	<0.5	3	<0.05	-	0.11	0.1	<7	<0.05	3.6
AENV-WRC-15-002-Berry	885598-10	Berry	09	12V 483777 6350392	15	<0.5	<0.2	8.39	<0.01	<0.5	4.8	<0.05	-	<0.03	<0.0009	<7	<0.05	3.3
AENV-WRC-15-003-Berry	885598-13	Berry	09	12V 483772 6350399	13	<0.5	<0.2	6.2	<0.01	<0.5	3.4	<0.05	-	<0.03	<0.0009	<7	<0.05	3.4
AENV-WRC-15-004-Berry	885598-16	Berry	09	12V 483772 6350392	14	<0.5	<0.2	8.97	<0.01	<0.5	4.2	<0.05	-	<0.03	<0.0009	<8	<0.05	3.5
AENV-WRC-15-005-Berry	885598-19	Berry	09	12V 483772 6350399	12	<0.5	<0.2	7.51	<0.01	0.71	3.4	<0.05	-	0.14	0.1	<7	<0.05	2.6
AENV-WRC-17-001-Fruit	887081-25	Berry	11	12V 460013 6344599	17.4	<0.498	<0.199	10.7	<0.0149	<0.498	3.08	<0.050	-	<0.0348	<0.04	<7	<0.050	3.23
AENV-WRC-17-002-Fruit	887081-29	Berry	11	12V 460012 6344596	18.2	<0.497	<0.199	13.8	<0.0149	<0.497	2.99	<0.050	-	<0.0348	<0.04	<6	0.0497	3.14

					Metal Concentration in (ug/g dry weight)												
Sample ID	**EXOVA Sample ID**	**Media**	**Site Number**	**Location (UTM 12)**	**Aluminum**	**Antimony**	**Arsenic**	**Barium**	**Beryllium**	**Bismuth**	**Boron**	**Cadmium**	**Calcium**	**Chromium**	**Chrom-ium(III)**	**Chrom-ium (VI)**	**Cobalt**	**Copper**
AENV-WRC-17-003-Fruit	887081-33	Berry	11	12V 460010 6344596	19.2	<0.500	<0.200	14.2	<0.0150	<0.500	3.12	<0.050	-	<0.0350	<0.04	<6	<0.050	3.06
AENV-WRC-17-004-Fruit	887081-37	Berry	11	12V 460005 6344593	18.7	<0.496	<0.199	11.4	<0.0149	<0.496	3.38	<0.050	-	0.0794	0.08	<7	0.0745	3.3
AENV-WRC-17-005-Fruit	887081-41	Berry	11	12V 460003 6344596	13.5	<0.498	<0.199	11.2	<0.0149	<0.498	2.94	<0.0498	-	0.0398	0.04	<6	<0.050	3.42
AENV-WRC-18-001-Fruit	887081-50	Berry	12	12V 459412 6347045	14.9	<0.50	<0.199	10.2	<0.0149	<0.498	2.73	<0.050	-	0.0398	0.04	<6	0.0696	3.08
AENV-WRC-18-002-Fruit	887081-54	Berry	12	12V 459416 6347054	11.7	<0.50	<0.199	11.8	<0.0149	<0.497	3.03	<0.050	-	<0.0348	<0.04	<6	<0.050	3.26
AENV-WRC-18-003-Fruit	887081-58	Berry	12	12V 459422 6347054	12.4	0.886	<0.199	9.96	<0.0149	<0.498	3.33	<0.050	-	0.0498	0.05	<6	<0.050	3.51
AENV-WRC-18-004-Fruit	887081-62	Berry	12	12V 459426 6347060	12.4	<0.50	<0.199	11.1	<0.0150	<0.50	3.44	<0.050	-	<0.0349	<0.04	<6	<0.050	2.76
AENV-WRC-18-005-Fruit	887081-66	Berry	12	12V 459427 6347060	10.3	<0.498	<0.199	9.35	<0.0150	<0.498	3.09	<0.050	-	<0.0349	<0.04	<6	<0.050	3.32
AENV-WRC 19-001-Fruit	886745-5	Berry	13	12V 468223 6310175	22.8	<0.50	<0.20	9.56	<0.0149	0.502	2.38	<0.050	-	0.294	0.3	<7	0.0696	3.82
AENV-WRC 19-002-Fruit	886745-9	Berry	13	12V 468123 6310152	22	<0.496	<0.198	13.9	<0.0149	0.56	3.27	<0.050	-	0.68	0.7	<6	<0.050	3.79
AENV-WRC 19-003-Fruit	886745-13	Berry	13	12V 468079 6310127	16.3	<0.50	<0.199	15.5	<0.0149	<0.497	3	<0.0497	-	0.0746	0.075	<6.0	<0.050	3.55
AENV-WRC 19-004-Fruit	886745-17	Berry	13	12V 468066 6310130	13.5	<0.498	<0.20	12.5	<0.0150	<0.498	4.51	<0.0498	-	0.12	0.1	<6	<0.050	3.82
AENV-WRC 19-005-Fruit	886745-21	Berry	13	12V 468106 6310087	23.3	<0.496	<0.198	8.88	<0.0149	<0.496	2.01	<0.050	-	0.169	0.2	<6	<0.050	3.13
AENV-WRC-35-001-Fruit	887081-5	Berry	14	12V 463672 6326286	19.4	<0.50	<0.20	9.42	<0.01	<0.50	3.61	<0.05	-	0.08	0.08	<5	<0.05	2.57
AENV-WRC-35-002-Fruit	887081-8	Berry	14	12V 463668 6326271	17.6	<0.499	<0.200	10	<0.0150	<0.499	3.1	<0.050	-	<0.0349	<0.04	<5	<0.050	2.42
AENV-WRC-35-003-Fruit	887081-11	Berry	14	12V 463646 6326280	50.7	<0.500	<0.200	6.63	<0.0150	0.849	2.9	<0.050	-	0.0849	0.08	<5	0.0649	2.8
AENV-WRC-35-004-Fruit	887081-14	Berry	14	12V 463677 6326271	13.6	<0.499	<0.200	8.93	<0.0150	0.634	3.06	<0.050	-	<0.0349	<0.04	<5	<0.050	2.47
AENV-WRC-35-005-Fruit	887081-17	Berry	14	12V 463682 6326265	14.4	<0.498	<0.20	4.71	<0.0149	<0.498	2.62	<0.050	-	<0.0349	<0.0349	<5	<0.050	2.62
AENV-WRC-05-002-Foliage	895939-9	Foliage	04	12V 470514 6330812	140	<0.498	<0.199	97.4	<0.0150	0.558	23.6	<0.0498	-	2.13	-	-	0.144	3.18
AENV-WRC-05-	895939-12	Foliage	04	12V 470519	125	<0.498	<0.199	104	<0.0149	0.837	18.8	<0.050	-	2.28	-	-	0.0847	3.16

					Metal Concentration in (ug/g dry weight)												
Sample ID	**EXOVA Sample ID**	**Media**	**Site Number**	**Location (UTM 12)**	**Aluminum**	**Antimony**	**Arsenic**	**Barium**	**Beryllium**	**Bismuth**	**Boron**	**Cadmium**	**Calcium**	**Chromium**	**Chrom-ium(III)**	**Chrom-ium (VI)**	**Cobalt**	**Copper**
003-Foliage				6330808														
AENV-WRC-05-004-Foliage	895939-16	Foliage	04	12V 470515 6330808	110	<0.497	<0.199	93.3	<0.0149	<0.497	13.6	<0.050	-	1.52	-	-	0.104	3.5
AENV-WRC-05-005-Foliage	895939-19	Foliage	04	12V 470512 6330812	112	<0.496	<0.198	95.9	<0.0149	<0.496	19.4	<0.050	-	1.64	-	-	0.124	2.99
AENV-WRC-5-001-Foliage	895939-6	Foliage	04	12V 470512 6330815	147	<0.500	<0.200	143	<0.0150	1.28	19.8	<0.050	-	2.46	-	-	0.08	3.19
AENV-WRC-06-001-Foliage	896047-26	Foliage	05	12V 463968 6345076	143	<0.498	<0.199	170	<0.0149	0.796	26	<0.050	-	1.66	-	-	0.194	4.9
AENV-WRC-06-002-Foliage	896047-29	Foliage	05	12V 463974 6345085	164	<0.50	<0.199	186	<0.0149	1.46	29.8	<0.050	-	2.36	-	-	0.249	5.67
AENV-WRC-06-003-Foliage	896047-32	Foliage	05	12V 463973 6345088	149	<0.499	<0.200	227	<0.0150	0.714	28.4	<0.050	-	1.78	-	-	0.304	5.2
AENV-WRC-06-004-Foliage	896047-35	Foliage	05	12V 463973 6345088	107	<0.496	<0.199	160	<0.0149	<0.496	25.5	<0.050	-	1.3	-	-	0.154	4.94
AENV-WRC-06-005-Foliage	896047-38	Foliage	05	12V 463895 6344999	83	<0.498	<0.199	151	<0.0150	0.598	22.2	<0.050	-	0.419	-	-	0.0598	3.54
AENV-WRC-14-001-Foliage	895939-26	Foliage	08	12V 484062 6347144	95.3	<0.497	<0.199	159	<0.0149	<0.497	26.4	<0.050	-	1.44	-	-	0.0646	4.2
AENV-WRC-14-002-Foliage	895939-29	Foliage	08	12V 484069 6347138	67.7	<0.496	<0.198	76.7	<0.0149	0.714	25.8	<0.050	-	1.15	-	-	0.0744	4.24
AENV-WRC-14-003-Foliage	895939-32	Foliage	08	12V 484072 6347157	70.2	<0.496	<0.199	72	<0.0149	0.824	27.3	<0.050	-	1.19	-	-	0.0546	3.54
AENV-WRC-14-004-Foliage	895939-35	Foliage	08	12V 484059 6347160	94.4	<0.496	<0.198	102	<0.0149	<0.496	35.4	<0.050	-	1.61	-	-	0.174	3.57
AENV-WRC-14-005-Foliage	895939-38	Foliage	08	12V 484052 6347151	72.2	<0.496	<0.199	180	<0.0149	1.07	21.9	<0.050	-	0.531	-	-	0.114	9.06
AENV-WRC-17-001-Foliage	887081-26	Foliage	11	12V 460012 6344596	92.2	<0.50	<0.199	91.9	<0.0149	<0.496	17.4	<0.050	-	0.412	-	-	0.218	3.46
AENV-WRC-17-002-	887081-30	Foliage	11	12V 460012 6344596	95.6	0.634	<0.200	91.7	<0.0150	<0.499	16.4	<0.050	-	0.459	-	-	0.254	3.49

					Metal Concentration in (ug/g dry weight)												
Sample ID	**EXOVA Sample ID**	**Media**	**Site Number**	**Location (UTM 12)**	**Aluminum**	**Antimony**	**Arsenic**	**Barium**	**Beryllium**	**Bismuth**	**Boron**	**Cadmium**	**Calcium**	**Chromium**	**Chrom-ium(III)**	**Chrom-ium (VI)**	**Cobalt**	**Copper**
Foliage																		
AENV-WRC-17-003-Foliage	887081-34	Foliage	11	12V 460010 6344596	88.2	<0.50	<0.201	83.7	<0.0150	<0.502	16.8	<0.050	-	0.271	-	-	0.216	3.95
AENV-WRC-17-004-Foliage	887081-38	Foliage	11	12V 460005 6344593	60.4	0.645	<0.200	84.9	<0.0150	<0.500	13.8	<0.050	-	0.455	0.455	<2.4	0.18	2.81
AENV-WRC-17-005-Foliage	887081-42	Foliage	11	12V 460003 6344596	124	0.702	<0.201	140	<0.0150	<0.502	18.4	<0.050	-	0.426	-	-	0.221	2.99
AENV-WRC-18-001-Foliage	887081-51	Foliage	12	12V 459412 6347045	121	<0.498	<0.199	105	<0.0150	<0.498	17.2	<0.050	-	0.374	-	-	0.299	2.8
AENV-WRC-18-002-Foliage	887081-55	Foliage	12	12V 459416 6347054	55.8	<0.498	<0.199	109	<0.0150	<0.498	18.4	<0.0498	-	0.244	-	-	0.125	3.41
AENV-WRC-18-003-Foliage	887081-59	Foliage	12	12V 459422 6347054	80.9	<0.502	<0.201	80.3	<0.0150	<0.502	23.6	<0.0502	-	0.416	0.4	<3	0.14	3.78
AENV-WRC-18-004-Foliage	887081-63	Foliage	12	12V 459426 6347060	103	<0.496	<0.199	118	<0.0149	<0.50	24.6	<0.050	-	0.561	-	-	0.109	2.74
AENV-WRC-18-005-Foliage	887081-67	Foliage	12	12V 459427 6347060	91.6	<0.496	<0.198	99.6	<0.0149	<0.50	25.4	<0.050	--	0.278	-	-	0.164	3.55
AENV-WRC 19-001-Foliage	886745-6	Foliage	13	12V 468223 6310175	210	<0.499	<0.200	114	<0.0150	<0.499	14.2	<0.050	-	1.65	-	-	0.254	3.12
AENV-WRC 19-002-Foliage	886745-10	Foliage	13	12V 468123 6310152	162	<0.499	<0.200	130	<0.0150	<0.499	11.3	<0.050	-	0.409	-	<2	0.0848	2.5
AENV-WRC 19-003-Foliage	886745-14	Foliage	13	12V 468079 6310127	83.3	<0.496	<0.199	104	<0.0149	<0.496	10.1	<0.050	-	0.233	-	-	0.129	3.05
AENV-WRC 19-004-Foliage	886745-18	Foliage	13	12V 468066 6310130	120	<0.496	<0.198	96.9	<0.0149	<0.496	15	<0.050	-	0.739	-	-	0.119	3.1
AENV-WRC 19-005-Foliage	886745-22	Foliage	13	12V 468106 6310087	93.7	0.518	<0.199	98.7	<0.0150	<0.498	13.4	<0.050	-	0.563	-	-	0.0498	3.18
AENV-WRC-36-001-Foliage	896208-21	Foliage	15	12V 463617 6326364	145	0.96	<0.20	158	<0.01	<0.50	25.4	<0.05	-	2.55	-	-	0.25	2.74
AENV-WRC-36-002-	896208-24	Foliage	15	12V 463620 6326361	168	<0.50	<0.20	126	<0.01	<0.50	24.8	<0.05	-	2.08	-	-	0.31	3.85

					Metal Concentration in (ug/g dry weight)												
Sample ID	**EXOVA Sample ID**	**Media**	**Site Number**	**Location (UTM 12)**	**Aluminum**	**Antimony**	**Arsenic**	**Barium**	**Beryllium**	**Bismuth**	**Boron**	**Cadmium**	**Calcium**	**Chromium**	**Chrom-ium(III)**	**Chrom-ium (VI)**	**Cobalt**	**Copper**
Foliage																		
AENV-WRC-36-003-Foliage	896208-27	Foliage	15	12V 463647 6326364	188	0.52	<0.20	128	<0.01	<0.50	23.8	<0.05	-	3.46	-	-	0.3	3.62
AENV-WRC-36-004-Foliage	896208-30	Foliage	15	12V 463617 6326367	174	<0.50	<0.20	129	<0.01	<0.50	21.7	<0.05	-	4.7	-	-	0.31	3.44
AENV-WRC-36-005-Foliage	896208-33	Foliage	15	12V 463617 6326370	162	<0.50	<0.20	138	<0.01	<0.50	31.5	<0.05	-	2.76	-	-	0.21	4.8
AENV-WRC-40-001-Foliage	894583-27	Foliage	16	12V 463891 6290600	80.4	<0.498	<0.199	97.8	<0.0150	<0.498	41.1	<0.050	-	0.947	-	-	<0.050	3.26
AENV-WRC-40-002-Foliage	894583-3	Foliage	16	12V 463892 6290600	94	<0.498	<0.199	61.3	<0.0150	<0.498	35.9	<0.050	-	1.24	-	-	<0.050	3.63
AENV-WRC-40-003-Foliage	894583-6	Foliage	16	12V 463892 6290603	66.7	<0.496	<0.198	79.9	<0.0149	<0.496	29.2	<0.050	-	0.655	-	-	<0.050	3.54
AENV-WRC-40-004-Foliage	894583-9	Foliage	16	12V 463902 6290606	69.9	0.592	<0.199	97	<0.0149	<0.498	31.4	<0.0498	-	0.492	-	-	<0.050	3.19
AENV-WRC-40-005-Foliage	894583-12	Foliage	16	12V 463896 6290603	51.6	<0.498	<0.20	63	<0.0149	<0.498	25.4	<0.050	-	0.592	-	-	<0.050	2.35
AENV-WRC-50-001-Foliage	896047-7	Foliage	17	12V 460192 6353024	63.4	<0.498	<0.199	96.5	<0.0150	0.852	26.3	<0.050	-	0.369	-	-	<0.050	2.96
AENV-WRC-50-002-Foliage	896047-10	Foliage	17	12V 460189 6353024	91	<0.514	<0.206	111	<0.0154	<0.514	25.9	<0.051	-	0.457	-	-	0.108	3.41
AENV-WRC-50-003-Foliage	896047-13	Foliage	17	12V 460192 6353027	64	<0.498	<0.199	157	<0.0149	0.587	24.1	<0.050	-	0.876	-	-	<0.050	3.28
AENV-WRC-50-004-Foliage	896047-16	Foliage	17	12V 460198 6353030	65.1	<0.496	<0.198	129	<0.0149	0.506	32.4	<0.050	-	0.521	-	-	0.0595	2.52
AENV-WRC-50-005-Foliage	896047-19	Foliage	17	12V 460204 6353030	91.8	<0.499	<0.200	107	<0.0150	0.564	23.3	<0.050	-	1.1	-	-	0.0649	2.38
AENV-WRC-58-001-Foliage	886745-30	Foliage	18	12V 462844 6363984	101	<0.509	<0.204	97	<0.0153	<0.509	17.3	<0.051	-	1.1	-	-	0.127	3.82
AENV-WRC-58-002-	886745-33	Foliage	18	12V 462848 6363962	208	<0.608	<0.243	138	0.0182	<0.608	17	<0.061	-	1.57	-	-	0.219	5.28

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Foliage																		
AENV-WRC-58-003-Foliage	886745-36	Foliage	18	12V 462847 6363962	230	1.29	<0.258	133	0.0193	<0.644	19.4	<0.064	-	1.34	-	-	0.271	4.43
AENV-WRC-58-004-Foliage	886745-39	Foliage	18	12V 462828 6363971	114	<0.608	<0.243	125	<0.0182	<0.608	22.7	<0.061	-	0.584	-	-	0.109	5.05
AENV-WRC-58-005-Foliage	886745-42	Foliage	18	12V 462838 6363971	117	<0.780	<0.312	88.1	<0.0234	<0.780	12.5	<0.078	-	0.811	-	-	0.296	5.39
AENV-WRC-16-001-Rhizome	896208-6	Rhizome	10	12V 484152 6347051	21.2	<0.50	<0.20	14.6	<0.01	<0.50	15	<0.05	-	0.2	0.2	<7	0.08	4.08
AENV-WRC-16-002-Rhizome	896208-8	Rhizome	10	12V 484164 6347051	41.5	0.58	<0.20	19.7	<0.02	<0.50	16.9	<0.05	-	0.14	-	-	0.2	1.58
AENV-WRC-16-003-Rhizome	896208-10	Rhizome	10	12V 484150 6347051	17.5	<0.50	<0.20	25.6	<0.01	<0.50	16.9	<0.05	-	0.07	0.07	<5	0.21	4.1
AENV-WRC-16-004-Rhizome	896208-12	Rhizome	10	12V 484149 6347051	16	<0.50	<0.20	15.3	<0.01	<0.50	15.5	<0.05	-	0.06	-	-	0.13	4.99
AENV-WRC-16-005-Rhizome	896208-14	Rhizome	10	12V 484127 6347048	21.5	<0.50	<0.20	17.8	<0.01	<0.50	16	0.07	-	0.51	0.5	<4	0.12	9.2
AENV-WRC-59-001-Rhizome	894583-16	Rhizome	19	12V 496187 6256732	229	<0.497	0.656	43.9	<0.0149	<0.497	18.8	<0.050	-	0.79	0.8	<6	0.402	2.29
AENV-WRC-59-002-Rhizome	894583-17	Rhizome	19	12V 496245 6256692	53.9	<0.50	<0.200	26.3	<0.0150	<0.500	14.8	<0.0500	-	0.989	-	-	0.145	2.24
AENV-WRC-59-003-Rhizome	894583-18	Rhizome	19	12V 496245 6256689	102	<0.498	0.274	24.6	<0.0150	<0.50	13.1	<0.050	-	0.808	-	-	0.179	2.2
AENV-WRC-59-004-Rhizome	894583-19	Rhizome	19	12V 496245 6256686	34.5	<0.498	0.209	33.5	<0.0150	<0.498	18.4	<0.050	-	0.279	0.3	<10	<0.050	1.31
AENV-WRC-59-005-Rhizome	894583-20	Rhizome	19	12V 496243 6256689	40.6	<0.500	<0.200	30.3	<0.0150	<0.500	14	<0.050	-	0.27	-	-	0.25	2.06
AENV-WRC-01-001-Metal	884901-6	Soil	01	12V 473516 6330037	564	<0.5	<0.2	29.6	0.02	<0.5	-	<0.05	34-7	1.01	1	<0.6	0.2	0.74
AENV-WRC-01-002-Metal	884901-9	Soil	01	12V 473533 6329987	936	<0.5	<0.2	11.2	0.02	<0.5	-	<0.05	164	1.31	1.3	<0.5	0.2	0.3

					Metal Concentration in (ug/g dry weight)												
Sample ID	**EXOVA Sample ID**	**Media**	**Site Number**	**Location (UTM 12)**	**Aluminum**	**Antimony**	**Arsenic**	**Barium**	**Beryllium**	**Bismuth**	**Boron**	**Cadmium**	**Calcium**	**Chromium**	**Chrom-ium(III)**	**Chrom-ium (VI)**	**Cobalt**	**Copper**
AENV-WRC-01-003-Metal	884901-12	Soil	01	12V 473528 6329993	601	<0.5	<0.2	15	0.01	<0.5	-	<0.05	164	1.15	1.2	<0.5	0.2	0.66
AENV-WRC-01-004-Metal	884901-15	Soil	01	12V 473530 6329996	421	<0.5	<0.2	12.2	<0.01	<0.5	-	<0.05	192	0.74	<0.5	1.1	0.2	0.4
AENV-WRC-01-005-Metal	884901-18	Soil	01	12V 473528 6329990	435	<0.5	<0.2	8.38	<0.01	<0.5	-	<0.05	116	0.78	0.8	<1	0.1	0.3
AENV-WRC-02-001-Metal	884901-25	Soil	02	12V 471715 6330175	1490	<0.5	0.3	28	0.05	<0.5	-	<0.05	128	1.54	1.5	<0.5	0.75	0.1
AENV-WRC-02-002-Metal	884901-28	Soil	02	12V 471721 6330163	1910	<0.5	<0.2	31.1	0.06	<0.5	-	<0.05	238	2.22	2.2	<0.5	1	0.2
AENV-WRC-02-003-Metal	884901-31	Soil	02	12V 471704 6330163	1600	<0.5	<0.2	39.4	0.06	<0.5	-	<0.05	196	2	2	<0.5	1	0.1
AENV-WRC-02-004-Metal	884901-34	Soil	02	12V 471692 6330169	1680	<0.5	<0.2	20.7	0.06	<0.5	-	<0.05	178	1.62	1.6	<0.5	0.87	0.1
AENV-WRC-02-005-Metal	884901-37	Soil	02	12V 471690 6330160	1320	0.7	0.3	37.6	0.05	<0.5	-	<0.05	420	1.19	<0.5	2.7	0.88	0.4
AENV-WRC-03-001-Metal	884901-44	Soil	03	12V 464201 6364624	1550	0.8	0.6	25.9	0.07	<0.5	-	<0.05	411	1.75	1.8	<0.5	0.88	0.57
AENV-WRC-03-002-Metal	884901-47	Soil	03	12V 464196 6364624	1610	<0.5	0.3	32.3	0.07	<0.5	-	<0.05	634	1.98	2	<0.5	0.98	0.52
AENV-WRC-03-003-Metal	884901-50	Soil	03	12V 464204 6364621	1540	<0.5	0.4	48	0.06	<0.5	-	<0.05	1090	1.82	1.82	<0.5	1	0.52
AENV-WRC-03-004-Metal	884901-53	Soil	03	12V 464196 6364621	1920	<0.5	0.3	31	0.07	<0.5	-	<0.05	508	2.08	2.1	<0.6	1.1	0.4
AENV-WRC-03-005-Metal	884901-56	Soil	03	12V 464191 6364615	2210	<0.5	0.6	19.7	0.09	<0.5	-	<0.05	285	2.7	2.7	<0.5	1	0.3
AENV-WRC-05-002-Metal	895939-8	Soil	04	12V 470514 6330812	260	<0.5	<0.2	15.9	<0.01	<0.5	-	<0.05	167	0.5	0.5	<1	0.17	0.4
AENV-WRC-05-003-Metal	895939-11	Soil	04	12V 470519 6330808	512	<0.5	<0.2	7.54	0.01	<0.5	-	<0.05	143	1.2	1	<1	0.21	0.11
AENV-WRC-05-004-Metal	895939-15	Soil	04	12V 470515 6330808	315	<0.5	<0.2	13	0.01	<0.5	-	<0.05	272	1.08	-	-	0.12	0.54
AENV-WRC-05-005-Metal	895939-18	Soil	04	12V 470512 6330812	412	<0.5	<0.2	11	0.01	<0.5	-	0.05	282	0.7	-	-	0.1	0.44
AENV-WRC-5-001-Metal	895939-5	Soil	04	12V 470512 6330815	387	<0.5	<0.2	8.7	0.01	<0.5	-	<0.05	73	0.86	0.9	<1	0.06	0.3
AENV-WRC-06-001-Metal	896047-25	Soil	05	12V 463968 6345076	6120	1.3	3.4	152	0.43	<0.5	-	0.16	2500	11.7	5.36	6.3	4.15	9.11
AENV-WRC-06-002-Metal	896047-28	Soil	05	12V 463974 6345085	6660	1.2	1.2	97.4	0.45	<0.5	-	0.06	1560	9.76	7	2.8	3.16	9.45

					Metal Concentration in (ug/g dry weight)												
Sample ID	**EXOVA Sample ID**	**Media**	**Site Number**	**Location (UTM 12)**	**Aluminum**	**Antimony**	**Arsenic**	**Barium**	**Beryllium**	**Bismuth**	**Boron**	**Cadmium**	**Calcium**	**Chromium**	**Chrom-ium(III)**	**Chrom-ium (VI)**	**Cobalt**	**Copper**
AENV-WRC-06-003-Metal	896047-31	Soil	05	12V 463973 6345088	9980	2.2	1.8	95.2	0.88	<0.5	-	0.1	1800	12.7	12.7	<0.6	5.27	16.5
AENV-WRC-06-004-Metal	896047-34	Soil	05	12V 463973 6345088	3650	1	6.7	69.2	0.22	<0.5	-	0.39	3320	5.84	-	-	1.9	6.66
AENV-WRC-06-005-Metal	896047-37	Soil	05	12V 463895 6344999	1510	0.8	4.1	79.9	0.09	<0.5	-	0.09	582	2.81	2.2	0.6	0.88	<0.05
AENV-WRC-07-001-Metal	886741-7	Soil	06	12V 464106 6344648	2620	0.7	0.4	77.1	0.1	<0.5	-	<0.05	1550	2.71	0.29	2.4	1.31	1.34
AENV-WRC-07-002-Metal	886741-10	Soil	06	12V 464123 6344645	1990	0.6	0.6	49.7	0.07	<0.5	-	<0.05	1270	2.5	2.5	<0.5	1.12	0.85
AENV-WRC-07-003-Metal	886741-13	Soil	06	12V 464116 6344663	1970	0.7	1.1	63.6	0.09	<0.5	-	<0.05	1330	2.57	2.6	<0.5	1.24	1.28
AENV-WRC-07-004-Metal	886741-16	Soil	06	12V 464123 6344672	1950	<0.5	0.8	79	0.08	<0.5	-	<0.05	1900	2.37	0.93	1.4	1.19	1.41
AENV-WRC-07-005-Metal	886741-19	Soil	06	12V 464108 6344676	2620	1.2	0.6	62.4	0.11	<0.5	-	<0.05	1880	3.44	3.4	<0.5	1.52	1.44
AENV-WRC-08-001-Metal	886741-26	Soil	07	12V 466958 6366367	2420	<0.5	0.7	45.2	0.1	<0.5	-	<0.05	370	2.12	2.12	<0.5	1.17	0.38
AENV-WRC-08-002-Metal	886741-29	Soil	07	12V 466953 6366364	1950	0.6	1	40.8	0.08	<0.5	-	<0.05	355	2.12	2.12	<0.5	0.96	0.43
AENV-WRC-08-003-Metal	886741-32	Soil	07	12V 466951 6366361	2360	<0.5	1.4	21.7	0.1	<0.5	-	<0.05	278	2.66	2.7	<0.5	1.36	0.79
AENV-WRC-08-004-Metal	886741-35	Soil	07	12V 466946 6366357	1870	0.8	1.5	17.2	0.09	<0.5	-	<0.05	207	2.42	2.4	<0.5	1.22	0.85
AENV-WRC-14-001-Metal	895939-25	Soil	08	12V 484062 6347144	5770	0.9	<0.2	29.2	0.12	<0.5	--	0.05	1990	8.2	8	<1	1.44	0.47
AENV-WRC-14-002-Metal	895939-28	Soil	08	12V 484069 6347138	5790	0.8	<0.2	34	0.17	<0.5	-	0.08	4720	7.3	3.4	3.8	1.7	3.03
AENV-WRC-14-003-Metal	895939-31	Soil	08	12V 484072 6347157	5940	1.1	<0.2	57.6	0.16	<0.5	-	<0.05	2980	9	6.6	2.4	1.81	2.32
AENV-WRC-14-004-Metal	895939-34	Soil	08	12V 484059 6347160	7600	<0.5	<0.2	45.2	0.12	<0.5	-	<0.05	1340	8.7	9	<1	1.58	0.96
AENV-WRC-14-005-Metal	895939-37	Soil	08	12V 484052 6347151	11100	1.6	<0.2	96	0.41	<0.5	-	0.07	2430	13.6	14	<2	3.3	4.37
AENV-WRC-15-001-Metal	885598-6	Soil	09	12V 483787 6350408	688	<0.5	<0.2	14.3	0.01	<0.5	-	<0.05	274	0.96	-	-	0.2	0.52
AENV-WRC-15-002-Metal	885598-9	Soil	09	12V 483777 6350392	720	<0.5	<0.2	17.2	0.02	<0.5	-	<0.05	445	1.09	-	-	0.2	0.59
AENV-WRC-15-003-Metal	885598-12	Soil	09	12V 483772 6350399	599	<0.5	<0.2	22	0.01	<0.5	-	<0.05	338	0.89	0.9	<0.5	0.1	0.66

					Metal Concentration in (ug/g dry weight)												
Sample ID	**EXOVA Sample ID**	**Media**	**Site Number**	**Location (UTM 12)**	**Aluminum**	**Antimony**	**Arsenic**	**Barium**	**Beryllium**	**Bismuth**	**Boron**	**Cadmium**	**Calcium**	**Chromium**	**Chrom-ium(III)**	**Chrom-ium (VI)**	**Cobalt**	**Copper**
AENV-WRC-15-004-Metal	885598-15	Soil	09	12V 483772 6350392	400	<0.5	<0.2	20.5	<0.01	<0.5	-	<0.05	712	0.72	-	-	0.1	0.83
AENV-WRC-15-005-Metal	885598-18	Soil	09	12V 483772 6350399	903	<0.5	<0.2	19.5	0.02	<0.5	-	<0.05	290	1.22	1.2	<0.6	0.3	0.57
AENV-WRC-16-001-Metal/PAH	896208-5	Soil	10	12V 484152 6347051	3420	0.7	<0.2	63.5	0.17	0.7	-	0.16	13100	5.57	-	-	1.83	4.3
AENV-WRC-16-002-Meta/PAHl	896208-7	Soil	10	12V 484164 6347051	4080	1.3	0.3	87.5	0.17	0.7	-	0.09	14200	6.06	-	-	2.67	3.69
AENV-WRC-16-003-Metal/PAH	896208-9	Soil	10	12V 484150 6347051	4060	0.9	<0.2	73.6	0.19	<0.5	-	0.13	12800	6.16	2	4	2.45	5.29
AENV-WRC-16-004-Metal/PAH	896208-11	Soil	10	12V 484149 6347051	3060	0.6	0.6	61.2	0.18	<0.5	-	0.18	14400	4.99	5	<3	1.6	4.6
AENV-WRC-16-005-Metal/PAH	896208-13	Soil	10	12V 484127 6347048	3670	<0.5	0.3	79	0.18	<0.5	-	0.24	15200	5.53	6	<3	2.92	5.7
AENV-WRC-17-001-Metal	887081-28	Soil	11	12V 460013 6344599	3180	<0.5	<0.2	60.1	0.08	<0.5	-	<0.05	1290	7.35	4.5	2.8	1.74	2.51
AENV-WRC-17-002-Metal	887081-32	Soil	11	12V 460012 6344596	2730	0.7	<0.2	62	0.09	<0.5	-	<0.05	634	5.67	5.7	<0.6	1.67	1.72
AENV-WRC-17-003-Metal	887081-36	Soil	11	12V 460010 6344596	2620	0.5	<0.2	49.6	0.07	<0.5	-	<0.05	885	5.49			1.8	1.1
AENV-WRC-17-004-Metal	887081-40	Soil	11	12V 460005 6344593	4020	0.9	<0.2	82.9	0.17	<0.5	-	<0.05	4480	7.72	7.7	<1.4	2.81	2.18
AENV-WRC-17-005-Metal	887081-44	Soil	11	12V 460003 6344596	3800	<0.5	<0.2	80	0.12	<0.5	-	<0.05	1890	6.14	6.1	<0.6	2.12	2.19
AENV-WRC-18-001-Metal	887081-53	Soil	12	12V 459412 6347045	2480	0.5	<0.2	79.4	0.08	<0.5	-	<0.05	2440	5.22	-	-	1.34	1.67
AENV-WRC-18-002-Metal	887081-57	Soil	12	12V 459416 6347054	2610	1.1	<0.2	114	0.16	<0.5	-	<0.05	5370	5.63	-	-	2.14	3.04
AENV-WRC-18-003-Metal	887081-61	Soil	12	12V 459422 6347054	2520	<0.5	<0.2	49.8	0.05	<0.5	-	<0.05	3230	4.51	-	-	1.16	1.11
AENV-WRC-18-004-Metal	887081-65	Soil	12	12V 459426 6347060	2640	0.8	<0.2	56.6	0.06	<0.5	-	<0.05	1740	4.92	4.9	<1.1	1.28	0.82
AENV-WRC-18-005-Metal	887081-69	Soil	12	12V 459427 6347060	3060	1.1	0.9	77.8	0.12	<0.5	-	<0.05	1720	5.72	-	-	1.63	0.74

					Metal Concentration in (ug/g dry weight)													
Sample ID	**EXOVA Sample ID**	**Media**	**Site Number**	**Location (UTM 12)**	**Aluminum**	**Antimony**	**Arsenic**	**Barium**	**Beryllium**	**Bismuth**	**Boron**	**Cadmium**	**Calcium**	**Chromium**	**Chrom-ium(III)**	**Chrom-ium (VI)**	**Cobalt**	**Copper**
AENV-WRC 19-001-Metal	886745-8	Soil	13	12V 468223 6310175	866	<0.5	0.5	15.2	0.04	<0.5	-	<0.05	947	1.6	<0.5	4.4	0.58	0.68
AENV-WRC 19-002-Metal	886745-12	Soil	13	12V 468123 6310152	2240	<0.5	0.7	22.1	0.07	<0.5	-	<0.05	681	4.06	4.1	<0.5	0.72	1.05
AENV-WRC 19-003-Metal	886745-16	Soil	13	12V 468079 6310127	1170	0.6	<0.2	30.9	0.04	<0.5	-	<0.05	701	2.18	<0.5	3.6	0.39	1.33
AENV-WRC 19-004-Metal	886745-20	Soil	13	12V 468066 6310130	1100	0.6	<0.2	28.6	0.05	<0.5	-	<0.05	872	3.03	3.03	<0.5	0.57	1.58
AENV-WRC 19-005-Metal	886745-24	Soil	13	12V 468106 6310087	617	<0.5	0.2	17	0.02	<0.5	-	<0.05	509	1.19	<0.5	3.3	0.25	0.7
AENV-WRC-35-001-Metal	887081-7	Soil	14	12V 463672 6326286	1640	<0.5	0.3	57.7	0.09	<0.5	-	<0.05	2230	2.63	-	-	1.44	1.39
AENV-WRC-35-002-Metal	887081-10	Soil	14	12V 463668 6326271	1280	<0.5	0.2	63.2	0.06	<0.5	-	<0.05	2300	2.53	0.86	1.7	1.42	1.44
AENV-WRC-35-003-Metal	887081-13	Soil	14	12V 463646 6326280	1370	0.6	0.6	69	0.06	<0.5	-	<0.05	1810	2.09	-	-	1.25	1.02
AENV-WRC-35-004-Metal	887081-16	Soil	14	12V 463677 6326271	1470	<0.5	0.4	71.1	0.08	<0.5	-	<0.05	2100	2.52	-	-	1.51	1.47
AENV-WRC-35-005-Metal	887081-19	Soil	14	12V 463682 6326265	1600	<0.5	<0.2	128	0.1	<0.5	-	0.11	5180	3.01	3.01	<1.0	2.02	2.49
AENV-WRC-36-001-Metal	896208-20	Soil	15	12V 463617 6326364	904	<0.5	<0.2	50.3	0.05	<0.5	-	0.07	2820	2.33	-	-	1.35	2.04
AENV-WRC-36-002-Metal	896208-23	Soil	15	12V 463620 6326361	1400	<0.5	<0.2	90	0.08	<0.5	-	<0.05	4200	2.94	2.9	<0.6	3.1	2.87
AENV-WRC-36-003-Metal	896208-26	Soil	15	12V 463647 6326364	613	<0.5	<0.2	30.4	0.02	<0.5	-	<0.05	1220	1.39	1.4	<0.5	1.09	0.78
AENV-WRC-36-004-Metal	896208-29	Soil	15	12V 463617 6326367	405	<0.5	<0.2	40.4	0.01	<0.5	-	<0.05	1190	1.18	-	-	0.46	0.89
AENV-WRC-36-005-Metal	896208-32	Soil	15	12V 463617 6326370	1530	<0.5	0.3	158	0.1	<0.5	-	0.08	5520	3.17	-	-	2.86	2.86
AENV-WRC-40-001-Metal	894583-26	Soil	16	12V 463891 6290600	20200	2.7	<0.2	199	0.65	<0.5	-	0.14	12400	19.5	11	9	8.95	7.92
AENV-WRC-40-002-Metal	894583-2	Soil	16	12V 463892 6290600	8590	0.9	<0.2	89.7	0.24	<0.5	-	0.2	9390	8.8	-	-	4.36	3.71
AENV-WRC-40-003-Metal	894583-5	Soil	16	12V 463892 6290603	8640	0.8	<0.2	107	0.28	<0.5	-	0.36	9980	9.63	-	-	4.98	5.72
AENV-WRC-40-004-Metal	894583-8	Soil	16	12V 463902 6290606	9240	1.1	<0.2	102	0.33	<0.5	-	0.09	7810	11.5	-	-	7.1	3.74
AENV-WRC-40-005-Metal	894583-11	Soil	16	12V 463896 6290603	9680	1	<0.2	126	0.41	<0.5	-	0.14	9520	11.4	-	-	11.3	5.06

					Metal Concentration in (ug/g dry weight)												
Sample ID	**EXOVA Sample ID**	**Media**	**Site Number**	**Location (UTM 12)**	**Aluminum**	**Antimony**	**Arsenic**	**Barium**	**Beryllium**	**Bismuth**	**Boron**	**Cadmium**	**Calcium**	**Chromium**	**Chrom-ium(III)**	**Chrom-ium (VI)**	**Cobalt**	**Copper**
AENV-WRC-50-001-Metal	896047-6	Soil	17	12V 460192 6353024	888	<0.5	<0.2	231	0.05	<0.5	-	0.14	94300	1.71	-	-	1	4.8
AENV-WRC-50-002-Metal	896047-9	Soil	17	12V 460189 6353024	1730	0.7	<0.2	86	0.12	<0.5	-	0.18	16700	3.84	-	-	1.65	2
AENV-WRC-50-003-Metal	896047-12	Soil	17	12V 460192 6353027	702	0.8	<0.2	225	0.03	<0.5	-	0.11	92600	1.12	-	-	0.64	2.72
AENV-WRC-50-004-Metal	896047-15	Soil	17	12V 460198 6353030	727	<0.5	0.2	242	0.04	<0.5	-	0.13	73000	1.43	1	<10	0.6	2.95
AENV-WRC-50-005-Metal	896047-18	Soil	17	12V 460204 6353030	1880	0.7	1.1	26.2	0.13	<0.5	-	<0.05	2370	3.89	-	-	1.19	0.4
AENV-WRC-58-001-Metal	886745-32	Soil	18	12V 462844 6363984	2180	<0.5	0.4	70.9	0.06	<0.5	-	<0.05	1630	3.97	<0.5	10	2.52	3.42
AENV-WRC-58-002-Metal	886745-35	Soil	18	12V 462848 6363962	1440	<0.5	<0.2	77.7	0.04	<0.5	-	<0.05	1890	2.86	<0.5	22.5	3.17	2.16
AENV-WRC-58-003-Metal	886745-38	Soil	18	12V 462847 6363962	1700	<0.5	<0.2	62.2	0.05	<0.5	-	0.07	2950	3.27	<0.5	14.9	2.35	2.68
AENV-WRC-58-004-Metal	886745-41	Soil	18	12V 462828 6363971	1060	<0.5	<0.2	58.3	0.04	<0.5	-	<0.05	5990	2.27	<0.5	16	1.07	2.95
AENV-WRC-58-005-Metal	886745-44	Soil	18	12V 462838 6363971	1510	<0.5	0.4	61.2	0.05	<0.5	-	<0.05	2680	3.03	<0.5	11	2.59	3.05
AENV-WRC-01-001-Trip-Metal	884901-1	Trip Blank	01	12V 473516 6330037	9	<0.5	<0.2	2.2	<0.01	<0.5	-	<0.05	150	0.2	-	-	<0.05	0.5
AENV-WRC-02-001-Trip-Metal	884901-20	Trip Blank	02	12V 471715 6330175	<1	<0.5	<0.2	1.4	<0.01	<0.5	-	<0.05	120	<0.04	-	-	<0.05	0.9
AENV-WRC-03-001-Trip-Metal	884901-39	Trip Blank	03	12V 464201 6364624	<1	<0.5	<0.2	1.8	<0.01	<0.5	-	<0.05	120	<0.04	-	-	<0.05	0.8
AENV-WRC-5-Trip	895939-1	Trip Blank	04	12V 470512 6330815	4	1.4	<0.4	0.22	<0.02	<1.1	-	<0.11	43	<0.09	<0.04	<0.5	<0.11	<0.11
AENV-WRC-06-Trip	896047-20	Trip Blank	05	12V 463968 6345076	<5	<2.3	1.8	0.56	<0.05	<2.3	-	<0.23	34	<0.18	<0.04	<6	<0.23	<0.23
AENV-WRC-07-Trip Blank	886741-1	Trip Blank	06	12V 464106 6344648	<1	<0.5	<0.2	1.13	<0.01	<0.5	-	<0.05	42	<0.04	-	-	<0.05	0.58
AENV-WRC-08-Trip Blank	886741-20	Trip Blank	07	12V 466958 6366367	<1	<0.5	<0.2	0.34	<0.01	3.1	-	<0.05	52	<0.04	-	-	<0.05	<0.05
AENV-WRC-14-Trip	895939-20	Trip Blank	08	12V 484062 6347144	4	<0.8	<0.3	0.4	<0.02	<0.8	-	<0.08	30	0.08	0.08	<4	<0.08	<0.08

					Metal Concentration in (ug/g dry weight)												
Sample ID	**EXOVA Sample ID**	**Media**	**Site Number**	**Location (UTM 12)**	**Aluminum**	**Antimony**	**Arsenic**	**Barium**	**Beryllium**	**Bismuth**	**Boron**	**Cadmium**	**Calcium**	**Chromium**	**Chrom-ium(III)**	**Chrom-ium (VI)**	**Cobalt**	**Copper**
AENV-WRC-15-001 Trip	885598-1	Trip Blank	09	12V 483787 6350408	<1	<0.5	1	0.48	<0.01	<0.5	-	<0.05	53	<0.04	-	-	<0.05	<0.05
AENV-WRC-16-Trip	896208-1	Trip Blank	10	12V 484152 6347051	<3	<1.5	<0.6	0.47	<0.03	2.2	-	<0.15	26	<0.12	<0.04	<4	<0.15	<0.15
AENV-WRC-17-Trip Blank	887081-20	Trip Blank	11	12V 460013 6344599	<5	<2.5	1.39	0.25	<0.05	<2.48	-	<0.25	33.8	<0.20	<0.04	<5	<0.25	0.32
AENV-WRC-18-Trip Blank	887081-45	Trip Blank	12	12V 459412 6347045	<4	<2.1	<0.84	0.29	<0.04	<2.09	-	<0.21	38.4	<0.17	<0.04	<4	<0.21	<0.21
AENV-WRC 19-Trip Blank	886745-1	Trip Blank	13	12V 468223 6310175	<1	<0.5	<0.2	0.34	<0.01	<0.5	-	<0.05	32	<0.04	<0.0009	<7	<0.05	0.39
AENV-WRC-35-Trip Blank	887081-1	Trip Blank	14	12V 463672 6326286	<6	<2.9	<1.15	0.34	<0.06	<2.87	-	<0.29	33.6	<0.23	<0.04	<6	<0.29	0.46
AENV-WRC-36-Trip	896208-15	Trip Blank	15	12V 463617 6326364	6	<1.6	<0.6	0.5	<0.03	<1.6	-	<0.16	45	<0.13	<0.04	<8	<0.16	<0.16
AENV-WRC-40-Trip	894583-21	Trip Blank	16	12V 463891 6290600	3	<1.0	<0.4	0.29	<0.02	<1.0	-	<0.10	40	<0.08	<0.0009	<10	<0.10	<0.10
AENV-WRC-50-Trip	896047-1	Trip Blank	17	12V 460192 6353024	<2	<0.9	<0.4	0.36	<0.02	<0.9	-	<0.09	27	<0.07	<0.04	<3	<0.09	<0.09
AENV-WRC-58-Trip Blank	886745-26	Trip Blank	18	12V 462844 6363984	<1	<0.5	<0.2	0.22	<0.01	<0.5	-	<0.05	44	<0.04	<0.0009	<9	<0.05	<0.05
AENV-WRC-59-Trip	894583-13	Trip Blank	19	12V 496245 6256692	4	<1.4	<0.5	0.3	<0.03	<1.4	-	<0.14	65	<0.11	<0.0009	<10	<0.14	<0.14
AENV-WRC-01-001-Location	884901-2	Location Blank	01	12V 473516 6330037	<1	<0.5	<0.2	0.64	<0.01	<0.5	-	<0.05	46	<0.04	-	-	<0.05	<0.05
AENV-WRC-02-001-Location	884901-21	Location Blank	02	12V 471715 6330175	<1	<0.5	<0.2	1.3	<0.01	<0.5	-	<0.05	86	<0.04	-	-	<0.05	<0.05
AENV-WRC-03-001-Location	884901-40	Location Blank	03	12V 464201 6364624	<1	<0.5	<0.2	24	<0.01	72	-	<0.05	1300	5	-	-	<0.05	10
AENV-WRC-5-Location	895939-2	Location Blank	04	12V 470512 6330815	7	<1.0	<0.4	0.3	<0.02	<1.0	-	<0.10	35	<0.08	<0.04	<6	<0.10	0.29
AENV-WRC-06-Location	896047-21	Location Blank	05	12V 463968 6345076	<4	<2.0	<0.8	0.5	<0.04	<2.0	-	<0.20	31	<0.16	<0.04	<6	<0.20	<0.20
AENV-WRC-07-Location Blank	886741-2	Location Blank	06	12V 464106 6344648	<1	<0.5	<0.2	0.59	<0.01	<0.5	-	<0.05	44	<0.04	-	-	<0.05	0.74

					Metal Concentration in (ug/g dry weight)												
Sample ID	**EXOVA Sample ID**	**Media**	**Site Number**	**Location (UTM 12)**	**Aluminum**	**Antimony**	**Arsenic**	**Barium**	**Beryllium**	**Bismuth**	**Boron**	**Cadmium**	**Calcium**	**Chromium**	**Chrom-ium(III)**	**Chrom-ium (VI)**	**Cobalt**	**Copper**
AENV-WRC-08-Location Blank	886741-21	Location Blank	07	12V 466958 6366367	<1	<0.5	<0.2	0.39	<0.01	<0.5	-	<0.05	35	<0.04	-	-	<0.05	0.24
AENV-WRC-14-Location	895939-21	Location Blank	08	12V 484062 6347144	4	<1.0	<0.4	0.41	<0.02	<1.0	-	<0.10	28	<0.08	<0.04	<5	<0.10	<0.10
AENV-WRC-15-001 Location	885598-2	Location Blank	09	12V 483787 6350408	<1	<0.5	<0.2	0.82	<0.01	<0.5	-	<0.05	51	0.2	-	-	<0.05	0.4
AENV-WRC-16-Location	896208-2	Location Blank	10	12V 484152 6347051	<4	<2.0	0.9	0.38	<0.04	<2.0	-	<0.20	21	<0.16	<0.04	<3	<0.20	<0.20
AENV-WRC-17-Location Blank	887081-21	Location Blank	11	12V 460013 6344599	<4	<2.2	<0.88	0.24	<0.04	<2.21	-	<0.22	35.1	<0.18	<0.04	<5	<0.22	<0.22
AENV-WRC-18-Location Blank	887081-46	Location Blank	12	12V 459412 6347045	<5	<2.3	<0.92	0.18	<0.05	<2.3	-	<0.23	32.2	<0.18	<0.04	<5	<0.23	0.3
AENV-WRC 19-Location Blank	886745-2	Location Blank	13	12V 468223 6310175	7	<0.5	<0.2	0.5	<0.01	<0.5	-	<0.05	45	<0.04	<0.0009	<7	<0.05	0.18
AENV-WRC-35-Location Blank	887081-2	Location Blank	14	12V 463672 6326286	<9	<4.5	<1.82	<0.27	<0.09	<4.54	-	<0.45	35.5	<0.36	<0.04	<10	<0.45	0.77
AENV-WRC-36-Location	896208-16	Location Blank	15	12V 463617 6326364	<6	<3.1	<1.2	0.49	<0.06	4.6	-	<0.31	27	<0.25	<0.04	<6	<0.31	<0.31
AENV-WRC-40-Location	894583-22	Location Blank	16	12V 463891 6290600	2	<1.0	<0.4	0.31	<0.02	<1.0	-	<0.10	38	<0.08	<0.0009	<10	<0.10	<0.10
AENV-WRC-50-Location	896047-2	Location Blank	17	12V 460192 6353024	<2	<1.2	<0.5	0.64	<0.02	2.4	-	<0.12	49	<0.10	<0.04	<5	<0.12	<0.12
AENV-WRC-58-Location Blank	886745-27	Location Blank	18	12V 462844 6363984	<1	<0.5	<0.2	0.32	<0.01	<0.5	-	<0.05	41	0.35	0.4	<9	<0.05	0.39
AENV-WRC-59-Location	894583-14	Location Blank	19	12V 496245 6256692	<3	<1.6	0.7	0.3	<0.03	<1.6	-	<0.16	44	<0.13	<0.0009	<10	<0.16	<0.16

Iron to Sodium

Table 2. The sample ID, media type, site number, and sampling location is provided for each sample along with the laboratory results of iron to sodium.

					Metals Concentration (ug/g dry weight)													
Sample ID	**EXOVA Sample ID**	**Media**	**Site Number**	**Location (UTM 12)**	**Iron**	**Lead**	**Lith-ium**	**Magnesium**	**Manganese**	**Mercury**	**Molybdenum**	**Nickel**	**Phos phorus**	**Potassium**	**Selenium**	**Silicon**	**Silver**	**Sodium**
AENV-WRC-01-001-Berry	884901-7	Berry	01	12V 473516 6330037	28	<0.2	<0.1	428	403	<0.002	0.07	1.3	922	5000	1.1	34	<0.1	12
AENV-WRC-01-002-Berry	884901-10	Berry	01	12V 473533 6329987	27	0.3	<0.1	493	542	<0.002	0.2	0.87	1060	5770	0.93	32	<0.1	5.2
AENV-WRC-01-003-Berry	884901-13	Berry	01	12V 473528 6329993	27	<0.2	<0.1	493	385	<0.002	0.08	0.87	1020	5740	0.67	35	<0.1	6.6
AENV-WRC-01-004-Berry	884901-16	Berry	01	12V 473530 6329996	19	<0.2	<0.1	491	392	<0.002	0.1	0.84	983	5190	1	29	<0.1	4
AENV-WRC-01-005-Berry	884901-19	Berry	01	12V 473528 6329990	21	<0.2	<0.1	453	325	<0.002	0.1	0.78	942	5140	0.9	27	<0.1	6.4
AENV-WRC-02-001-Berry	884901-26	Berry	02	12V 471715 6330175	32	0.4	<0.1	387	715	<0.002	0.2	0.8	980	5140	0.98	31	<0.1	5.2
AENV-WRC-02-002-Berry	884901-29	Berry	02	12V 471721 6330163	33	<0.2	<0.1	396	756	<0.002	0.4	0.8	1080	5440	0.81	28	<0.1	6.6
AENV-WRC-02-003-Berry	884901-32	Berry	02	12V 471704 6330163	30	<0.2	<0.1	365	664	<0.002	0.2	1	1020	5310	0.3	25	<0.1	8.1
AENV-WRC-02-004-Berry	884901-35	Berry	02	12V 471692 6330169	29	<0.2	<0.1	447	862	<0.002	0.2	0.93	1020	5210	0.8	28	<0.1	5.9
AENV-WRC-02-005-Berry	884901-38	Berry	02	12V 471690 6330160	20	<0.2	<0.1	366	490	<0.002	0.2	1	989	5320	0.88	17	<0.1	8.6
AENV-WRC-03-001-Berry	884901-45	Berry	03	12V 464201 6364624	17	<0.2	<0.1	371	243	<0.002	0.07	1	855	4680	0.4	16	<0.1	2
AENV-WRC-03-002-Berry	884901-48	Berry	03	12V 464196 6364624	25	<0.2	<0.1	420	245	<0.002	0.2	1.5	876	4620	0.4	19	<0.1	3
AENV-WRC-03-003-Berry	884901-51	Berry	03	12V 464204 6364621	21	<0.2	<0.1	418	315	<0.002	0.06	1.1	888	4550	0.92	18	<0.1	6.6
AENV-WRC-03-004-Berry	884901-54	Berry	03	12V 464196 6364621	20	<0.2	0.52	413	394	<0.002	0.1	1.2	877	4510	0.81	21	<0.1	5.1
AENV-WRC-03-005-Berry	884901-57	Berry	03	12V 464191 6364615	16	<0.2	<0.1	408	284	<0.002	0.1	1.2	834	4430	0.58	16	<0.1	3
AENV-WRC-07-001-Berry	886741-5	Berry	06	12V 464106 6344648	28	<0.2	0.1	413	313	<0.002	0.09	0.4	919	4620	<0.2	26	<0.1	6.2
AENV-WRC-07-002-Berry	886741-8	Berry	06	12V 464123 6344645	25	<0.25	<0.1	321	336	<0.002	0.1	0.72	818	4470	<0.2	24	<0.1	7.2

					Metals Concentration (ug/g dry weight)													
Sample ID	**EXOVA Sample ID**	**Media**	**Site Number**	**Location (UTM 12)**	**Iron**	**Lead**	**Lith-ium**	**Magnesium**	**Manganese**	**Mercury**	**Molybdenum**	**Nickel**	**Phos phorus**	**Potassium**	**Selenium**	**Silicon**	**Silver**	**Sodium**
AENV-WRC-07-003-Berry	886741-11	Berry	06	12V 464116 6344663	34	<0.2	<0.1	414	239	<0.002	0.1	0.73	939	4860	<0.2	35	<0.1	6.5
AENV-WRC-07-004-Berry	886741-14	Berry	06	12V 464123 6344672	35	<0.2	<0.1	379	260	<0.002	<0.05	0.4	816	4300	0.61	37	<0.1	30
AENV-WRC-07-005-Berry	886741-17	Berry	06	12V 464108 6344676	41	<0.2	<0.1	341	193	<0.002	0.07	0.54	861	4940	<0.2	35	<0.1	5.4
AENV-WRC-08-001-Berry	886741-24	Berry	07	12V 466958 6366367	38	<0.2	<0.1	471	322	<0.002	0.06	1.3	952	4280	0.5	34	<0.1	4
AENV-WRC-08-002-Berry	886741-27	Berry	07	12V 466953 6366364	30	<0.2	<0.1	486	413	<0.002	0.07	1.5	960	4700	<0.2	34	<0.1	4
AENV-WRC-08-003-Berry	886741-30	Berry	07	12V 466951 6366361	36	<0.2	<0.1	438	361	<0.002	<0.05	1.1	980	4910	0.5	36	<0.1	4
AENV-WRC-08-004-Berry	886741-33	Berry	07	12V 466946 6366357	25	<0.2	0.1	372	302	<0.002	<0.05	1.2	862	4570	0.3	35	<0.1	4
AENV-WRC-08-005-Berry	886741-36	Berry	07	12V 466949 6366364	24	<0.2	<0.1	407	402	<0.002	<0.05	1.4	957	4380	0.56	32	<0.1	7.7
AENV-WRC-15-001-Berry	885598-7	Berry	09	12V 483787 6350408	45	<0.2	<0.1	462	405	<0.002	0.2	0.75	1080	5440	0.97	45	<0.1	5.8
AENV-WRC-15-002-Berry	885598-10	Berry	09	12V 483777 6350392	18	<0.2	<0.1	390	345	<0.002	0.3	0.53	1000	5540	0.57	38	<0.1	6
AENV-WRC-15-003-Berry	885598-13	Berry	09	12V 483772 6350399	15	<0.2	<0.1	371	254	<0.002	0.2	0.63	1060	5630	0.87	29	<0.1	3
AENV-WRC-15-004-Berry	885598-16	Berry	09	12V 483772 6350392	22	<0.2	<0.1	421	243	<0.002	0.1	0.54	1060	5690	0.64	46	<0.1	3
AENV-WRC-15-005-Berry	885598-19	Berry	09	12V 483772 6350399	17	<0.2	<0.1	343	209	<0.002	0.2	0.4	980	5110	0.4	30	<0.1	4
AENV-WRC-17-001-Fruit	887081-25	Berry	11	12V 460013 6344599	36.3	<0.249	0.114	613	614	<0.00249	<0.050	0.97	811	5000	1.29	47.4	<0.149	7.63
AENV-WRC-17-002-Fruit	887081-29	Berry	11	12V 460012 6344596	31.7	<0.248	<0.0994	516	582	0.00398	<0.0497	0.835	834	5140	1.01	40.6	<0.149	5.92
AENV-WRC-17-003-Fruit	887081-33	Berry	11	12V 460010 6344596	30.4	<0.250	<0.100	471	524	<0.00250	<0.050	0.82	820	4780	0.82	42.7	<0.15	5.22
AENV-WRC-17-004-Fruit	887081-37	Berry	11	12V 460005 6344593	32.8	<0.248	<0.0993	411	279	<0.00248	<0.050	0.839	885	5490	0.839	42.8	<0.149	6.95
AENV-WRC-17-005-Fruit	887081-41	Berry	11	12V 460003 6344596	29.7	<0.249	<0.0996	458	315	<0.00249	<0.050	0.862	746	4960	0.757	36.7	<0.149	6.17
AENV-WRC-18-001-Fruit	887081-50	Berry	12	12V 459412 6347045	26.5	<0.249	<0.0995	471	423	<0.00249	<0.050	0.652	694	5250	0.801	48.2	<0.149	5.53
AENV-WRC-18-002-Fruit	887081-54	Berry	12	12V 459416 6347054	25.5	<0.248	0.114	436	387	<0.00248	<0.050	0.582	657	5140	1.06	38.4	<0.149	7.69

					Metals Concentration (ug/g dry weight)													
Sample ID	**EXOVA Sample ID**	**Media**	**Site Number**	**Location (UTM 12)**	**Iron**	**Lead**	**Lith-ium**	**Magnesium**	**Manganese**	**Mercury**	**Molybdenum**	**Nickel**	**Phos phorus**	**Potassium**	**Selenium**	**Silicon**	**Silver**	**Sodium**
AENV-WRC-18-003-Fruit	887081-58	Berry	12	12V 459422 6347054	25.8	<0.25	<0.0995	458	422	<0.00249	<0.050	0.577	719	5330	1.07	42.5	<0.149	5.12
AENV-WRC-18-004-Fruit	887081-62	Berry	12	12V 459426 6347060	24.7	<0.249	<0.0997	396	455	<0.00249	<0.050	0.543	664	5020	1.01	32.8	<0.150	6.12
AENV-WRC-18-005-Fruit	887081-66	Berry	12	12V 459427 6347060	22.5	<0.249	<0.0997	414	401	<0.00249	<0.050	0.598	668	4990	1.03	37.1	<0.150	6.29
AENV-WRC 19-001-Fruit	886745-5	Berry	13	12V 468223 6310175	78	<0.25	0.119	517	143	<0.00249	0.0498	1.18	890	5560	1.01	64.3	<0.149	13.7
AENV-WRC 19-002-Fruit	886745-9	Berry	13	12V 468123 6310152	41.1	<0.248	0.119	514	110	<0.00248	0.347	1.51	891	5560	0.928	67	<0.149	8.54
AENV-WRC 19-003-Fruit	886745-13	Berry	13	12V 468079 6310127	38.5	<0.248	<0.0994	521	158	<0.00248	0.149	1.4	925	5150	1.18	48.4	<0.149	6.75
AENV-WRC 19-004-Fruit	886745-17	Berry	13	12V 468066 6310130	30.6	<0.249	<0.0997	538	105	<0.00249	0.0847	1.51	892	5540	0.713	52.7	<0.150	8.39
AENV-WRC 19-005-Fruit	886745-21	Berry	13	12V 468106 6310087	48.2	<0.25	<0.0992	385	249	<0.00248	0.278	1.14	830	5250	1.26	61.1	<0.149	12.6
AENV-WRC-35-001-Fruit	887081-5	Berry	14	12V 463672 6326286	40.4	<0.25	0.1	505	152	0.01	<0.05	0.74	905	5090	0.89	41.6	<0.15	20.8
AENV-WRC-35-002-Fruit	887081-8	Berry	14	12V 463668 6326271	44.9	<0.250	<0.0998	442	199	0.00599	<0.050	0.569	845	4960	1.02	42.9	<0.150	17.9
AENV-WRC-35-003-Fruit	887081-11	Berry	14	12V 463646 6326280	48.1	<0.250	<0.0999	386	264	0.004	<0.050	0.624	846	5210	1.05	48.2	<0.150	14.6
AENV-WRC-35-004-Fruit	887081-14	Berry	14	12V 463677 6326271	30.4	<0.250	<0.0998	464	169	0.00299	<0.050	0.449	820	4780	0.644	33.9	<0.150	11.8
AENV-WRC-35-005-Fruit	887081-17	Berry	14	12V 463682 6326265	32.5	<0.249	<0.0996	366	99.2	0.00249	<0.050	0.548	713	4150	1.29	43.1	<0.149	11.8
AENV-WRC-05-002-Foliage	895939-9	Foliage	04	12V 470514 6330812	687	0.254	0.339	1630	1550	0.00698	0.12	2.66	1290	4230	1.04	176	<0.15	16.6
AENV-WRC-05-003-Foliage	895939-12	Foliage	04	12V 470519 6330808	585	<0.249	0.374	1660	1040	0.00747	0.0946	2.83	1200	4350	1.56	170	<0.15	14.9
AENV-WRC-05-004-Foliage	895939-16	Foliage	04	12V 470515 6330808	515	0.338	0.308	1750	329	0.00746	0.0795	2.42	1370	4800	1.11	159	<0.1	11.3
AENV-WRC-05-005-Foliage	895939-19	Foliage	04	12V 470512 6330812	458	<0.248	0.297	1830	595	0.00793	0.109	3.5	1170	4010	1.48	167	<0.15	9.09
AENV-WRC-5-001-Foliage	895939-6	Foliage	04	12V 470512 6330815	656	0.495	0.735	1760	1970	0.0075	<0.050	3.12	1280	4270	1.4	185	<0.15	15.1
AENV-WRC-06-001-Foliage	896047-26	Foliage	05	12V 463968 6345076	686	0.647	0.368	1500	383	0.00945	0.139	2.82	1520	6890	1.43	154	<0.15	13.3
AENV-WRC-06-002-Foliage	896047-29	Foliage	05	12V 463974 6345085	739	0.637	0.373	1950	281	0.00945	0.0896	3.04	1910	8740	1.27	158	<0.15	16.4

					Metals Concentration (ug/g dry weight)													
Sample ID	**EXOVA Sample ID**	**Media**	**Site Number**	**Location (UTM 12)**	**Iron**	**Lead**	**Lith-ium**	**Magnesium**	**Manganese**	**Mercury**	**Molybdenum**	**Nickel**	**Phos phorus**	**Potassium**	**Selenium**	**Silicon**	**Silver**	**Sodium**
AENV-WRC-06-003-Foliage	896047-32	Foliage	05	12V 463973 6345088	606	0.364	0.379	2220	383	0.00948	0.135	3.18	1440	6940	1.07	156	<0.15	23.1
AENV-WRC-06-004-Foliage	896047-35	Foliage	05	12V 463973 6345088	449	0.283	1.48	1610	235	0.00943	0.129	2.48	1740	6010	1.4	138	<0.149	9.4
AENV-WRC-06-005-Foliage	896047-38	Foliage	05	12V 463895 6344999	336	<0.249	0.324	1990	1250	0.00648	0.0798	1.42	1390	4290	1.43	121	<0.15	8.06
AENV-WRC-14-001-Foliage	895939-26	Foliage	08	12V 484062 6347144	283	<0.248	0.313	1870	635	0.00596	0.0944	1.28	1490	4410	1.38	239	<0.15	7.83
AENV-WRC-14-002-Foliage	895939-29	Foliage	08	12V 484069 6347138	208	<0.248	0.223	2100	813	0.00893	0.0942	0.932	1530	5160	1.58	124	<0.149	8.3
AENV-WRC-14-003-Foliage	895939-32	Foliage	08	12V 484072 6347157	212	<0.248	0.228	2070	568	0.00794	0.0695	0.993	1470	5100	1.12	132	<0.149	7.32
AENV-WRC-14-004-Foliage	895939-35	Foliage	08	12V 484059 6347160	267	0.665	0.302	1890	636	0.00992	0.0694	1.18	1300	4750	1.54	150	<0.149	8.88
AENV-WRC-14-005-Foliage	895939-38	Foliage	08	12V 484052 6347151	184	<0.248	0.273	1810	663	0.00844	0.0943	1.27	1250	5640	1.17	136	<0.1	5.87
AENV-WRC-17-001-Foliage	887081-26	Foliage	11	12V 460012 6344596	237	<0.248	0.333	1270	1140	0.00596	<0.050	2.31	1090	4610	0.958	135	<0.149	15.8
AENV-WRC-17-002-Foliage	887081-30	Foliage	11	12V 460012 6344596	261	<0.250	0.394	1340	996	0.00599	<0.0499	2.85	1150	4660	1.4	130	<0.150	9.16
AENV-WRC-17-003-Foliage	887081-34	Foliage	11	12V 460010 6344596	237	<0.251	0.346	1270	1090	0.00502	<0.0502	1.92	1220	5320	1.27	160	<0.150	10.7
AENV-WRC-17-004-Foliage	887081-38	Foliage	11	12V 460005 6344593	171	<0.250	0.31	1490	230	0.0035	<0.050	0.72	890	4080	0.95	117	<0.150	8.84
AENV-WRC-17-005-Foliage	887081-42	Foliage	11	12V 460003 6344596	303	<0.251	0.391	1610	1580	0.00602	<0.050	2.52	1010	5280	1.11	169	<0.150	14.3
AENV-WRC-18-001-Foliage	887081-51	Foliage	12	12V 459412 6347045	255	<0.249	0.354	1560	1340	0.00548	<0.050	1.56	972	4060	1.38	197	<0.150	13.1
AENV-WRC-18-002-Foliage	887081-55	Foliage	12	12V 459416 6347054	136	<0.249	0.269	1340	666	0.00249	<0.050	1.61	906	4000	1.05	144	<0.150	10.2
AENV-WRC-18-003-Foliage	887081-59	Foliage	12	12V 459422 6347054	215	<0.251	0.306	1740	1080	0.00251	<0.0502	1.55	895	4320	1.48	149	<0.150	11.4
AENV-WRC-18-004-Foliage	887081-63	Foliage	12	12V 459426 6347060	267	<0.248	0.397	1420	1190	0.00546	<0.050	1.12	840	4510	1.28	182	<0.149	11.1
AENV-WRC-18-005-Foliage	887081-67	Foliage	12	12V 459427 6347060	215	<0.248	0.308	1370	1300	0.00347	<0.050	1.31	1070	4330	1.2	181	<0.149	11.1
AENV-WRC 19-001-Foliage	886745-6	Foliage	13	12V 468223 6310175	973	<0.250	0.529	1760	254	0.00649	0.0848	3.54	922	4470	1.38	229	<0.150	32.2
AENV-WRC 19-002-Foliage	886745-10	Foliage	13	12V 468123 6310152	322	<0.250	0.344	1480	180	0.00399	0.0549	3.54	919	3460	1.19	171	<0.150	12.7

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AENV-WRC 19-003-Foliage	886745-14	Foliage	13	12V 468079 6310127	232	<0.248	0.318	1260	868	0.00348	<0.050	2.75	1060	4170	1.56	230	<0.149	19.5
AENV-WRC 19-004-Foliage	886745-18	Foliage	13	12V 468066 6310130	383	<0.248	0.387	1070	395	0.00546	0.0546	3.82	838	5590	1.2	177	<0.149	20.4
AENV-WRC 19-005-Foliage	886745-22	Foliage	13	12V 468106 6310087	290	<0.249	0.299	1260	988	0.00399	0.0548	2.13	884	4220	1.57	160	<0.150	18
AENV-WRC-36-001-Foliage	896208-21	Foliage	15	12V 463617 6326364	458	0.4	0.49	1700	308	0.006	0.08	1.94	1440	4070	0.53	120	<0.15	26.2
AENV-WRC-36-002-Foliage	896208-24	Foliage	15	12V 463620 6326361	533	<0.25	0.55	1630	382	0.006	<0.05	1.64	1280	4570	0.42	138	<0.15	22.8
AENV-WRC-36-003-Foliage	896208-27	Foliage	15	12V 463647 6326364	597	<0.25	0.53	1580	667	0.006	0.09	2.45	1340	4930	0.92	146	<0.15	29
AENV-WRC-36-004-Foliage	896208-30	Foliage	15	12V 463617 6326367	547	<0.25	0.54	1720	368	0.006	0.1	2.82	1270	3730	1.14	131	<0.15	43.4
AENV-WRC-36-005-Foliage	896208-33	Foliage	15	12V 463617 6326370	538	0.25	0.55	1860	300	0.006	0.07	2.04	1350	3940	0.77	129	<0.15	27.6
AENV-WRC-40-001-Foliage	894583-27	Foliage	16	12V 463891 6290600	236	<0.249	0.354	1770	664	0.00598	0.11	0.857	1500	6010	1.17	135	<0.15	5.74
AENV-WRC-40-002-Foliage	894583-3	Foliage	16	12V 463892 6290600	259	<0.249	0.459	1780	215	0.00897	0.0648	0.877	1330	5190	1.24	173	<0.150	6.74
AENV-WRC-40-003-Foliage	894583-6	Foliage	16	12V 463892 6290603	181	<0.248	0.332	1550	487	0.00645	<0.050	0.58	1220	5150	0.898	157	<0.15	4.78
AENV-WRC-40-004-Foliage	894583-9	Foliage	16	12V 463902 6290606	198	<0.249	0.378	1730	348	0.00647	0.0995	0.617	1100	4630	0.94	117	<0.15	6.11
AENV-WRC-40-005-Foliage	894583-12	Foliage	16	12V 463896 6290603	138	<0.249	0.333	1460	328	0.00348	0.0647	0.318	1000	4440	1.05	94.5	<0.15	1.64
AENV-WRC-50-001-Foliage	896047-7	Foliage	17	12V 460192 6353024	307	<0.249	0.444	1710	512	0.00698	<0.050	0.648	1340	4770	1.79	154	<0.150	7.33
AENV-WRC-50-002-Foliage	896047-10	Foliage	17	12V 460189 6353024	516	<0.257	1.23	1810	319	0.00874	0.0771	0.622	1360	5640	1.46	151	<0.15	8.94
AENV-WRC-50-003-Foliage	896047-13	Foliage	17	12V 460192 6353027	345	<0.249	0.692	2280	266	0.00746	0.104	0.746	1360	4770	1.2	168	<0.15	6.75
AENV-WRC-50-004-Foliage	896047-16	Foliage	17	12V 460198 6353030	338	<0.25	0.446	2130	362	0.00794	0.0744	0.466	1360	4020	0.893	139	<0.149	6.9
AENV-WRC-50-005-Foliage	896047-19	Foliage	17	12V 460204 6353030	533	<0.250	0.449	1620	163	0.00748	0.0748	0.833	1140	5340	1.62	145	<0.150	8.63
AENV-WRC-58-001-Foliage	886745-30	Foliage	18	12V 462844 6363984	860	<0.254	0.331	1290	508	0.00356	0.0509	0.896	1280	5140	1.29	140	<0.153	15.8
AENV-WRC-58-002-Foliage	886745-33	Foliage	18	12V 462848 6363962	2000	<0.304	0.516	1810	1010	0.00547	<0.061	1.51	1520	5440	1.28	213	<0.182	24.7

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AENV-WRC-58-003-Foliage	886745-36	Foliage	18	12V 462847 6363962	2200	<0.322	0.548	1840	981	0.00709	0.0644	1.49	1240	4610	1.62	239	<0.193	30
AENV-WRC-58-004-Foliage	886745-39	Foliage	18	12V 462828 6363971	901	<0.304	0.359	1400	815	0.00547	0.0608	0.675	1350	5940	1.37	174	<0.182	13.2
AENV-WRC-58-005-Foliage	886745-42	Foliage	18	12V 462838 6363971	970	<0.39	0.429	1400	854	<0.00390	<0.0780	1.35	1090	5260	1.61	177	<0.234	16.4
AENV-WRC-16-001-Rhizome	896208-6	Rhizome	10	12V 484152 6347051	419	<0.25	0.29	2000	71.4	0.003	0.49	0.24	3110	14600	1	47.8	<0.15	654
AENV-WRC-16-002-Rhizome	896208-8	Rhizome	10	12V 484164 6347051	459	<0.25	0.38	1650	71.4	<0.002	0.66	0.3	1670	11200	0.44	60.8	0.16	544
AENV-WRC-16-003-Rhizome	896208-10	Rhizome	10	12V 484150 6347051	1260	<0.25	0.25	2430	92.8	0.002	0.64	0.22	2160	11100	0.65	39.3	<0.1	1330
AENV-WRC-16-004-Rhizome	896208-12	Rhizome	10	12V 484149 6347051	600	<0.25	0.3	1960	97.3	<0.002	0.48	<0.10	2490	10800	0.7	31.8	<0.15	1340
AENV-WRC-16-005-Rhizome	896208-14	Rhizome	10	12V 484127 6347048	368	<0.25	0.25	1740	96.7	0.003	0.73	0.56	2700	12100	0.9	42.8	<0.15	334
AENV-WRC-59-001-Rhizome	894583-16	Rhizome	19	12V 496187 6256732	1060	<0.248	0.626	1640	191	0.00398	2.93	1.69	1630	10300	1.05	426	<0.149	1520
AENV-WRC-59-002-Rhizome	894583-17	Rhizome	19	12V 496245 6256692	192	0.514	0.509	1260	118	0.0025	2	1.31	1120	15700	0.724	100	<0.150	1230
AENV-WRC-59-003-Rhizome	894583-18	Rhizome	19	12V 496245 6256689	478	<0.249	0.449	1410	114	0.00648	1.75	1.96	1120	11200	1.1	235	<0.15	1110
AENV-WRC-59-004-Rhizome	894583-19	Rhizome	19	12V 496245 6256686	407	<0.249	0.503	1560	74.5	0.00299	4.52	1.04	2640	15900	0.598	71.9	<0.15	1790
AENV-WRC-59-005-Rhizome	894583-20	Rhizome	19	12V 496243 6256689	741	<0.250	0.25	1410	43.8	0.0035	0.85	0.495	3280	9930	0.92	108	<0.15	1770
AENV-WRC-01-001-Metal	884901-6	Soil	01	12V 473516 6330037	687	1.4	0.3	62	24.2	0.007	0.2	2.1	59.3	100	<0.3	642	<0.2	21
AENV-WRC-01-002-Metal	884901-9	Soil	01	12V 473533 6329987	1580	1.4	0.7	106	14.1	0.005	0.1	1.2	61.8	100	<0.3	414	<0.2	16
AENV-WRC-01-003-Metal	884901-12	Soil	01	12V 473528 6329993	935	1.8	0.3	63	7.8	0.006	0.2	1.8	53.3	98	<0.3	584	<0.2	13
AENV-WRC-01-004-Metal	884901-15	Soil	01	12V 473530 6329996	502	0.5	0.2	36	5	0.005	0.1	1	28.4	68	<0.3	566	<0.2	16

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AENV-WRC-01-005-Metal	884901-18	Soil	01	12V 473528 6329990	466	0.9	0.2	40	5.9	0.003	0.1	1.2	33.3	66	<0.3	516	<0.2	11
AENV-WRC-02-001-Metal	884901-25	Soil	02	12V 471715 6330175	3480	1.6	1.7	137	393	0.005	0.05	1.8	139	93	0.5	500	<0.2	17
AENV-WRC-02-002-Metal	884901-28	Soil	02	12V 471721 6330163	5060	1.9	2.1	205	507	0.007	0.3	2.9	195	140	<0.3	548	<0.2	17
AENV-WRC-02-003-Metal	884901-31	Soil	02	12V 471704 6330163	5280	2.8	1.8	160	736	0.008	0.3	2.5	168	120	<0.3	480	<0.2	18
AENV-WRC-02-004-Metal	884901-34	Soil	02	12V 471692 6330169	4550	1.5	1.8	152	497	0.006	0.2	2.1	196	92	<0.3	453	<0.2	13
AENV-WRC-02-005-Metal	884901-37	Soil	02	12V 471690 6330160	3920	1.8	1.3	138	685	0.01	0.56	3.3	163	130	<0.3	482	<0.2	14
AENV-WRC-03-001-Metal	884901-44	Soil	03	12V 464201 6364624	3660	1.8	1.5	199	123	0.006	0.1	2.5	136	130	0.3	372	<0.2	9
AENV-WRC-03-002-Metal	884901-47	Soil	03	12V 464196 6364624	3640	1.6	1.7	239	147	0.007	0.1	2.4	134	130	<0.3	424	<0.2	10
AENV-WRC-03-003-Metal	884901-50	Soil	03	12V 464204 6364621	3340	1.8	1.6	231	238	0.01	0.1	2.4	149	120	<0.3	462	<0.2	13
AENV-WRC-03-004-Metal	884901-53	Soil	03	12V 464196 6364621	3760	2.1	2	219	237	0.006	0.1	2.6	169	140	<0.3	490	<0.2	15
AENV-WRC-03-005-Metal	884901-56	Soil	03	12V 464191 6364615	4690	2.6	2.3	286	97.2	0.007	0.3	3	125	150	<0.3	517	<0.2	15
AENV-WRC-05-002-Metal	895939-8	Soil	04	12V 470514 6330812	588	0.8	<0.1	33	16.9	0.007	0.21	1.2	29.5	64	<0.3	172	<0.2	27
AENV-WRC-05-003-Metal	895939-11	Soil	04	12V 470519 6330808	1390	0.8	0.3	69	8.3	0.008	0.17	1	36.4	72	<0.3	197	<0.2	25
AENV-WRC-05-004-Metal	895939-15	Soil	04	12V 470515 6330808	970	0.8	<0.1	42	7.3	0.01	0.37	1.7	66.8	81	<0.3	144	<0.2	25
AENV-WRC-05-005-Metal	895939-18	Soil	04	12V 470512 6330812	814	0.8	0.1	58	13.3	0.008	0.24	1.8	58.2	92	<0.3	190	<0.2	34
AENV-WRC-5-001-Metal	895939-5	Soil	04	12V 470512 6330815	775	1	0.2	35	29.1	0.004	0.08	0.7	26.8	48	<0.3	271	<0.2	10
AENV-WRC-06-001-Metal	896047-25	Soil	05	12V 463968 6345076	22900	3.7	10.5	779	248	0.021	<0.05	11.4	268	316	<0.3	659	<0.2	27
AENV-WRC-06-002-Metal	896047-28	Soil	05	12V 463974 6345085	14800	4.7	9	743	42.1	0.015	0.14	10	199	449	<0.3	716	<0.2	16
AENV-WRC-06-003-Metal	896047-31	Soil	05	12V 463973 6345088	22300	5.8	13.4	965	80.9	0.015	0.11	17	294	496	<0.3	797	<0.2	22
AENV-WRC-06-004-Metal	896047-34	Soil	05	12V 463973 6345088	20400	4.9	4.2	524	88.4	0.016	<0.05	7.9	307	349	<0.3	544	<0.2	27

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AENV-WRC-06-005-Metal	896047-37	Soil	05	12V 463895 6344999	17400	2.2	1.9	272	175	0.007	0.07	1.8	374	201	<0.3	382	<0.2	14
AENV-WRC-07-001-Metal	886741-7	Soil	06	12V 464106 6344648	4580	1.9	2.5	384	665	0.01	0.23	3	310	219	0.9	403	1.4	18
AENV-WRC-07-002-Metal	886741-10	Soil	06	12V 464123 6344645	4120	2.5	2.4	357	371	0.01	0.25	2.7	224	234	<0.3	416	0.6	13
AENV-WRC-07-003-Metal	886741-13	Soil	06	12V 464116 6344663	4350	1	2.1	354	450	0.01	0.17	2.7	228	230	0.5	415	0.2	17
AENV-WRC-07-004-Metal	886741-16	Soil	06	12V 464123 6344672	4110	1.4	2.2	387	555	0.011	0.15	2.8	259	316	<0.3	412	<0.2	26
AENV-WRC-07-005-Metal	886741-19	Soil	06	12V 464108 6344676	5240	1.9	2.8	550	335	0.012	0.21	3.9	314	323	<0.3	406	<0.2	19
AENV-WRC-08-001-Metal	886741-26	Soil	07	12V 466958 6366367	6890	1.1	2.2	222	542	0.009	0.17	2.9	191	138	<0.3	403	<0.2	18
AENV-WRC-08-002-Metal	886741-29	Soil	07	12V 466953 6366364	5940	1.4	2	245	300	0.01	0.13	2.9	196	160	0.3	415	<0.2	14
AENV-WRC-08-003-Metal	886741-32	Soil	07	12V 466951 6366361	8040	2	2.4	335	153	0.008	0.18	3.2	185	195	<0.3	377	<0.2	19
AENV-WRC-08-004-Metal	886741-35	Soil	07	12V 466946 6366357	7530	1.8	1.9	313	119	0.008	0.11	3	142	166	0.2	345	<0.2	12
AENV-WRC-14-001-Metal	895939-25	Soil	08	12V 484062 6347144	11000	3.8	6.9	1110	32.2	0.017	0.47	4.2	121	370	<0.3	197	<0.2	55
AENV-WRC-14-002-Metal	895939-28	Soil	08	12V 484069 6347138	6600	5.3	6.6	1600	42	0.034	0.56	5.9	257	623	1	313	<0.2	162
AENV-WRC-14-003-Metal	895939-31	Soil	08	12V 484072 6347157	6240	4	7.4	1010	96.3	0.018	0.47	5.5	129	423	0.4	220	<0.2	38
AENV-WRC-14-004-Metal	895939-34	Soil	08	12V 484059 6347160	8140	3.7	9.5	1210	49.2	0.014	0.35	3.9	97.4	522	<0.3	185	<0.2	40
AENV-WRC-14-005-Metal	895939-37	Soil	08	12V 484052 6347151	11400	6.9	12.1	1460	133	0.029	0.95	9.1	184	714	0.4	210	<0.2	54
AENV-WRC-15-001-Metal	885598-6	Soil	09	12V 483787 6350408	798	1.6	0.4	82	52.1	0.004	0.05	1.1	72.7	84	<0.3	716	<0.2	14
AENV-WRC-15-002-Metal	885598-9	Soil	09	12V 483777 6350392	930	1.9	0.5	120	59.3	0.007	0.07	1.3	72.8	130	<0.3	688	<0.2	21
AENV-WRC-15-003-Metal	885598-12	Soil	09	12V 483772 6350399	693	1.4	0.4	88	54.4	0.008	<0.05	1.2	69	98	<0.3	817	<0.2	10
AENV-WRC-15-004-Metal	885598-15	Soil	09	12V 483772 6350392	577	1.1	0.4	115	62.5	0.009	<0.05	1.1	82.4	120	<0.3	491	<0.2	30
AENV-WRC-15-005-Metal	885598-18	Soil	09	12V 483772 6350399	1060	1.4	0.6	109	36	0.007	0.07	1.5	78.9	110	<0.3	1050	<0.2	19

					Metals Concentration (ug/g dry weight)													
Sample ID	**EXOVA Sample ID**	**Media**	**Site Number**	**Location (UTM 12)**	**Iron**	**Lead**	**Lith-ium**	**Magnesium**	**Manganese**	**Mercury**	**Molybdenum**	**Nickel**	**Phos phorus**	**Potassium**	**Selenium**	**Silicon**	**Silver**	**Sodium**
AENV-WRC-16-001-Metal/PAH	896208-5	Soil	10	12V 484152 6347051	8840	2.6	4.5	1910	322	0.031	0.35	6.4	687	704	0.7	639	<0.2	165
AENV-WRC-16-002-Meta/PAHl	896208-7	Soil	10	12V 484164 6347051	16900	3.3	5.4	2320	1270	0.037	0.21	6.8	1000	929	0.6	722	<0.2	210
AENV-WRC-16-003-Metal/PAH	896208-9	Soil	10	12V 484150 6347051	9220	3	5	1900	313	0.036	0.47	7.6	857	762	1	767	<0.2	287
AENV-WRC-16-004-Metal/PAH	896208-11	Soil	10	12V 484149 6347051	8320	2.5	3.7	1880	233	0.032	0.4	6.7	578	636	1.1	684	<0.2	290
AENV-WRC-16-005-Metal/PAH	896208-13	Soil	10	12V 484127 6347048	9410	3.8	4.6	2120	512	0.05	0.51	8.3	963	948	1.1	696	<0.2	183
AENV-WRC-17-001-Metal	887081-28	Soil	11	12V 460013 6344599	6240	3.9	3.1	506	274	0.017	0.57	4.7	174	404	<0.3	440	<0.2	27
AENV-WRC-17-002-Metal	887081-32	Soil	11	12V 460012 6344596	9980	4.4	2.2	413	111	0.014	0.5	3.4	150	301	<0.3	425	<0.2	25
AENV-WRC-17-003-Metal	887081-36	Soil	11	12V 460010 6344596	9170	3.8	3.8	531	172	0.013	0.4	3.7	130	352	<0.3	439	<0.2	26
AENV-WRC-17-004-Metal	887081-40	Soil	11	12V 460005 6344593	10200	4.4	5.5	842	401	0.018	0.62	6.6	251	775	0.4	455	<0.2	43
AENV-WRC-17-005-Metal	887081-44	Soil	11	12V 460003 6344596	8410	7.7	4.8	714	252	0.016	0.45	4.2	142	446	<0.3	475	<0.2	30
AENV-WRC-18-001-Metal	887081-53	Soil	12	12V 459412 6347045	12900	4.8	2.7	612	308	0.016	0.35	3.7	198	373	<0.3	418	<0.2	33
AENV-WRC-18-002-Metal	887081-57	Soil	12	12V 459416 6347054	16600	5.3	2.6	937	774	0.027	0.48	5.8	330	587	0.6	437	<0.2	28
AENV-WRC-18-003-Metal	887081-61	Soil	12	12V 459422 6347054	6000	3.2	3.3	561	160	0.015	0.27	2.8	132	365	<0.3	394	<0.2	24
AENV-WRC-18-004-Metal	887081-65	Soil	12	12V 459426 6347060	12200	4	3.3	620	190	0.011	0.33	2.8	146	377	<0.3	420	<0.2	24
AENV-WRC-18-005-Metal	887081-69	Soil	12	12V 459427 6347060	17800	5	3.4	581	288	0.018	0.3	4.6	178	341	<0.3	474	<0.2	26
AENV-WRC 19-001-Metal	886745-8	Soil	13	12V 468223 6310175	1760	1.1	0.8	272	36.2	0.008	0.29	2.3	72.4	208	<0.3	335	<0.2	16
AENV-WRC 19-002-Metal	886745-12	Soil	13	12V 468123 6310152	3190	2.6	2.1	355	40.4	0.011	0.5	3.2	122	314	<0.3	411	<0.2	15
AENV-WRC 19-003-Metal	886745-16	Soil	13	12V 468079 6310127	1430	4	0.6	178	24.5	0.011	0.69	4.6	110	231	<0.3	446	<0.2	21

					Metals Concentration (ug/g dry weight)													
Sample ID	**EXOVA Sample ID**	**Media**	**Site Number**	**Location (UTM 12)**	**Iron**	**Lead**	**Lith-ium**	**Magnesium**	**Manganese**	**Mercury**	**Molybdenum**	**Nickel**	**Phos phorus**	**Potassium**	**Selenium**	**Silicon**	**Silver**	**Sodium**
AENV-WRC 19-004-Metal	886745-20	Soil	13	12V 468066 6310130	1670	2.6	0.8	264	37.4	0.015	0.73	5.8	97.8	271	<0.3	449	<0.2	18
AENV-WRC 19-005-Metal	886745-24	Soil	13	12V 468106 6310087	742	0.8	0.4	110	21.3	0.011	0.33	2.5	70.4	219	<0.3	380	<0.2	19
AENV-WRC-35-001-Metal	887081-7	Soil	14	12V 463672 6326286	5960	2.8	1.9	456	401	0.013	0.37	4	270	301	<0.3	409	<0.2	25
AENV-WRC-35-002-Metal	887081-10	Soil	14	12V 463668 6326271	3630	2.4	1.5	420	534	0.009	0.32	3.2	220	335	0.3	489	<0.2	24
AENV-WRC-35-003-Metal	887081-13	Soil	14	12V 463646 6326280	3970	2.5	1.5	396	435	0.013	0.32	3.1	212	240	<0.3	432	<0.2	28
AENV-WRC-35-004-Metal	887081-16	Soil	14	12V 463677 6326271	4480	8.4	1.6	454	504	0.016	0.32	3.4	237	293	<0.3	483	<0.2	22
AENV-WRC-35-005-Metal	887081-19	Soil	14	12V 463682 6326265	5720	3.4	1.8	743	915	0.023	0.63	5.8	356	474	<0.3	477	<0.2	38
AENV-WRC-36-001-Metal	896208-20	Soil	15	12V 463617 6326364	3010	2.1	0.9	473	419	0.015	0.54	3.2	236	375	<0.3	413	<0.2	24
AENV-WRC-36-002-Metal	896208-23	Soil	15	12V 463620 6326361	4400	3.5	1.5	657	1120	0.021	0.81	4.8	294	492	0.8	440	<0.2	48
AENV-WRC-36-003-Metal	896208-26	Soil	15	12V 463647 6326364	3950	2.3	0.5	242	377	0.006	0.35	2	104	178	<0.3	292	<0.2	16
AENV-WRC-36-004-Metal	896208-29	Soil	15	12V 463617 6326367	1570	0.7	0.3	181	68.3	0.005	0.21	1.2	73.1	149	<0.3	298	<0.2	18
AENV-WRC-36-005-Metal	896208-32	Soil	15	12V 463617 6326370	5200	4.4	1.6	769	1360	0.026	1.11	6.2	332	489	0.5	478	<0.2	40
AENV-WRC-40-001-Metal	894583-26	Soil	16	12V 463891 6290600	26100	11.2	32.5	4730	591	0.064	0.56	12.1	618	1560	1.5	880	<0.2	530
AENV-WRC-40-002-Metal	894583-2	Soil	16	12V 463892 6290600	8100	3.7	11.4	3260	414	0.085	0.6	6	566	825	1.4	847	<0.2	365
AENV-WRC-40-003-Metal	894583-5	Soil	16	12V 463892 6290603	9310	5.4	12.1	3410	485	0.068	0.74	8	596	947	1.3	776	<0.2	398
AENV-WRC-40-004-Metal	894583-8	Soil	16	12V 463902 6290606	15100	7	16.6	3210	281	0.031	0.47	7.6	320	917	1	568	<0.2	195
AENV-WRC-40-005-Metal	894583-11	Soil	16	12V 463896 6290603	16100	7.7	18.2	2890	421	0.039	0.54	8.6	458	892	1.2	556	<0.2	212
AENV-WRC-50-001-Metal	896047-6	Soil	17	12V 460192 6353024	2740	2	3.5	4170	1280	0.05	0.4	2.8	939	767	0.8	557	<0.2	270
AENV-WRC-50-002-Metal	896047-9	Soil	17	12V 460189 6353024	11400	7.7	2.7	2550	340	0.062	0.64	5.4	615	1120	0.4	596	<0.2	305
AENV-WRC-50-003-Metal	896047-12	Soil	17	12V 460192 6353027	1520	2	3.2	3400	545	0.058	0.38	2.7	756	644	0.6	480	<0.2	209

					Metals Concentration (ug/g dry weight)													
Sample ID	**EXOVA Sample ID**	**Media**	**Site Number**	**Location (UTM 12)**	**Iron**	**Lead**	**Lith-ium**	**Magnesium**	**Manganese**	**Mercury**	**Molybdenum**	**Nickel**	**Phos phorus**	**Potassium**	**Selenium**	**Silicon**	**Silver**	**Sodium**
AENV-WRC-50-004-Metal	896047-15	Soil	17	12V 460198 6353030	1220	2.3	2.5	3860	472	0.078	0.31	2.7	661	600	0.8	495	<0.2	172
AENV-WRC-50-005-Metal	896047-18	Soil	17	12V 460204 6353030	12300	2.6	3	694	131	0.01	0.17	2.9	118	346	<0.3	426	<0.2	30
AENV-WRC-58-001-Metal	886745-32	Soil	18	12V 462844 6363984	4940	2.2	2.4	489	694	0.017	0.59	3.5	215	440	<0.3	467	<0.2	29
AENV-WRC-58-002-Metal	886745-35	Soil	18	12V 462848 6363962	2880	3.2	0.9	317	798	0.022	0.57	3.3	246	531	0.4	399	<0.2	23
AENV-WRC-58-003-Metal	886745-38	Soil	18	12V 462847 6363962	4050	2.8	1.3	501	905	0.025	0.66	3.4	281	562	0.4	413	<0.2	26
AENV-WRC-58-004-Metal	886745-41	Soil	18	12V 462828 6363971	1840	1.3	0.9	568	478	0.024	0.41	2.5	376	655	0.4	482	<0.2	24
AENV-WRC-58-005-Metal	886745-44	Soil	18	12V 462838 6363971	3540	2	1.1	384	765	0.018	0.59	2.6	290	529	0.3	444	<0.2	29
AENV-WRC-01-001-Trip-Metal	884901-1	Trip Blank	01	12V 473516 6330037	31	<0.3	<0.1	45	<0.3	<0.003	<0.05	1	23	40	2	310	<0.2	230
AENV-WRC-02-001-Trip-Metal	884901-20	Trip Blank	02	12V 471715 6330175	20	<0.3	<0.1	46	<0.3	<0.003	<0.05	1	21	<5	<0.3	350	<0.2	97
AENV-WRC-03-001-Trip-Metal	884901-39	Trip Blank	03	12V 464201 6364624	30	<0.3	<0.1	30	<0.3	<0.003	<0.05	2	22	<5	<0.3	210	<0.2	110
AENV-WRC-5-Trip	895939-1	Trip Blank	04	12V 470512 6330815	5	<0.7	<0.2	5	<0.7	<0.007	<0.11	<0.2	11.7	13	0.8	15	<0.4	269
AENV-WRC-06-Trip	896047-20	Trip Blank	05	12V 463968 6345076	28	<1.4	<0.5	12	<1.4	<0.014	<0.23	<0.5	8.6	<20	<1.4	10	<0.9	239
AENV-WRC-07-Trip Blank	886741-1	Trip Blank	06	12V 464106 6344648	11	<0.3	<0.1	19	<0.3	0.023	<0.05	<0.1	13.7	<5	<0.3	23	<0.2	221
AENV-WRC-08-Trip Blank	886741-20	Trip Blank	07	12V 466958 6366367	10	<0.3	<0.1	22	<0.3	<0.003	<0.05	<0.1	16.3	<5	<0.3	17	<0.2	305
AENV-WRC-14-Trip	895939-20	Trip Blank	08	12V 484062 6347144	5	<0.5	<0.2	14	<0.5	0.034	<0.08	<0.2	9.2	<8	0.6	13	<0.3	268
AENV-WRC-15-001 Trip	885598-1	Trip Blank	09	12V 483787 6350408	10	2	<0.1	20	<0.3	<0.003	<0.05	<0.1	16	<5	<0.3	<1	<0.2	230
AENV-WRC-16-Trip	896208-1	Trip Blank	10	12V 484152 6347051	8	1.2	<0.3	11	<0.9	<0.009	<0.15	<0.3	8	<20	<0.9	11	<0.6	268
AENV-WRC-17-Trip Blank	887081-20	Trip Blank	11	12V 460013 6344599	5	<1.5	<0.5	10	<1.5	<0.015	<0.25	<0.5	13.6	<25	<1.5	18	<1.0	276
AENV-WRC-18-Trip Blank	887081-45	Trip Blank	12	12V 459412 6347045	10.2	<1.2	<0.4	8	<1.2	<0.012	<0.21	0.6	13.3	<21	<1.2	22	<0.8	287

					Metals Concentration (ug/g dry weight)													
Sample ID	**EXOVA Sample ID**	**Media**	**Site Number**	**Location (UTM 12)**	**Iron**	**Lead**	**Lith-ium**	**Magnesium**	**Manganese**	**Mercury**	**Molybdenum**	**Nickel**	**Phos phorus**	**Potassium**	**Selenium**	**Silicon**	**Silver**	**Sodium**
AENV-WRC 19-Trip Blank	886745-1	Trip Blank	13	12V 468223 6310175	12	<0.3	<0.1	7	<0.3	<0.003	<0.05	0.7	15	<5	<0.3	39	<0.2	213
AENV-WRC-35-Trip Blank	887081-1	Trip Blank	14	12V 463672 6326286	12.2	<1.7	<0.6	10	<1.7	<0.017	<0.29	0.6	16	<29	<1.7	17	<1.1	242
AENV-WRC-36-Trip	896208-15	Trip Blank	15	12V 463617 6326364	17	<1.0	<0.3	18	<1.0	<0.010	<0.16	<0.3	12.6	<20	<1.0	12	<0.6	257
AENV-WRC-40-Trip	894583-21	Trip Blank	16	12V 463891 6290600	7	<0.6	<0.2	18	<0.6	<0.006	<0.10	<0.2	9.1	<10	1.2	6	<0.4	345
AENV-WRC-50-Trip	896047-1	Trip Blank	17	12V 460192 6353024	8	<0.5	<0.2	17	<0.5	<0.005	<0.09	<0.2	8.5	<9	<0.5	10	<0.4	268
AENV-WRC-58-Trip Blank	886745-26	Trip Blank	18	12V 462844 6363984	17	<0.3	<0.1	26	<0.3	<0.003	<0.05	<0.1	12.3	<5	<0.3	46	<0.2	221
AENV-WRC-59-Trip	894583-13	Trip Blank	19	12V 496245 6256692	7	<0.8	<0.3	19	<0.8	<0.008	<0.14	<0.3	11.1	15	1.5	6	<0.5	334
AENV-WRC-01-001-Location	884901-2	Location Blank	01	12V 473516 6330037	10	<0.3	<0.1	20	<0.3	<0.003	<0.05	<0.1	14	<5	<0.3	<1	<0.2	210
AENV-WRC-02-001-Location	884901-21	Location Blank	02	12V 471715 6330175	20	<0.3	<0.1	40	<0.3	<0.003	<0.05	<0.1	19	<5	<0.3	180	<0.2	190
AENV-WRC-03-001-Location	884901-40	Location Blank	03	12V 464201 6364624	300	<0.3	<0.1	500	<0.3	<0.003	<0.05	<0.1	240	<5	<0.3	2100	<0.2	2000
AENV-WRC-5-Location	895939-2	Location Blank	04	12V 470512 6330815	12	<0.6	<0.2	10	<0.6	<0.006	<0.10	<0.2	13.7	<10	<0.6	15	<0.4	208
AENV-WRC-06-Location	896047-21	Location Blank	05	12V 463968 6345076	12	<1.2	<0.4	13	<1.2	<0.012	<0.20	<0.4	10.4	<20	<1.2	8	<0.8	258
AENV-WRC-07-Location Blank	886741-2	Location Blank	06	12V 464106 6344648	16	<0.3	<0.1	20	<0.3	<0.003	<0.05	1.2	16.8	<5	<0.3	30	<0.2	226
AENV-WRC-08-Location Blank	886741-21	Location Blank	07	12V 466958 6366367	10	<0.3	<0.1	16	<0.3	<0.003	<0.05	0.8	12.8	<5	<0.3	19	<0.2	209
AENV-WRC-14-Location	895939-21	Location Blank	08	12V 484062 6347144	5	<0.6	<0.2	14	<0.6	0.008	<0.10	<0.2	8.9	<10	0.8	11	<0.4	266
AENV-WRC-15-001 Location	885598-2	Location Blank	09	12V 483787 6350408	10	<0.3	<0.1	20	<0.3	<0.003	<0.05	<0.1	16	<5	<0.3	10	<0.2	220
AENV-WRC-16-Location	896208-2	Location Blank	10	12V 484152 6347051	7	<1.2	<0.4	15	<1.2	<0.012	<0.20	<0.4	8	<20	<1.2	8	<0.8	275
AENV-WRC-17-Location Blank	887081-21	Location Blank	11	12V 460013 6344599	<4.4	<1.3	<0.4	7	<1.3	<0.013	<0.22	0.6	15.1	<22	<1.3	16	<0.9	282

					Metals Concentration (ug/g dry weight)													
Sample ID	**EXOVA Sample ID**	**Media**	**Site Number**	**Location (UTM 12)**	**Iron**	**Lead**	**Lith-ium**	**Magnesium**	**Manganese**	**Mercury**	**Molybdenum**	**Nickel**	**Phos phorus**	**Potassium**	**Selenium**	**Silicon**	**Silver**	**Sodium**
AENV-WRC-18-Location Blank	887081-46	Location Blank	12	12V 459412 6347045	4.6	<1.4	<0.5	5	<1.4	<0.014	<0.23	<0.5	12.6	<23	<1.4	18	<0.9	268
AENV-WRC 19-Location Blank	886745-2	Location Blank	13	12V 468223 6310175	16	<0.3	<0.1	17	<0.3	<0.003	<0.05	<0.1	12.8	<5	<0.3	25	<0.2	238
AENV-WRC-35-Location Blank	887081-2	Location Blank	14	12V 463672 6326286	<9.1	<2.7	<0.9	<9	<2.7	<0.027	<0.45	<0.9	13.8	<45	<2.7	18	<1.8	279
AENV-WRC-36-Location	896208-16	Location Blank	15	12V 463617 6326364	15	2.2	<0.6	9	<1.8	<0.018	<0.31	<0.6	5.2	<30	<1.8	14	<1.2	258
AENV-WRC-40-Location	894583-22	Location Blank	16	12V 463891 6290600	7	<0.6	<0.2	14	<0.6	0.01	<0.10	0.3	8.6	<10	<0.6	7	<0.4	348
AENV-WRC-50-Location	896047-2	Location Blank	17	12V 460192 6353024	15	<0.7	<0.2	16	1.8	<0.007	<0.12	<0.2	10.8	<12	<0.7	13	0.5	266
AENV-WRC-58-Location Blank	886745-27	Location Blank	18	12V 462844 6363984	15	<0.3	<0.1	19	<0.3	<0.003	<0.05	<0.1	12	<5	2.4	38	<0.2	239
AENV-WRC-59-Location	894583-14	Location Blank	19	12V 496245 6256692	7	<1.0	<0.3	13	<1.0	<0.010	<0.16	<0.3	8.4	<16	<1.0	4	<0.6	340

Strontium to Zirconium

Table 3. The sample ID, media type, site number, and sampling location provided for each sample along with the laboratory results of strontium to zirconium.

					Metals Concentration (ug/g dry weight)								
Sample ID	**EXOVA Sample ID**	**Media**	**Site Number**	**Location (UTM)**	**Strontium**	**Sulfur**	**Thallium**	**Tin**	**Titanium**	**Uranium**	**Vanadium**	**Zinc**	**Zirconium**
AENV-WRC-01-001-Berry	884901-7	Berry	01	12V 473516 6330037	0.938	704	1.4	0.5	0.06	<0.2	<0.1	5.81	0.05
AENV-WRC-01-002-Berry	884901-10	Berry	01	12V 473533 6329987	0.78	604	1.7	0.4	0.07	<0.2	<0.1	6.17	<0.05
AENV-WRC-01-003-Berry	884901-13	Berry	01	12V 473528 6329993	0.838	612	1.6	0.4	0.08	<0.2	<0.1	6.62	<0.05
AENV-WRC-01-004-Berry	884901-16	Berry	01	12V 473530 6329996	0.73	560	1.7	0.4	<0.05	<0.2	<0.1	5.92	<0.05
AENV-WRC-01-005-Berry	884901-19	Berry	01	12V 473528 6329990	0.812	614	1.8	0.5	<0.05	<0.2	0.1	5.49	<0.05
AENV-WRC-02-001-Berry	884901-26	Berry	02	12V 471715 6330175	0.854	598	2.2	0.75	0.3	<0.2	<0.1	5	<0.05
AENV-WRC-02-002-Berry	884901-29	Berry	02	12V 471721 6330163	0.798	645	1.5	0.5	0.1	<0.2	<0.1	5.03	<0.05

					Metals Concentration (ug/g dry weight)								
Sample ID	**EXOVA Sample ID**	**Media**	**Site Number**	**Location (UTM)**	**Strontium**	**Sulfur**	**Thallium**	**Tin**	**Titanium**	**Uranium**	**Vanadium**	**Zinc**	**Zirconium**
AENV-WRC-02-003-Berry	884901-32	Berry	02	12V 471704 6330163	0.655	648	1.7	0.58	0.05	<0.2	0.2	4.8	<0.05
AENV-WRC-02-004-Berry	884901-35	Berry	02	12V 471692 6330169	0.959	639	1.7	0.51	0.1	<0.2	<0.1	5.87	<0.05
AENV-WRC-02-005-Berry	884901-38	Berry	02	12V 471690 6330160	0.91	552	1.6	0.5	<0.05	<0.2	0.2	6.09	<0.05
AENV-WRC-03-001-Berry	884901-45	Berry	03	12V 464201 6364624	1.88	506	1.3	0.2	<0.05	<0.2	<0.1	5.23	<0.05
AENV-WRC-03-002-Berry	884901-48	Berry	03	12V 464196 6364624	2.13	525	1.8	0.4	<0.05	<0.2	<0.1	6.11	<0.05
AENV-WRC-03-003-Berry	884901-51	Berry	03	12V 464204 6364621	2.31	559	1	0.4	<0.05	<0.2	<0.1	6.38	<0.05
AENV-WRC-03-004-Berry	884901-54	Berry	03	12V 464196 6364621	2.09	529	0.84	0.4	<0.05	<0.2	<0.1	6.22	<0.05
AENV-WRC-03-005-Berry	884901-57	Berry	03	12V 464191 6364615	2.15	494	1.5	0.4	<0.05	<0.2	<0.1	5.86	<0.05
AENV-WRC-07-001-Berry	886741-5	Berry	06	12V 464106 6344648	2.46	494	1.2	0.3	0.1	<0.2	<0.1	6.23	<0.05
AENV-WRC-07-002-Berry	886741-8	Berry	06	12V 464123 6344645	1.32	477	1.8	0.55	0.2	<0.2	<0.1	5.72	<0.05
AENV-WRC-07-003-Berry	886741-11	Berry	06	12V 464116 6344663	2.88	592	1.2	0.66	0.2	<0.2	<0.1	6.36	0.05
AENV-WRC-07-004-Berry	886741-14	Berry	06	12V 464123 6344672	1.77	453	1.2	0.4	0.3	<0.2	<0.1	4.9	0.06
AENV-WRC-07-005-Berry	886741-17	Berry	06	12V 464108 6344676	2.32	446	1.2	0.53	0.2	<0.2	<0.1	4.7	0.06
AENV-WRC-08-001-Berry	886741-24	Berry	07	12V 466958 6366367	3.98	475	1.5	0.3	0.3	<0.2	<0.1	6.21	<0.05
AENV-WRC-08-002-Berry	886741-27	Berry	07	12V 466953 6366364	3.06	509	1.9	0.4	0.2	<0.2	<0.1	6.84	<0.05
AENV-WRC-08-003-Berry	886741-30	Berry	07	12V 466951 6366361	3.35	494	1.6	0.3	0.3	<0.2	<0.1	5.81	<0.05
AENV-WRC-08-004-Berry	886741-33	Berry	07	12V 466946 6366357	3	397	1.7	0.2	0.1	<0.2	<0.1	5.28	<0.05
AENV-WRC-08-005-Berry	886741-36	Berry	07	12V 466949 6366364	4.46	484	1.7	0.5	0.1	<0.2	<0.1	6.58	<0.05
AENV-WRC-15-001-Berry	885598-7	Berry	09	12V 483787 6350408	1.24	686	1.9	0.4	0.4	<0.2	<0.1	6.86	<0.05
AENV-WRC-15-002-Berry	885598-10	Berry	09	12V 483777 6350392	0.837	622	1.9	0.83	0.1	<0.2	<0.1	6.56	<0.05
AENV-WRC-15-003-Berry	885598-13	Berry	09	12V 483772 6350399	0.737	650	1.3	0.54	<0.05	<0.2	0.2	5.64	<0.05
AENV-WRC-15-004-Berry	885598-16	Berry	09	12V 483772 6350392	0.852	660	1.2	0.71	0.05	<0.2	0.2	6.07	<0.05
AENV-WRC-15-005-Berry	885598-19	Berry	09	12V 483772 6350399	0.816	569	1.4	0.3	<0.05	<0.2	<0.1	5.17	<0.05
AENV-WRC-17-001-Fruit	887081-25	Berry	11	12V 460013 6344599	1.64	627	1.39	1.22	0.269	<0.5	<0.149	5.68	<0.050
AENV-WRC-17-002-Fruit	887081-29	Berry	11	12V 460012 6344596	1.41	574	1.69	0.512	0.293	<0.5	<0.149	4.71	<0.050
AENV-WRC-17-003-Fruit	887081-33	Berry	11	12V 460010 6344596	1.36	565	1.06	0.565	0.315	<0.5	<0.150	4.72	<0.050
AENV-WRC-17-004-Fruit	887081-37	Berry	11	12V 460005 6344593	1.29	625	1.55	0.75	0.263	<0.5	<0.149	4.77	<0.050
AENV-WRC-17-005-Fruit	887081-41	Berry	11	12V 460003 6344596	1.37	535	1.64	0.548	0.269	<0.5	<0.149	4.51	0.0747
AENV-WRC-18-001-	887081-	Berry	12	12V 459412	1.16	534	1.66	0.328	0.144	<0.5	<0.149	2.98	0.0746

					Metals Concentration (ug/g dry weight)								
Sample ID	**EXOVA Sample ID**	**Media**	**Site Number**	**Location (UTM)**	**Strontium**	**Sulfur**	**Thallium**	**Tin**	**Titanium**	**Uranium**	**Vanadium**	**Zinc**	**Zirconium**
Fruit	50			6347045									
AENV-WRC-18-002-Fruit	887081-54	Berry	12	12V 459416 6347054	1.67	510	1.75	0.273	0.194	<0.5	<0.15	3.33	0.0547
AENV-WRC-18-003-Fruit	887081-58	Berry	12	12V 459422 6347054	1.44	590	1.11	0.388	0.129	<0.5	<0.149	3.17	0.0696
AENV-WRC-18-004-Fruit	887081-62	Berry	12	12V 459426 6347060	1.32	524	1.44	0.299	0.14	<0.5	<0.150	3.18	<0.050
AENV-WRC-18-005-Fruit	887081-66	Berry	12	12V 459427 6347060	1.22	500	0.852	0.593	0.12	<0.5	<0.150	3.63	0.0748
AENV-WRC 19-001-Fruit	886745-5	Berry	13	12V 468223 6310175	1.67	655	1.49	<0.199	0.657	<0.2	<0.149	4.64	<0.050
AENV-WRC 19-002-Fruit	886745-9	Berry	13	12V 468123 6310152	2.04	613	1.27	0.417	0.709	<0.2	<0.149	5.03	<0.050
AENV-WRC 19-003-Fruit	886745-13	Berry	13	12V 468079 6310127	1.62	603	1.45	0.576	0.308	<0.2	<0.149	5.79	<0.050
AENV-WRC 19-004-Fruit	886745-17	Berry	13	12V 468066 6310130	1.58	693	1.3	<0.199	0.199	<0.2	<0.150	4.92	<0.050
AENV-WRC 19-005-Fruit	886745-21	Berry	13	12V 468106 6310087	1.03	586	1.03	0.362	0.972	<0.2	<0.149	4.38	<0.050
AENV-WRC-35-001-Fruit	887081-5	Berry	14	12V 463672 6326286	1.67	559	1.4	0.66	0.38	<0.5	<0.15	4.72	0.1
AENV-WRC-35-002-Fruit	887081-8	Berry	14	12V 463668 6326271	1.43	474	1.34	0.444	0.369	<0.5	<0.150	4.61	0.0649
AENV-WRC-35-003-Fruit	887081-11	Berry	14	12V 463646 6326280	0.734	607	1.29	0.554	0.395	<0.5	<0.150	4.48	0.0849
AENV-WRC-35-004-Fruit	887081-14	Berry	14	12V 463677 6326271	1.55	528	1.41	0.429	0.254	<0.5	<0.15	4.75	<0.050
AENV-WRC-35-005-Fruit	887081-17	Berry	14	12V 463682 6326265	1.16	407	1.25	0.423	0.269	<0.5	<0.149	4.13	0.0747
AENV-WRC-05-002-Foliage	895939-9	Foliage	04	12V 470514 6330812	9.78	1080	2.29	0.424	3.05	<0.5	0.543	25.9	0.224
AENV-WRC-05-003-Foliage	895939-12	Foliage	04	12V 470519 6330808	14.9	1020	2.46	0.408	2.89	<0.5	0.174	21.9	0.309
AENV-WRC-05-004-Foliage	895939-16	Foliage	04	12V 470515 6330808	12.2	986	2.13	0.542	2.69	<0.5	0.238	16.7	0.229
AENV-WRC-05-005-Foliage	895939-19	Foliage	04	12V 470512 6330812	20.9	965	2.13	0.585	2.28	<0.5	0.322	20.7	0.208
AENV-WRC-5-001-Foliage	895939-6	Foliage	04	12V 470512 6330815	13.1	1070	3.13	0.46	3.88	<0.5	0.305	22.6	0.245
AENV-WRC-06-001-Foliage	896047-26	Foliage	05	12V 463968 6345076	12.1	1230	2.27	0.642	4.73	<0.5	0.547	31	0.323
AENV-WRC-06-002-Foliage	896047-29	Foliage	05	12V 463974 6345085	12	1340	2.17	0.259	4.9	<0.5	0.652	25.7	0.353
AENV-WRC-06-003-Foliage	896047-32	Foliage	05	12V 463973 6345088	15.9	1280	1.91	0.689	4.27	<0.5	0.499	26.3	0.304
AENV-WRC-06-004-Foliage	896047-35	Foliage	05	12V 463973 6345088	11.9	1370	2.08	0.412	3.19	<0.5	0.417	28.9	0.184
AENV-WRC-06-005-Foliage	896047-38	Foliage	05	12V 463895 6344999	9.16	1130	3.04	0.494	1.92	<0.5	<0.150	25.9	0.11
AENV-WRC-14-001-Foliage	895939-26	Foliage	08	12V 484062 6347144	13.7	1110	1.43	0.572	2.86	<0.5	<0.149	20.3	0.169
AENV-WRC-14-002-Foliage	895939-29	Foliage	08	12V 484069 6347138	9.49	1110	1.5	<0.198	1.88	<0.5	0.193	28.3	0.104
AENV-WRC-14-003-Foliage	895939-32	Foliage	08	12V 484072 6347157	8.72	1080	2.35	0.462	1.95	<0.5	<0.149	25.9	0.0993
AENV-WRC-14-004-Foliage	895939-35	Foliage	08	12V 484059 6347160	15.6	1150	2.19	0.268	2.49	<0.5	0.164	25.6	0.144
AENV-WRC-14-005-Foliage	895939-38	Foliage	08	12V 484052 6347151	21	1100	2.38	0.556	1.64	<0.5	0.174	21.5	0.0645

					Metals Concentration (ug/g dry weight)								
Sample ID	**EXOVA Sample ID**	**Media**	**Site Number**	**Location (UTM)**	**Strontium**	**Sulfur**	**Thallium**	**Tin**	**Titanium**	**Uranium**	**Vanadium**	**Zinc**	**Zirconium**
AENV-WRC-17-001-Foliage	887081-26	Foliage	11	12V 460012 6344596	8.23	912	2.27	0.462	2.02	<0.5	<0.149	12.2	0.238
AENV-WRC-17-002-Foliage	887081-30	Foliage	11	12V 460012 6344596	9.64	1030	2.1	0.708	2.18	<0.5	<0.150	13.1	0.314
AENV-WRC-17-003-Foliage	887081-34	Foliage	11	12V 460010 6344596	7.87	1110	2.73	0.471	2.23	<0.5	<0.150	15	0.246
AENV-WRC-17-004-Foliage	887081-38	Foliage	11	12V 460005 6344593	9.18	782	1.66	0.365	1.53	<0.5	<0.15	11.4	0.225
AENV-WRC-17-005-Foliage	887081-42	Foliage	11	12V 460003 6344596	10.7	916	2.34	0.597	2.63	<0.5	0.16	12	0.346
AENV-WRC-18-001-Foliage	887081-51	Foliage	12	12V 459412 6347045	9.8	914	2.38	0.798	2.77	<0.5	<0.150	12.5	0.339
AENV-WRC-18-002-Foliage	887081-55	Foliage	12	12V 459416 6347054	9.35	834	1.95	0.808	1.56	<0.5	<0.150	11.6	0.279
AENV-WRC-18-003-Foliage	887081-59	Foliage	12	12V 459422 6347054	8.99	883	1.99	0.532	1.76	<0.5	<0.15	8.54	0.251
AENV-WRC-18-004-Foliage	887081-63	Foliage	12	12V 459426 6347060	11.7	881	2.3	0.705	2.76	<0.5	<0.149	9.02	0.288
AENV-WRC-18-005-Foliage	887081-67	Foliage	12	12V 459427 6347060	8.6	1040	2.24	0.56	2	<0.5	<0.15	8.83	0.248
AENV-WRC 19-001-Foliage	886745-6	Foliage	13	12V 468223 6310175	17.4	891	2.1	0.499	7.08	<0.2	0.728	17.7	0.354
AENV-WRC 19-002-Foliage	886745-10	Foliage	13	12V 468123 6310152	17	805	1.03	0.589	3.04	<0.2	0.22	16.8	0.185
AENV-WRC 19-003-Foliage	886745-14	Foliage	13	12V 468079 6310127	9.4	852	2.35	0.432	2.58	<0.2	0.189	16.9	0.134
AENV-WRC 19-004-Foliage	886745-18	Foliage	13	12V 468066 6310130	13.3	798	2.32	0.337	2.96	<0.2	0.223	13.1	0.218
AENV-WRC 19-005-Foliage	886745-22	Foliage	13	12V 468106 6310087	10.3	804	2.14	0.553	2.93	<0.2	<0.150	16.5	0.224
AENV-WRC-36-001-Foliage	896208-21	Foliage	15	12V 463617 6326364	12.1	954	1.79	0.26	3.2	<0.5	0.74	20.2	0.29
AENV-WRC-36-002-Foliage	896208-24	Foliage	15	12V 463620 6326361	10.8	1070	2.01	<0.20	4	<0.5	0.77	20.7	0.44
AENV-WRC-36-003-Foliage	896208-27	Foliage	15	12V 463647 6326364	10.4	1160	1.57	0.24	4.32	<0.5	0.93	24.9	0.42
AENV-WRC-36-004-Foliage	896208-30	Foliage	15	12V 463617 6326367	14.1	952	1.89	0.36	4.26	<0.5	0.75	23.6	0.37
AENV-WRC-36-005-Foliage	896208-33	Foliage	15	12V 463617 6326370	11.4	1040	1.86	0.3	4.9	<0.5	0.74	24.5	0.37
AENV-WRC-40-001-Foliage	894583-27	Foliage	16	12V 463891 6290600	33.6	1120	2.25	0.429	2.76	<0.5	<0.15	26.2	0.144
AENV-WRC-40-002-Foliage	894583-3	Foliage	16	12V 463892 6290600	26.8	955	2.72	0.439	3.84	<0.5	0.259	24.9	0.174
AENV-WRC-40-003-Foliage	894583-6	Foliage	16	12V 463892 6290603	23.9	897	2.46	0.64	2.27	<0.5	0.213	24	0.0546
AENV-WRC-40-004-Foliage	894583-9	Foliage	16	12V 463902 6290606	21.9	868	2.2	0.492	2.84	<0.5	0.363	22.1	0.159
AENV-WRC-40-005-Foliage	894583-12	Foliage	16	12V 463896 6290603	19.5	729	2.06	0.448	1.49	<0.5	0.189	18.4	0.0995
AENV-WRC-50-001-Foliage	896047-7	Foliage	17	12V 460192 6353024	13.1	891	2.46	0.628	2.19	<0.5	<0.150	25.5	0.0897
AENV-WRC-50-002-Foliage	896047-10	Foliage	17	12V 460189 6353024	14.8	1060	1.95	0.519	3.14	<0.5	0.288	28.3	0.195
AENV-WRC-50-003-Foliage	896047-13	Foliage	17	12V 460192 6353027	19.5	969	1.65	0.692	2.14	<0.5	0.154	24.8	0.0945
AENV-WRC-50-004-Foliage	896047-16	Foliage	17	12V 460198 6353030	17.7	940	2.11	0.58	1.78	<0.5	0.169	24.7	0.109

					Metals Concentration (ug/g dry weight)								
Sample ID	**EXOVA Sample ID**	**Media**	**Site Number**	**Location (UTM)**	**Strontium**	**Sulfur**	**Thallium**	**Tin**	**Titanium**	**Uranium**	**Vanadium**	**Zinc**	**Zirconium**
AENV-WRC-50-005-Foliage	896047-19	Foliage	17	12V 460204 6353030	14.9	876	2	0.494	3.26	<0.5	0.339	26	0.214
AENV-WRC-58-001-Foliage	886745-30	Foliage	18	12V 462844 6363984	9.7	999	1.97	0.662	4	<0.2	0.382	17.7	0.224
AENV-WRC-58-002-Foliage	886745-33	Foliage	18	12V 462848 6363962	11.2	1120	1.68	0.583	8.41	<0.3	0.614	28.2	0.492
AENV-WRC-58-003-Foliage	886745-36	Foliage	18	12V 462847 6363962	11.2	1010	1.16	0.631	9.65	<0.3	0.825	28.2	0.567
AENV-WRC-58-004-Foliage	886745-39	Foliage	18	12V 462828 6363971	11.6	1070	1.26	0.669	4.14	<0.3	0.292	25.9	0.334
AENV-WRC-58-005-Foliage	886745-42	Foliage	18	12V 462838 6363971	7.71	873	1.79	0.554	4.76	<0.4	<0.234	14	0.25
AENV-WRC-16-001-Rhizome	896208-6	Rhizome	10	12V 484152 6347051	27.3	2850	1.93	0.64	0.34	<0.5	0.21	40	0.05
AENV-WRC-16-002-Rhizome	896208-8	Rhizome	10	12V 484164 6347051	32.3	2360	1.51	0.42	1.44	<0.5	0.18	33.3	0.09
AENV-WRC-16-003-Rhizome	896208-10	Rhizome	10	12V 484150 6347051	32.2	2660	1.84	0.21	0.12	<0.5	0.32	39.1	<0.05
AENV-WRC-16-004-Rhizome	896208-12	Rhizome	10	12V 484149 6347051	26.5	2190	1.88	0.46	0.19	<0.5	<0.15	41.3	0.08
AENV-WRC-16-005-Rhizome	896208-14	Rhizome	10	12V 484127 6347048	27.5	1770	1.75	0.6	0.35	<0.5	0.22	35.3	0.13
AENV-WRC-59-001-Rhizome	894583-16	Rhizome	19	12V 496187 6256732	55.7	3640	2.98	0.348	4.61	<0.5	0.681	29.8	0.234
AENV-WRC-59-002-Rhizome	894583-17	Rhizome	19	12V 496245 6256692	33.3	3020	2.76	0.444	1.52	<0.5	0.225	24.5	0.105
AENV-WRC-59-003-Rhizome	894583-18	Rhizome	19	12V 496245 6256689	32.9	2890	1.55	0.434	2.62	<0.5	0.419	27.8	0.234
AENV-WRC-59-004-Rhizome	894583-19	Rhizome	19	12V 496245 6256686	48.4	5520	2.56	0.389	0.942	<0.5	<0.150	14.9	<0.050
AENV-WRC-59-005-Rhizome	894583-20	Rhizome	19	12V 496243 6256689	36.2	3420	1.74	0.52	0.925	<0.5	<0.15	37	0.115
AENV-WRC-01-001-Metal	884901-6	Soil	01	12V 473516 6330037	3.72	-	0.7	<0.2	32.4	<0.2	4.5	3.1	0.2
AENV-WRC-01-002-Metal	884901-9	Soil	01	12V 473533 6329987	2.12	-	<0.3	<0.2	51.4	<0.2	5.1	4.1	0.4
AENV-WRC-01-003-Metal	884901-12	Soil	01	12V 473528 6329993	2.32	-	0.7	<0.2	47.4	<0.2	5.2	3.6	0.3
AENV-WRC-01-004-Metal	884901-15	Soil	01	12V 473530 6329996	2.98	-	<0.3	<0.2	40	<0.2	2.7	2.2	0.3
AENV-WRC-01-005-Metal	884901-18	Soil	01	12V 473528 6329990	2.08	-	<0.3	<0.2	41.3	<0.2	2.9	1.9	0.3
AENV-WRC-02-001-Metal	884901-25	Soil	02	12V 471715 6330175	2.24	--	0.5	0.2	56.1	<0.2	6	14.8	0.2
AENV-WRC-02-002-Metal	884901-28	Soil	02	12V 471721 6330163	3.12	-	0.4	<0.2	74.6	<0.2	12.1	21	0.5
AENV-WRC-02-003-Metal	884901-31	Soil	02	12V 471704 6330163	4.96	-	1	0.3	66.5	<0.2	10.2	18.1	0.4
AENV-WRC-02-004-Metal	884901-34	Soil	02	12V 471692 6330169	2	-	<0.3	<0.2	57.8	<0.2	8.8	18	0.4
AENV-WRC-02-005-Metal	884901-37	Soil	02	12V 471690 6330160	3.67	-	<0.3	<0.2	49.2	<0.2	12.5	18	0.3
AENV-WRC-03-001-Metal	884901-44	Soil	03	12V 464201 6364624	5.19	-	0.2	<0.2	39.5	<0.2	6.6	9	0.3
AENV-WRC-03-002-Metal	884901-47	Soil	03	12V 464196 6364624	6.1	-	<0.3	<0.2	52.6	<0.2	8.4	11.8	0.5
AENV-WRC-03-003-Metal	884901-50	Soil	03	12V 464204 6364621	8.98	-	<0.3	<0.2	42.8	<0.2	6.7	14.7	0.4

					Metals Concentration (ug/g dry weight)								
Sample ID	**EXOVA Sample ID**	**Media**	**Site Number**	**Location (UTM)**	**Strontium**	**Sulfur**	**Thallium**	**Tin**	**Titanium**	**Uranium**	**Vanadium**	**Zinc**	**Zirconium**
AENV-WRC-03-004-Metal	884901-53	Soil	03	12V 464196 6364621	5.26	-	<0.3	<0.2	55.6	<0.2	9	14	0.4
AENV-WRC-03-005-Metal	884901-56	Soil	03	12V 464191 6364615	5.07	-	<0.3	<0.2	67.5	<0.2	13.6	9.6	0.4
AENV-WRC-05-002-Metal	895939-8	Soil	04	12V 470514 6330812	1.52	-	<0.3	<0.2	20.2	<0.5	3.6	1.8	0.23
AENV-WRC-05-003-Metal	895939-11	Soil	04	12V 470519 6330808	2.48	-	<0.3	<0.2	37.2	<0.5	4	1.9	0.25
AENV-WRC-05-004-Metal	895939-15	Soil	04	12V 470515 6330808	2.24	-	0.6	<0.2	17.8	<0.5	5.9	2.9	0.21
AENV-WRC-05-005-Metal	895939-18	Soil	04	12V 470512 6330812	2.6	-	0.4	<0.2	24.8	<0.5	6.1	2.6	0.18
AENV-WRC-5-001-Metal	895939-5	Soil	04	12V 470512 6330815	1.17	-	0.6	<0.2	33.5	<0.5	2.9	2.2	0.26
AENV-WRC-06-001-Metal	896047-25	Soil	05	12V 463968 6345076	10.7	-	<0.3	0.4	82.9	<0.5	38.6	32	6.28
AENV-WRC-06-002-Metal	896047-28	Soil	05	12V 463974 6345085	9.32	-	<0.3	0.2	62.1	<0.5	27.6	18.4	1.58
AENV-WRC-06-003-Metal	896047-31	Soil	05	12V 463973 6345088	10.6	-	<0.3	0.4	79.3	<0.5	40.1	24.7	2.52
AENV-WRC-06-004-Metal	896047-34	Soil	05	12V 463973 6345088	14.5	-	<0.3	0.4	64.6	<0.5	24.4	44.7	0.72
AENV-WRC-06-005-Metal	896047-37	Soil	05	12V 463895 6344999	5.07	-	<0.3	0.4	51.1	<0.5	12.3	10	0.73
AENV-WRC-07-001-Metal	886741-7	Soil	06	12V 464106 6344648	8.43	-	0.5	0.7	51.9	<0.2	7.8	36.3	0.28
AENV-WRC-07-002-Metal	886741-10	Soil	06	12V 464123 6344645	6.98	-	0.4	0.3	51.4	<0.2	8.6	26	0.33
AENV-WRC-07-003-Metal	886741-13	Soil	06	12V 464116 6344663	8.06	-	0.4	<0.2	52.1	<0.2	7	29.4	0.27
AENV-WRC-07-004-Metal	886741-16	Soil	06	12V 464123 6344672	9.92	-	0.3	1.2	53.6	<0.2	7.4	32	0.25
AENV-WRC-07-005-Metal	886741-19	Soil	06	12V 464108 6344676	9.67	-	0.4	0.2	52.9	<0.2	9	28.9	0.33
AENV-WRC-08-001-Metal	886741-26	Soil	07	12V 466958 6366367	4.52	-	<0.3	0.4	60.5	<0.2	6	22.2	0.52
AENV-WRC-08-002-Metal	886741-29	Soil	07	12V 466953 6366364	3.93	-	0.4	<0.2	56.1	<0.2	6.2	21.6	0.32
AENV-WRC-08-003-Metal	886741-32	Soil	07	12V 466951 6366361	4.46	-	<0.3	0.2	65.9	0.4	6.5	15.6	0.51
AENV-WRC-08-004-Metal	886741-35	Soil	07	12V 466946 6366357	4.65	-	<0.3	<0.2	52	<0.2	5.8	10.5	0.22
AENV-WRC-14-001-Metal	895939-25	Soil	08	12V 484062 6347144	12.8	-	0.5	0.4	71.1	<0.5	19.8	6.9	0.64
AENV-WRC-14-002-Metal	895939-28	Soil	08	12V 484069 6347138	18.5	-	0.9	0.4	58	1	15.9	9	1.74
AENV-WRC-14-003-Metal	895939-31	Soil	08	12V 484072 6347157	16.3	-	0.9	0.3	62.8	1	13	7.6	1.4
AENV-WRC-14-004-Metal	895939-34	Soil	08	12V 484059 6347160	14.7	-	<0.3	<0.2	93.5	0.7	17.3	8.3	1.65
AENV-WRC-14-005-Metal	895939-37	Soil	08	12V 484052 6347151	21.6	-	<0.3	0.5	99.9	2	22.5	14	1.56
AENV-WRC-15-001-Metal	885598-6	Soil	09	12V 483787 6350408	2.99	-	<0.3	<0.2	34.6	<0.2	2.2	3.3	0.4
AENV-WRC-15-002-Metal	885598-9	Soil	09	12V 483777 6350392	3.78	-	<0.3	<0.2	27.8	<0.2	2.4	3.5	0.4
AENV-WRC-15-003-Metal	885598-12	Soil	09	12V 483772 6350399	3.88	-	0.3	<0.2	28	<0.2	2.1	3.6	0.5

					Metals Concentration (ug/g dry weight)								
Sample ID	**EXOVA Sample ID**	**Media**	**Site Number**	**Location (UTM)**	**Strontium**	**Sulfur**	**Thallium**	**Tin**	**Titanium**	**Uranium**	**Vanadium**	**Zinc**	**Zirconium**
AENV-WRC-15-004-Metal	885598-15	Soil	09	12V 483772 6350392	4.5	-	0.6	<0.2	19	<0.2	1.7	11	0.3
AENV-WRC-15-005-Metal	885598-18	Soil	09	12V 483772 6350399	3.61	-	<0.3	<0.2	39.9	<0.2	3	5	0.4
AENV-WRC-16-001-Metal/PAH	896208-5	Soil	10	12V 484152 6347051	49.6	-	1.4	0.5	47	0.7	10.7	20.1	3.77
AENV-WRC-16-002-Meta/PAHl	896208-7	Soil	10	12V 484164 6347051	57.3	-	1.7	0.6	57.7	<0.5	13.4	21.3	1.54
AENV-WRC-16-003-Metal/PAH	896208-9	Soil	10	12V 484150 6347051	50.2	-	1.9	0.4	51.6	0.7	14.6	26.1	4.28
AENV-WRC-16-004-Metal/PAH	896208-11	Soil	10	12V 484149 6347051	52.6	-	1.4	0.6	45.2	1	9.6	19.9	4.19
AENV-WRC-16-005-Metal/PAH	896208-13	Soil	10	12V 484127 6347048	51.1	-	1.7	0.3	44.8	0.8	16.7	26.4	3.54
AENV-WRC-17-001-Metal	887081-28	Soil	11	12V 460013 6344599	7.52	-	<0.3	0.5	81.8	<0.5	15.7	10.2	0.28
AENV-WRC-17-002-Metal	887081-32	Soil	11	12V 460012 6344596	5.6	-	<0.3	0.4	87.5	<0.5	19.3	8.8	0.25
AENV-WRC-17-003-Metal	887081-36	Soil	11	12V 460010 6344596	6.06	-	<0.3	<0.2	82.9	<0.5	16.5	8.3	0.32
AENV-WRC-17-004-Metal	887081-40	Soil	11	12V 460005 6344593	17.4	-	<0.3	0.4	87.9	<0.5	17.9	20.8	1.39
AENV-WRC-17-005-Metal	887081-44	Soil	11	12V 460003 6344596	9.08	-	<0.3	0.3	93	<0.5	17.7	11.5	0.55
AENV-WRC-18-001-Metal	887081-53	Soil	12	12V 459412 6347045	11	-	<0.3	0.3	84.4	<0.5	16.6	10.7	0.55
AENV-WRC-18-002-Metal	887081-57	Soil	12	12V 459416 6347054	18.5	-	<0.3	0.6	66.3	<0.5	17.9	12.1	1.43
AENV-WRC-18-003-Metal	887081-61	Soil	12	12V 459422 6347054	10.2	-	<0.3	0.2	81.5	<0.5	13.1	7.3	0.66
AENV-WRC-18-004-Metal	887081-65	Soil	12	12V 459426 6347060	8.32	-	<0.3	0.4	94.2	<0.5	14.9	9.5	0.7
AENV-WRC-18-005-Metal	887081-69	Soil	12	12V 459427 6347060	9.15	-	<0.3	0.3	90	<0.5	18.3	9.2	0.52
AENV-WRC 19-001-Metal	886745-8	Soil	13	12V 468223 6310175	5.88	-	<0.3	<0.2	48.3	<0.2	6.9	3.8	0.41
AENV-WRC 19-002-Metal	886745-12	Soil	13	12V 468123 6310152	6.4	-	<0.3	0.2	49.8	<0.2	13.6	7.2	0.21
AENV-WRC 19-003-Metal	886745-16	Soil	13	12V 468079 6310127	5.49	-	<0.3	<0.2	52.7	<0.2	12.1	8.5	0.35
AENV-WRC 19-004-Metal	886745-20	Soil	13	12V 468066 6310130	5.58	-	<0.3	<0.2	52.1	<0.2	12.4	7.1	0.34
AENV-WRC 19-005-Metal	886745-24	Soil	13	12V 468106 6310087	4.57	-	<0.3	<0.2	45.6	<0.2	6.6	3.6	0.29
AENV-WRC-35-001-Metal	887081-7	Soil	14	12V 463672 6326286	9.26	-	<0.3	0.4	42	<0.5	9.7	23.1	0.27
AENV-WRC-35-002-Metal	887081-10	Soil	14	12V 463668 6326271	8.88	-	0.7	0.4	43.3	<0.5	7.4	17.9	0.37
AENV-WRC-35-003-Metal	887081-13	Soil	14	12V 463646 6326280	8.3	-	0.4	0.3	44	<0.5	8.4	14.9	0.26
AENV-WRC-35-004-Metal	887081-16	Soil	14	12V 463677 6326271	9.62	-	<0.3	0.4	39.3	<0.5	7.9	17.3	0.34
AENV-WRC-35-005-Metal	887081-19	Soil	14	12V 463682 6326265	17.8	-	1.3	<0.2	42.1	<0.5	12.3	38.4	0.67
AENV-WRC-36-001-Metal	896208-20	Soil	15	12V 463617 6326364	10.5	-	0.8	<0.2	38.2	<0.5	8	13.4	0.34
AENV-WRC-36-002-Metal	896208-23	Soil	15	12V 463620 6326361	14.4	-	0.8	0.3	43.4	<0.5	12.1	14.4	0.39

					Metals Concentration (ug/g dry weight)								
Sample ID	**EXOVA Sample ID**	**Media**	**Site Number**	**Location (UTM)**	**Strontium**	**Sulfur**	**Thallium**	**Tin**	**Titanium**	**Uranium**	**Vanadium**	**Zinc**	**Zirconium**
AENV-WRC-36-003-Metal	896208-26	Soil	15	12V 463647 6326364	4.9	-	<0.3	<0.2	39.9	<0.5	6.7	4.3	0.25
AENV-WRC-36-004-Metal	896208-29	Soil	15	12V 463617 6326367	5.42	-	<0.3	<0.2	37.1	<0.5	3.9	10.9	0.36
AENV-WRC-36-005-Metal	896208-32	Soil	15	12V 463617 6326370	18.5	-	1.4	0.3	49.4	<0.5	16.5	19.7	0.37
AENV-WRC-40-001-Metal	894583-26	Soil	16	12V 463891 6290600	161	-	0.4	1.2	74.9	7.4	40.6	33.1	5.36
AENV-WRC-40-002-Metal	894583-2	Soil	16	12V 463892 6290600	88.4	-	1.8	0.8	30.5	2	20.8	20	3.72
AENV-WRC-40-003-Metal	894583-5	Soil	16	12V 463892 6290603	96.8	-	1.8	0.6	39.9	3	21.3	34.6	3.58
AENV-WRC-40-004-Metal	894583-8	Soil	16	12V 463902 6290606	73.1	-	0.8	0.3	74	1	29.2	28.9	3.17
AENV-WRC-40-005-Metal	894583-11	Soil	16	12V 463896 6290603	89.2	-	0.4	0.6	71.1	4	29.1	20	3.13
AENV-WRC-50-001-Metal	896047-6	Soil	17	12V 460192 6353024	174	-	2.4	0.4	18.3	<0.5	4.1	54.6	0.58
AENV-WRC-50-002-Metal	896047-9	Soil	17	12V 460189 6353024	62.3	-	1.7	0.4	36.4	<0.5	15.1	72.7	1.58
AENV-WRC-50-003-Metal	896047-12	Soil	17	12V 460192 6353027	162	-	2	<0.2	12.9	<0.5	6.7	34.5	0.53
AENV-WRC-50-004-Metal	896047-15	Soil	17	12V 460198 6353030	174	-	2.6	0.2	13	0.8	6.6	56.8	0.59
AENV-WRC-50-005-Metal	896047-18	Soil	17	12V 460204 6353030	10.4	-	0.5	<0.2	69	<0.5	9.6	7.2	1.07
AENV-WRC-58-001-Metal	886745-32	Soil	18	12V 462844 6363984	8.81	-	0.7	<0.2	77.1	<0.2	10.1	9.2	0.31
AENV-WRC-58-002-Metal	886745-35	Soil	18	12V 462848 6363962	9.07	-	1.1	<0.2	62.5	<0.2	7.8	8.9	0.33
AENV-WRC-58-003-Metal	886745-38	Soil	18	12V 462847 6363962	10.9	-	0.8	0.2	70.5	<0.2	9.1	12.1	0.4
AENV-WRC-58-004-Metal	886745-41	Soil	18	12V 462828 6363971	16.1	-	1.1	0.4	44	<0.2	5.4	17.4	0.43
AENV-WRC-58-005-Metal	886745-44	Soil	18	12V 462838 6363971	9.61	--	0.9	0.4	53.8	<0.2	7.4	9.4	0.27
AENV-WRC-01-001-Trip-Metal	884901-1	Trip Blank	01	12V 473516 6330037	<0.02	-	2	2	0.5	<1	<0.1	4.7	0.3
AENV-WRC-02-001-Trip-Metal	884901-20	Trip Blank	02	12V 471715 6330175	<0.02	-	3	<0.2	0.4	<2	<0.1	2	<0.05
AENV-WRC-03-001-Trip-Metal	884901-39	Trip Blank	03	12V 464201 6364624	<0.02	-	<0.3	<0.2	1	<2	<0.1	1	<0.05
AENV-WRC-5-Trip	895939-1	Trip Blank	04	12V 470512 6330815	<0.04	-	1.4	<0.4	0.31	<1	<0.2	0.9	<0.11
AENV-WRC-06-Trip	896047-20	Trip Blank	05	12V 463968 6345076	<0.09	-	3.9	<0.9	0.62	<2	<0.5	1.1	<0.23
AENV-WRC-07-Trip Blank	886741-1	Trip Blank	06	12V 464106 6344648	<0.02	-	<0.3	1.9	<0.05	<2	<0.1	<0.1	<0.05
AENV-WRC-08-Trip Blank	886741-20	Trip Blank	07	12V 466958 6366367	<0.02	-	<0.3	<0.2	<0.05	<1	0.9	1.8	<0.05
AENV-WRC-14-Trip	895939-20	Trip Blank	08	12V 484062 6347144	<0.03	-	1.7	<0.3	0.19	<0.8	<0.2	0.6	0.1
AENV-WRC-15-001 Trip	885598-1	Trip Blank	09	12V 483787 6350408	<0.02	-	<0.3	1	<0.05	<1	<0.1	1	<0.05
AENV-WRC-16-Trip	896208-1	Trip Blank	10	12V 484152 6347051	<0.06	-	<0.9	0.8	<0.15	<2	<0.3	1.5	<0.15
AENV-WRC-17-Trip Blank	887081-20	Trip Blank	11	12V 460013 6344599	<0.10	-	1.7	1.1	<0.25	<1	0.7	<0.5	<0.25

					Metals Concentration (ug/g dry weight)								
Sample ID	**EXOVA Sample ID**	**Media**	**Site Number**	**Location (UTM)**	**Strontium**	**Sulfur**	**Thallium**	**Tin**	**Titanium**	**Uranium**	**Vanadium**	**Zinc**	**Zirconium**
AENV-WRC-18-Trip Blank	887081-45	Trip Blank	12	12V 459412 6347045	<0.08	-	<1.2	<0.8	<0.21	<1	<0.4	0.6	<0.21
AENV-WRC 19-Trip Blank	886745-1	Trip Blank	13	12V 468223 6310175	<0.02	-	<0.3	<0.2	<0.05	<1	<0.1	<0.1	<0.05
AENV-WRC-35-Trip Blank	887081-1	Trip Blank	14	12V 463672 6326286	<0.11	-	<1.7	1.4	<0.29	<1	0.6	0.8	<0.29
AENV-WRC-36-Trip	896208-15	Trip Blank	15	12V 463617 6326364	<0.06	-	1.3	<0.6	0.26	<3	<0.3	0.8	<0.16
AENV-WRC-40-Trip	894583-21	Trip Blank	16	12V 463891 6290600	<0.04	-	0.9	<0.4	<0.10	<1	<0.2	2.2	0.14
AENV-WRC-50-Trip	896047-1	Trip Blank	17	12V 460192 6353024	<0.04	-	2.2	0.5	<0.09	<0.9	<0.2	2.9	<0.09
AENV-WRC-58-Trip Blank	886745-26	Trip Blank	18	12V 462844 6363984	<0.02	-	2	<0.2	0.62	<2	<0.1	<0.1	<0.05
AENV-WRC-59-Trip	894583-13	Trip Blank	19	12V 496245 6256692	<0.05	-	<0.8	<0.5	0.15	<1	<0.3	1.7	0.27
AENV-WRC-01-001-Location	884901-2	Location Blank	01	12V 473516 6330037	<0.02	-	<0.3	<0.2	<0.05	<1	<0.1	1	0.3
AENV-WRC-02-001-Location	884901-21	Location Blank	02	12V 471715 6330175	<0.02	-	<0.3	<0.2	<0.05	<2	<0.1	2	<0.05
AENV-WRC-03-001-Location	884901-40	Location Blank	03	12V 464201 6364624	<0.02	-	<0.3	<0.2	9	<30	<0.1	20	<0.05
AENV-WRC-5-Location	895939-2	Location Blank	04	12V 470512 6330815	<0.04	-	1.7	<0.4	0.47	<1	<0.2	0.6	0.14
AENV-WRC-06-Location	896047-21	Location Blank	05	12V 463968 6345076	<0.08	-	<1.2	<0.8	0.22	<2	<0.4	1.3	<0.20
AENV-WRC-07-Location Blank	886741-2	Location Blank	06	12V 464106 6344648	<0.02	-	<0.3	<0.2	<0.05	<2	1.2	<0.1	<0.05
AENV-WRC-08-Location Blank	886741-21	Location Blank	07	12V 466958 6366367	<0.02	-	<0.3	1	<0.05	<1	<0.1	<0.1	<0.05
AENV-WRC-14-Location	895939-21	Location Blank	08	12V 484062 6347144	<0.04	-	1	<0.4	0.17	<1	<0.2	0.6	0.11
AENV-WRC-15-001 Location	885598-2	Location Blank	09	12V 483787 6350408	<0.02	-	<0.3	<0.2	<0.05	<1	<0.1	0.8	<0.05
AENV-WRC-16-Location	896208-2	Location Blank	10	12V 484152 6347051	<0.08	-	3.1	<0.8	<0.20	<2	<0.4	0.7	<0.20
AENV-WRC-17-Location Blank	887081-21	Location Blank	11	12V 460013 6344599	<0.09	-	<1.3	1.1	<0.22	<1	<0.4	<0.4	<0.22
AENV-WRC-18-Location Blank	887081-46	Location Blank	12	12V 459412 6347045	<0.09	-	<1.4	<0.9	<0.23	<1	1.3	<0.5	<0.23
AENV-WRC 19-Location Blank	886745-2	Location Blank	13	12V 468223 6310175	<0.02	-	<0.3	1.1	0.26	<0.8	<0.1	0.4	<0.05
AENV-WRC-35-Location Blank	887081-2	Location Blank	14	12V 463672 6326286	<0.18	-	<2.7	<1.8	<0.45	<2	<0.9	<0.9	<0.45
AENV-WRC-36-Location	896208-16	Location Blank	15	12V 463617 6326364	<0.12	-	3	<1.2	0.37	<3	<0.6	0.6	<0.31
AENV-WRC-40-Location	894583-22	Location Blank	16	12V 463891 6290600	<0.04	-	<0.6	<0.4	<0.10	<1	<0.2	0.5	0.14
AENV-WRC-50-Location	896047-2	Location Blank	17	12V 460192 6353024	<0.05	-	1.9	<0.5	0.13	<1	<0.2	1.9	<0.12
AENV-WRC-58-Location Blank	886745-27	Location Blank	18	12V 462844 6363984	<0.02	-	<0.3	<0.2	0.67	<2	1.2	<0.1	0.39
AENV-WRC-59-Location	894583-14	Location Blank	19	12V 496245 6256692	<0.06	-	1.4	<0.6	<0.16	<2	<0.3	0.6	<0.16

PAHs in Soil

The PAH analysis in soil was performed by both EXOVA and Pacific Rim Laboratories. EXOVA tested the soil and blanks for PAHs while Pacific Rim Laboratories analysed the berry, foliage, and rhizome samples. Both suites were too large so that tables had to be broken up into two parts. The results are shown in Tables 4 and 5. Quality control measurements such as matrix spikes were included where available. Concentrations marked with a "<" are below the method or sample detection limit. Details on the method detection limit can be found in Appendix 2. Locations projected in NAD83.

EXOVA Results: Acenaphthene to Dibenzo(a,h)anthacene

Table 4. The sample ID, media, site number and sampling location provided for each sample along with laboratory results of acenaphthene to dibenzo(a,h)anthacene.

					PAH Concentrations (ug/g dry weight)									
Sample ID	**EXOVA Sample ID**	**Media**	**Site Number**	**Location (UTM 12)**	**Acenaphthene**	**Acenaphthylene**	**Anthracene**	**Benzo(a) anthracene**	**Benzo(a) pyrene**	**Benzo(b) fluoranthene**	**Benzo(g,h,i) perylene**	**Benzo(k) fluoranthene**	**Chrysene**	**Dibenzo(a,h) anthracene**
AENV-WRC-01-001-PAH	884901-5	Soil	01	12V 473516 6330037	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
AENV-WRC-01-002-PAH	884901-8	Soil	01	12V 473533 6329987	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
AENV-WRC-01-003-PAH	884901-11	Soil	01	12V 473528 6329993	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
AENV-WRC-01-004-PAH	884901-14	Soil	01	12V 473530 6329996	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
AENV-WRC-01-005-PAH	884901-17	Soil	01	12V 473528 6329990	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
AENV-WRC-02-001-PAH	884901-24	Soil	02	12V 471715 6330175	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
AENV-WRC-02-002-PAH	884901-27	Soil	02	12V 471721 6330163	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
AENV-WRC-02-003-PAH	884901-30	Soil	02	12V 471704 6330163	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
AENV-WRC-02-004-PAH	884901-33	Soil	02	12V 471692 6330169	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
AENV-WRC-02-005-PAH	884901-36	Soil	02	12V 471690 6330160	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
AENV-WRC-03-001-PAH	884901-43	Soil	03	12V 464201 6364624	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
AENV-WRC-03-002-PAH	884901-46	Soil	03	12V 464196 6364624	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
AENV-WRC-03-003-PAH	884901-49	Soil	03	12V 464204 6364621	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
AENV-WRC-03-004-PAH	884901-52	Soil	03	12V 464196 6364621	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
AENV-WRC-03-005-PAH	884901-55	Soil	03	12V 464191 6364615	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
AENV-WRC-05-002-PAH	895939-7	Soil	04	12V 470514 6330812	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03

					PAH Concentrations (ug/g dry weight)									
Sample ID	**EXOVA Sample ID**	**Media**	**Site Number**	**Location (UTM 12)**	**Acenaphthene**	**Acenaphthylene**	**Anthracene**	**Benzo(a) anthracene**	**Benzo(a) pyrene**	**Benzo(b) fluoranthene**	**Benzo(g,h,i) perylene**	**Benzo(k) fluoranthene**	**Chrysene**	**Dibenzo(a,h) anthracene**
AENV-WRC-05-003-PAH	895939-10	Soil	04	12V 470519 6330808	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
AENV-WRC-05-004-PAH	895939-14	Soil	04	12V 470515 6330808	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
AENV-WRC-05-005-PAH	895939-17	Soil	04	12V 470512 6330812	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
AENV-WRC-5-001-PAH	895939-4	Soil	04	12V 470512 6330815	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
AENV-WRC-06-001-PAH	896047-24	Soil	05	12V 463968 6345076	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
AENV-WRC-06-002-PAH	896047-27	Soil	05	12V 463974 6345085	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
AENV-WRC-06-003-PAH	896047-30	Soil	05	12V 463973 6345088	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
AENV-WRC-06-004-PAH	896047-33	Soil	05	12V 463973 6345088	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
AENV-WRC-06-005-PAH	896047-36	Soil	05	12V 463895 6344999	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
AENV-WRC-07-001-PAH	886741-6	Soil	06	12V 464106 6344648	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
AENV-WRC-07-002-PAH	886741-9	Soil	06	12V 464123 6344645	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
AENV-WRC-07-003-PAH	886741-12	Soil	06	12V 464116 6344663	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
AENV-WRC-07-004-PAH	886741-15	Soil	06	12V 464123 6344672	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
AENV-WRC-07-005-PAH	886741-18	Soil	06	12V 464108 6344676	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
AENV-WRC-08-001-PAH	886741-25	Soil	07	12V 466958 6366367	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
AENV-WRC-08-002-PAH	886741-28	Soil	07	12V 466953 6366364	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
AENV-WRC-08-003-PAH	886741-31	Soil	07	12V 466951 6366361	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
AENV-WRC-08-004-PAH	886741-34	Soil	07	12V 466946 6366357	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
AENV-WRC-08-005-PAH	886741-37	Soil	07	12V 466949 6366364	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
AENV-WRC-14-001-PAH	895939-24	Soil	08	12V 484062 6347144	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
AENV-WRC-14-002-PAH	895939-27	Soil	08	12V 484069 6347138	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
AENV-WRC-14-003-PAH	895939-30	Soil	08	12V 484072 6347157	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
AENV-WRC-14-004-PAH	895939-33	Soil	08	12V 484059 6347160	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
AENV-WRC-14-005-PAH	895939-36	Soil	08	12V 484052 6347151	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
AENV-WRC-15-001-PAH	885598-5	Soil	09	12V 483787 6350408	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
AENV-WRC-15-002-PAH	885598-8	Soil	09	12V 483777 6350392	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
AENV-WRC-15-003-PAH	885598-11	Soil	09	12V 483772 6350399	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
AENV-WRC-15-004-PAH	885598-14	Soil	09	12V 483772 6350392	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
AENV-WRC-15-005-PAH	885598-17	Soil	09	12V 483772 6350399	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03

					PAH Concentrations (ug/g dry weight)									
Sample ID	**EXOVA Sample ID**	**Media**	**Site Number**	**Location (UTM 12)**	**Acenaphthene**	**Acenaphthylene**	**Anthracene**	**Benzo(a) anthracene**	**Benzo(a) pyrene**	**Benzo(b) fluoranthene**	**Benzo(g,h,i) perylene**	**Benzo(k) fluoranthene**	**Chrysene**	**Dibenzo(a,h) anthracene**
AENV-WRC-16-001-PAH/Metal	896208-5	Soil	10	12V 484152 6347051	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
AENV-WRC-16-002-PAH/Metal	896208-7	Soil	10	12V 484164 6347051	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
AENV-WRC-16-003-PAH/Metal	896208-9	Soil	10	12V 484150 6347051	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AENV-WRC-16-004-PAH/Metal	896208-11	Soil	10	12V 484149 6347051	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
AENV-WRC-16-005-PAH/Metal	896208-13	Soil	10	12V 484127 6347048	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
AENV-WRC-17-001-PAH	887081-27	Soil	11	12V 460013 6344599	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
AENV-WRC-17-002-PAH	887081-31	Soil	11	12V 460012 6344596	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
AENV-WRC-17-003-PAH	887081-35	Soil	11	12V 460010 6344596	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
AENV-WRC-17-004-PAH	887081-39	Soil	11	12V 460005 6344593	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
AENV-WRC-17-005-PAH	887081-43	Soil	11	12V 460003 6344596	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
AENV-WRC-18-001-PAH	887081-52	Soil	12	12V 459412 6347045	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
AENV-WRC-18-002-PAH	887081-56	Soil	12	12V 459416 6347054	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
AENV-WRC-18-003-PAH	887081-60	Soil	12	12V 459422 6347054	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
AENV-WRC-18-004-PAH	887081-64	Soil	12	12V 459426 6347060	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
AENV-WRC-18-005-PAH	887081-68	Soil	12	12V 459427 6347060	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
AENV-WRC-19-001-PAH	886745-7	Soil	13	12V 468223 6310175	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
AENV-WRC-19-002-PAH	886745-11	Soil	13	12V 468123 6310152	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
AENV-WRC-19-003-PAH	886745-15	Soil	13	12V 468079 6310127	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
AENV-WRC-19-004-PAH	886745-19	Soil	13	12V 468066 6310130	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
AENV-WRC-19-005-PAH	886745-23	Soil	13	12V 468106 6310087	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
AENV-WRC-35-001-PAH	887081-6	Soil	14	12V 463672 6326286	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
AENV-WRC-35-002-PAH	887081-9	Soil	14	12V 463668 6326271	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
AENV-WRC-35-003-PAH	887081-12	Soil	14	12V 463646 6326280	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
AENV-WRC-35-004-PAH	887081-15	Soil	14	12V 463677 6326271	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
AENV-WRC-35-005-PAH	887081-18	Soil	14	12V 463682 6326265	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
AENV-WRC-36-001-PAH	896208-19	Soil	15	12V 463617 6326364	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
AENV-WRC-36-002-PAH	896208-22	Soil	15	12V 463620 6326361	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	0.03	<0.03

					PAH Concentrations (ug/g dry weight)									
Sample ID	**EXOVA Sample ID**	**Media**	**Site Number**	**Location (UTM 12)**	**Acenaphthene**	**Acenaphthylene**	**Anthracene**	**Benzo(a) anthracene**	**Benzo(a) pyrene**	**Benzo(b) fluoranthene**	**Benzo(g,h,i) perylene**	**Benzo(k) fluoranthene**	**Chrysene**	**Dibenzo(a,h) anthracene**
AENV-WRC-36-003-PAH	896208-25	Soil	15	12V 463647 6326364	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
AENV-WRC-36-004-PAH	896208-28	Soil	15	12V 463617 6326367	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
AENV-WRC-36-005-PAH	896208-31	Soil	15	12V 463617 6326370	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
AENV-WRC-40-001-PAH	894583-25	Soil	16	12V 463891 6290600	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06
AENV-WRC-40-002-PAH	894583-1	Soil	16	12V 463892 6290600	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
AENV-WRC-40-003-PAH	894583-4	Soil	16	12V 463892 6290603	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
AENV-WRC-40-004-PAH	894583-7	Soil	16	12V 463902 6290606	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
AENV-WRC-40-005-PAH	894583-10	Soil	16	12V 463896 6290603	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06
AENV-WRC-50-001-PAH	896047-5	Soil	17	12V 460192 6353024	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
AENV-WRC-50-002-PAH	896047-8	Soil	17	12V 460189 6353024	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06
AENV-WRC-50-003-PAH	896047-11	Soil	17	12V 460192 6353027	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
AENV-WRC-50-004-PAH	896047-14	Soil	17	12V 460198 6353030	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
AENV-WRC-50-005-PAH	896047-17	Soil	17	12V 460204 6353030	<0.09	<0.09	<0.09	<0.09	<0.09	<0.09	<0.09	<0.09	<0.09	<0.09
AENV-WRC-58-001-PAH	886745-31	Soil	18	12V 462844 6363984	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
AENV-WRC-58-002-PAH	886745-34	Soil	18	12V 462848 6363962	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
AENV-WRC-58-003-PAH	886745-37	Soil	18	12V 462847 6363962	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
AENV-WRC-58-004-PAH	886745-40	Soil	18	12V 462828 6363971	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
AENV-WRC-58-005-PAH	886745-43	Soil	18	12V 462838 6363971	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
AENV-WRC-01-001-Trip	884901-1	Trip Blank	01	12V 473516 6330037	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
AENV-WRC-02-001-Trip	884901-20	Trip Blank	02	12V 471715 6330175	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
AENV-WRC-03-001-Trip	884901-39	Trip Blank	03	12V 464201 6364624	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
AENV-WRC-5-Trip	895939-1	Trip Blank	04	12V 470512 6330815	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
AENV-WRC-06-Trip	896047-20	Trip Blank	05	12V 463968 6345076	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	0.1	<0.03
AENV-WRC-07-Trip	886741-1	Trip Blank	06	12V 464106 6344648	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
AENV-WRC-08-Trip	886741-20	Trip Blank	07	12V 466958 6366367	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
AENV-WRC-14-Trip	895939-20	Trip Blank	08	12V 484062 6347144	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
AENV-WRC-15-001 Trip	885598-1	Trip Blank	09	12V 483787 6350408	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
AENV-WRC-16-Trip	896208-1	Trip Blank	10	12V 484152 6347051	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
AENV-WRC-17-Trip	887081-20	Trip Blank	11	12V 460013 6344599	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2

					PAH Concentrations (ug/g dry weight)									
Sample ID	**EXOVA Sample ID**	**Media**	**Site Number**	**Location (UTM 12)**	**Acenaphthene**	**Acenaphthylene**	**Anthracene**	**Benzo(a) anthracene**	**Benzo(a) pyrene**	**Benzo(b) fluoranthene**	**Benzo(g,h,i) perylene**	**Benzo(k) fluoranthene**	**Chrysene**	**Dibenzo(a,h) anthracene**
AENV-WRC-18-Trip	887081-45	Trip Blank	12	12V 459412 6347045	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
AENV-WRC-19-Trip	886745-1	Trip Blank	13	12V 468223 6310175	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
AENV-WRC-35-Trip	887081-1	Trip Blank	14	12V 463672 6326286	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
AENV-WRC-36-Trip	896208-15	Trip Blank	15	12V 463617 6326364	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
AENV-WRC-40-Trip	894583-21	Trip Blank	16	12V 463891 6290600	<0.8	<0.8	<0.8	<0.8	<0.03	<0.03	<0.03	<0.03	0.12	<0.03
AENV-WRC-50-Trip	896047-1	Trip Blank	17	12V 460192 6353024	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
AENV-WRC-58-Trip	886745-26	Trip Blank	18	12V 462844 6363984	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
AENV-WRC-59-Trip	894583-13	Trip Blank	19	12V 496245 6256692	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8
AENV-WRC-01-001-Location	884901-2	Location Blank	01	12V 473516 6330037	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
AENV-WRC-02-001-Location	884901-21	Location Blank	02	12V 471715 6330175	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
AENV-WRC-03-001-Location	884901-40	Location Blank	03	12V 464201 6364624	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
AENV-WRC-5-Location	895939-2	Location Blank	04	12V 470512 6330815	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
AENV-WRC-06-Location	896047-21	Location Blank	05	12V 463968 6345076	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	0.1	<0.03
AENV-WRC-07-Location	886741-2	Location Blank	06	12V 464106 6344648	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
AENV-WRC-08-Location	886741-21	Location Blank	07	12V 466958 6366367	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
AENV-WRC-14-Location	895939-21	Location Blank	08	12V 484062 6347144	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
AENV-WRC-15-001 Location	885598-2	Location Blank	09	12V 483787 6350408	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
AENV-WRC-16-Location	896208-2	Location Blank	10	12V 484152 6347051	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
AENV-WRC-17-Location	887081-21	Location Blank	11	12V 460013 6344599	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
AENV-WRC-18-Location	887081-46	Location Blank	12	12V 459412 6347045	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
AENV-WRC-19-Location	886745-2	Location Blank	13	12V 468223 6310175	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
AENV-WRC-35-Location	887081-2	Location Blank	14	12V 463672 6326286	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
AENV-WRC-36-Location	896208-16	Location Blank	15	12V 463617 6326364	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
AENV-WRC-40-Location	894583-22	Location Blank	16	12V 463891 6290600	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8
AENV-WRC-50-Location	896047-2	Location Blank	17	12V 460192 6353024	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
AENV-WRC-58-Location	886745-27	Location Blank	18	12V 462844 6363984	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
AENV-WRC-59-Location	894583-14	Location Blank	19	12V 496245 6256692	<0.8	<0.8	<0.8	<0.8	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03

EXOVA PAH Results: Fluoranthene to Pyrene and Surrogate Recovery

Table 5. The sample ID, media, site number and sampling location provided for each sample along with laboratory results of fluoranthene to pyrene and surrogate recovery.

					PAH Concentrations (ug/g dry weight)							Surrogate Recovery (%)		
Sample ID	EXOVA Sample ID	Media	Site Number	Location (UTM 12)	Fluoran-thene	Fluorene	Indeno (1,2,3c,d) pyrene	Naphthalene	Naphthalene-d8	Phen-anthrene	Pyrene	2-Fluorobiphenyl	2-Methyl-naphthalene	p-Terpheny l-d14
AENV-WRC-01-001-PAH	884901-5	Soil	01	12V 473516 6330037	<0.03	<0.03	<0.03	<0.03	84	<0.03	<0.03	80	<0.03	103
AENV-WRC-01-002-PAH	884901-8	Soil	01	12V 473533 6329987	<0.03	<0.03	<0.03	<0.03	99	<0.03	<0.03	101	<0.03	107
AENV-WRC-01-003-PAH	884901-11	Soil	01	12V 473528 6329993	<0.03	<0.03	<0.03	<0.03	98	<0.03	<0.03	98	<0.03	126
AENV-WRC-01-004-PAH	884901-14	Soil	01	12V 473530 6329996	<0.03	<0.03	<0.03	<0.03	103	<0.03	<0.03	105	<0.03	125
AENV-WRC-01-005-PAH	884901-17	Soil	01	12V 473528 6329990	<0.03	<0.03	<0.03	<0.03	101	<0.03	<0.03	101	<0.03	126
AENV-WRC-02-001-PAH	884901-24	Soil	02	12V 471715 6330175	<0.03	<0.03	<0.03	<0.03	101	<0.03	<0.03	104	<0.03	121
AENV-WRC-02-002-PAH	884901-27	Soil	02	12V 471721 6330163	<0.03	<0.03	<0.03	<0.03	93	<0.03	<0.03	94	<0.03	117
AENV-WRC-02-003-PAH	884901-30	Soil	02	12V 471704 6330163	<0.03	<0.03	<0.03	<0.03	97	<0.03	<0.03	100	<0.03	123
AENV-WRC-02-004-PAH	884901-33	Soil	02	12V 471692 6330169	<0.03	<0.03	<0.03	<0.03	104	<0.03	<0.03	106	<0.03	97
AENV-WRC-02-005-PAH	884901-36	Soil	02	12V 471690 6330160	<0.03	<0.03	<0.03	<0.03	97	<0.03	<0.03	100	<0.03	125
AENV-WRC-03-001-PAH	884901-43	Soil	03	12V 464201 6364624	<0.03	<0.03	<0.03	<0.03	100	<0.03	<0.03	104	<0.03	128
AENV-WRC-03-002-PAH	884901-46	Soil	03	12V 464196 6364624	<0.03	<0.03	<0.03	<0.03	98	<0.03	<0.03	101	<0.03	127
AENV-WRC-03-003-PAH	884901-49	Soil	03	12V 464204 6364621	<0.03	<0.03	<0.03	<0.03	103	<0.03	<0.03	107	<0.03	98
AENV-WRC-03-004-PAH	884901-52	Soil	03	12V 464196 6364621	<0.03	<0.03	<0.03	<0.03	106	<0.03	<0.03	108	<0.03	112
AENV-WRC-03-005-PAH	884901-55	Soil	03	12V 464191 6364615	<0.03	<0.03	<0.03	<0.03	100	<0.03	<0.03	103	<0.03	108
AENV-WRC-05-002-PAH	895939-7	Soil	04	12V 470514 6330812	<0.03	<0.03	<0.03	<0.03	94	<0.03	<0.03	98	<0.03	96
AENV-WRC-05-003-PAH	895939-10	Soil	04	12V 470519 6330808	<0.03	<0.03	<0.03	<0.03	83	<0.03	<0.03	99	<0.03	90
AENV-WRC-05-004-PAH	895939-14	Soil	04	12V 470515 6330808	<0.03	<0.03	<0.03	<0.03	91	<0.03	<0.03	103	<0.03	92
AENV-WRC-05-005-PAH	895939-17	Soil	04	12V 470512 6330812	<0.03	<0.03	<0.03	<0.03	89	<0.03	<0.03	107	<0.03	99
AENV-WRC-5-001-PAH	895939-4	Soil	04	12V 470512 6330815	<0.03	<0.03	<0.03	<0.03	86	<0.03	<0.03	92	<0.03	93
AENV-WRC-06-001-PAH	896047-24	Soil	05	12V 463968 6345076	<0.03	<0.03	<0.03	<0.03	96	<0.03	<0.03	104	<0.03	100
AENV-WRC-06-002-PAH	896047-27	Soil	05	12V 463974 6345085	<0.03	<0.03	<0.03	<0.03	93	<0.03	<0.03	108	<0.03	101
AENV-WRC-06-003-PAH	896047-30	Soil	05	12V 463973 6345088	<0.03	<0.03	<0.03	<0.03	97	<0.03	<0.03	107	<0.03	106
AENV-WRC-06-004-PAH	896047-33	Soil	05	12V 463973 6345088	<0.03	<0.03	<0.03	<0.03	95	<0.03	<0.03	107	<0.03	104
AENV-WRC-06-005-PAH	896047-36	Soil	05	12V 463895 6344999	<0.03	<0.03	<0.03	<0.03	96	<0.03	<0.03	103	<0.03	104
AENV-WRC-07-001-PAH	886741-6	Soil	06	12V 464106 6344648	<0.03	<0.03	<0.03	<0.03	97	<0.03	<0.03	102	<0.03	104
AENV-WRC-07-002-PAH	886741-9	Soil	06	12V 464123 6344645	<0.03	<0.03	<0.03	<0.03	98	<0.03	<0.03	102	<0.03	106
AENV-WRC-07-003-PAH	886741-12	Soil	06	12V 464116 6344663	<0.03	<0.03	<0.03	<0.03	92	<0.03	<0.03	95	<0.03	99
AENV-WRC-07-004-PAH	886741-15	Soil	06	12V 464123 6344672	<0.03	<0.03	<0.03	<0.03	104	<0.03	<0.03	108	<0.03	116
AENV-WRC-07-005-PAH	886741-18	Soil	06	12V 464108 6344676	<0.03	<0.03	<0.03	<0.03	98	<0.03	<0.03	101	<0.03	102
AENV-WRC-08-001-PAH	886741-25	Soil	07	12V 466958 6366367	<0.03	<0.03	<0.03	<0.03	100	<0.03	<0.03	109	<0.03	106
AENV-WRC-08-002-PAH	886741-28	Soil	07	12V 466953 6366364	<0.03	<0.03	<0.03	<0.03	82	<0.03	<0.03	86	<0.03	86
AENV-WRC-08-003-PAH	886741-31	Soil	07	12V 466951 6366361	<0.03	<0.03	<0.03	<0.03	94	<0.03	<0.03	100	<0.03	100
AENV-WRC-08-004-PAH	886741-34	Soil	07	12V 466946 6366357	<0.03	<0.03	<0.03	<0.03	87	<0.03	<0.03	89	<0.03	96
AENV-WRC-08-005-PAH	886741-37	Soil	07	12V 466949 6366364	<0.03	<0.03	<0.03	<0.03	89	<0.03	<0.03	92	<0.03	96
AENV-WRC-14-001-PAH	895939-24	Soil	08	12V 484062 6347144	<0.03	<0.03	<0.03	<0.03	97	<0.03	<0.03	112	<0.03	105
AENV-WRC-14-002-PAH	895939-27	Soil	08	12V 484069 6347138	<0.03	<0.03	<0.03	<0.03	94	<0.03	<0.03	106	<0.03	101
AENV-WRC-14-003-PAH	895939-30	Soil	08	12V 484072 6347157	<0.03	<0.03	<0.03	<0.03	91	<0.03	<0.03	103	<0.03	97
AENV-WRC-14-004-PAH	895939-33	Soil	08	12V 484059 6347160	<0.03	<0.03	<0.03	<0.03	92	<0.03	<0.03	106	<0.03	104

					PAH Concentrations (ug/g dry weight)							Surrogate Recovery (%)		
Sample ID	EXOVA Sample ID	Media	Site Number	Location (UTM 12)	Fluoran-thene	Fluorene	Indeno (1,2,3c,d) pyrene	Naphthalene	Naphthalene-d8	Phen-anthrene	Pyrene	2-Fluorobiphenyl	2-Methyl-naphthalene	p-Terpheny l-d14
AENV-WRC-14-005-PAH	895939-36	Soil	08	12V 484052 6347151	<0.03	<0.03	<0.03	<0.03	89	<0.03	<0.03	106	<0.03	95
AENV-WRC-15-001-PAH	885598-5	Soil	09	12V 483787 6350408	<0.03	<0.03	<0.03	<0.03	101	<0.03	<0.03	102	<0.03	116
AENV-WRC-15-002-PAH	885598-8	Soil	09	12V 483777 6350392	<0.03	<0.03	<0.03	<0.03	115	<0.03	<0.03	124	<0.03	104
AENV-WRC-15-003-PAH	885598-11	Soil	09	12V 483772 6350399	<0.03	<0.03	<0.03	<0.03	102	<0.03	<0.03	106	<0.03	110
AENV-WRC-15-004-PAH	885598-14	Soil	09	12V 483772 6350392	<0.03	<0.03	<0.03	<0.03	98	<0.03	<0.03	102	<0.03	102
AENV-WRC-15-005-PAH	885598-17	Soil	09	12V 483772 6350399	<0.03	<0.03	<0.03	<0.03	95	<0.03	<0.03	100	<0.03	105
AENV-WRC-16-001-PAH/Metal	896208-5	Soil	10	12V 484152 6347051	<0.1	<0.1	<0.1	<0.1	92	<0.1	<0.1	103	<0.1	98
AENV-WRC-16-002-PAH/Metal	896208-7	Soil	10	12V 484164 6347051	<0.1	<0.1	<0.1	<0.1	84	<0.1	<0.1	100	<0.1	102
AENV-WRC-16-003-PAH/Metal	896208-9	Soil	10	12V 484150 6347051	<0.2	<0.2	<0.2	<0.2	96	<0.2	<0.2	108	<0.2	104
AENV-WRC-16-004-PAH/Metal	896208-11	Soil	10	12V 484149 6347051	<0.1	<0.1	<0.1	<0.1	90	<0.1	<0.1	86	<0.1	101
AENV-WRC-16-005-PAH/Metal	896208-13	Soil	10	12V 484127 6347048	<0.1	<0.1	<0.1	<0.1	92	<0.1	<0.1	98	<0.1	92
AENV-WRC-17-001-PAH	887081-27	Soil	11	12V 460013 6344599	<0.03	<0.03	<0.03	<0.03	87	<0.03	<0.03	90	<0.03	95
AENV-WRC-17-002-PAH	887081-31	Soil	11	12V 460012 6344596	<0.03	<0.03	<0.03	<0.03	106	<0.03	<0.03	107	<0.03	112
AENV-WRC-17-003-PAH	887081-35	Soil	11	12V 460010 6344596	<0.03	<0.03	<0.03	<0.03	92	<0.03	<0.03	94	<0.03	101
AENV-WRC-17-004-PAH	887081-39	Soil	11	12V 460005 6344593	<0.03	<0.03	<0.03	0.07	93	0.04	<0.03	100	<0.03	100
AENV-WRC-17-005-PAH	887081-43	Soil	11	12V 460003 6344596	<0.03	<0.03	<0.03	0.04	96	<0.03	<0.03	102	<0.03	102
AENV-WRC-18-001-PAH	887081-52	Soil	12	12V 459412 6347045	<0.03	<0.03	<0.03	<0.03	94	<0.03	<0.03	98	<0.03	101
AENV-WRC-18-002-PAH	887081-56	Soil	12	12V 459416 6347054	<0.03	<0.03	<0.03	<0.03	95	<0.03	<0.03	99	<0.03	103
AENV-WRC-18-003-PAH	887081-60	Soil	12	12V 459422 6347054	<0.03	<0.03	<0.03	<0.03	102	<0.03	<0.03	107	<0.03	112
AENV-WRC-18-004-PAH	887081-64	Soil	12	12V 459426 6347060	<0.03	<0.03	<0.03	<0.03	90	<0.03	<0.03	93	<0.03	98
AENV-WRC-18-005-PAH	887081-68	Soil	12	12V 459427 6347060	<0.03	<0.03	<0.03	<0.03	90	<0.03	<0.03	97	<0.03	104
AENV-WRC-19-001-PAH	886745-7	Soil	13	12V 468223 6310175	<0.03	<0.03	<0.03	<0.03	94	<0.03	<0.03	96	<0.03	100
AENV-WRC-19-002-PAH	886745-11	Soil	13	12V 468123 6310152	<0.03	<0.03	<0.03	<0.03	100	<0.03	<0.03	103	<0.03	107
AENV-WRC-19-003-PAH	886745-15	Soil	13	12V 468079 6310127	<0.03	<0.03	<0.03	<0.03	106	<0.03	<0.03	111	<0.03	108
AENV-WRC-19-004-PAH	886745-19	Soil	13	12V 468066 6310130	<0.03	<0.03	<0.03	<0.03	86	<0.03	<0.03	96	<0.03	110
AENV-WRC-19-005-PAH	886745-23	Soil	13	12V 468106 6310087	<0.03	<0.03	<0.03	<0.03	91	<0.03	<0.03	96	<0.03	119
AENV-WRC-35-001-PAH	887081-6	Soil	14	12V 463672 6326286	<0.03	<0.03	<0.03	<0.03	89	<0.03	<0.03	93	<0.03	97
AENV-WRC-35-002-PAH	887081-9	Soil	14	12V 463668 6326271	<0.03	<0.03	<0.03	<0.03	88	<0.03	<0.03	91	<0.03	91
AENV-WRC-35-003-PAH	887081-12	Soil	14	12V 463646 6326280	<0.03	<0.03	<0.03	<0.03	98	<0.03	<0.03	102	<0.03	105
AENV-WRC-35-004-PAH	887081-15	Soil	14	12V 463677 6326271	<0.03	<0.03	<0.03	<0.03	86	<0.03	<0.03	90	<0.03	89
AENV-WRC-35-005-PAH	887081-18	Soil	14	12V 463682 6326265	<0.03	<0.03	<0.03	<0.03	90	<0.03	<0.03	95	<0.03	92
AENV-WRC-36-001-PAH	896208-19	Soil	15	12V 463617 6326364	<0.03	<0.03	<0.03	<0.03	89	<0.03	<0.03	102	<0.03	93
AENV-WRC-36-002-PAH	896208-22	Soil	15	12V 463620 6326361	<0.03	<0.03	<0.03	<0.03	93	<0.03	<0.03	105	<0.03	101
AENV-WRC-36-003-PAH	896208-25	Soil	15	12V 463647 6326364	<0.03	<0.03	<0.03	<0.03	96	<0.03	<0.03	107	<0.03	103
AENV-WRC-36-004-PAH	896208-28	Soil	15	12V 463617 6326367	<0.03	<0.03	<0.03	<0.03	96	<0.03	<0.03	105	<0.03	101
AENV-WRC-36-005-PAH	896208-31	Soil	15	12V 463617 6326370	<0.03	<0.03	<0.03	<0.03	93	<0.03	<0.03	106	<0.03	101
AENV-WRC-40-001-PAH	894583-25	Soil	16	12V 463891 6290600	<0.06	<0.06	<0.06	<0.06	111	<0.06	<0.06	117	<0.06	123
AENV-WRC-40-002-PAH	894583-1	Soil	16	12V 463892 6290600	<0.3	<0.3	<0.3	<0.3	102	<0.3	<0.3	114	<0.3	110
AENV-WRC-40-003-PAH	894583-4	Soil	16	12V 463892 6290603	<0.2	<0.2	<0.2	<0.2	116	<0.2	<0.2	112	<0.2	124
AENV-WRC-40-004-PAH	894583-7	Soil	16	12V 463902 6290606	<0.03	<0.03	<0.03	<0.03	95	<0.03	<0.03	111	<0.03	104
AENV-WRC-40-005-PAH	894583-10	Soil	16	12V 463896 6290603	<0.06	<0.06	<0.06	<0.06	86	<0.06	<0.06	102	<0.06	92
AENV-WRC-50-001-PAH	896047-5	Soil	17	12V 460192 6353024	<0.1	<0.1	<0.1	<0.1	93	<0.1	<0.1	102	<0.1	96
AENV-WRC-50-002-PAH	896047-8	Soil	17	12V 460189 6353024	<0.06	<0.06	<0.06	<0.06	88	<0.06	<0.06	106	<0.06	100
AENV-WRC-50-003-PAH	896047-11	Soil	17	12V 460192 6353027	<0.1	<0.1	<0.1	<0.1	85	<0.1	<0.1	97	<0.1	95
AENV-WRC-50-004-PAH	896047-14	Soil	17	12V 460198 6353030	<0.1	<0.1	<0.1	<0.1	80	<0.1	<0.1	96	<0.1	94
AENV-WRC-50-005-PAH	896047-17	Soil	17	12V 460204 6353030	<0.09	<0.09	<0.09	<0.09	96	<0.09	<0.09	108	<0.09	104

					PAH Concentrations (ug/g dry weight)							Surrogate Recovery (%)		
Sample ID	EXOVA Sample ID	Media	Site Number	Location (UTM 12)	Fluoran-thene	Fluorene	Indeno (1,2,3c,d) pyrene	Naphthalene	Naphthalene-d8	Phen-anthrene	Pyrene	2-Fluorobiphenyl	2-Methyl-naphthalene	p-Terpheny l-d14
AENV-WRC-58-001-PAH	886745-31	Soil	18	12V 462844 6363984	<0.03	<0.03	<0.03	<0.03	92	<0.03	<0.03	96	<0.03	124
AENV-WRC-58-002-PAH	886745-34	Soil	18	12V 462848 6363962	<0.03	<0.03	<0.03	<0.03	93	<0.03	<0.03	98	<0.03	124
AENV-WRC-58-003-PAH	886745-37	Soil	18	12V 462847 6363962	<0.03	<0.03	<0.03	<0.03	97	<0.03	<0.03	103	<0.03	129
AENV-WRC-58-004-PAH	886745-40	Soil	18	12V 462828 6363971	<0.03	<0.03	<0.03	<0.03	97	<0.03	<0.03	105	<0.03	129
AENV-WRC-58-005-PAH	886745-43	Soil	18	12V 462838 6363971	<0.03	<0.03	<0.03	<0.03	97	<0.03	<0.03	103	<0.03	126
AENV-WRC-01-001-Trip	884901-1	Trip Blank	01	12V 473516 6330037	<0.03	<0.03	<0.03	<0.03	102	<0.03	<0.03	115	<0.03	124
AENV-WRC-02-001-Trip	884901-20	Trip Blank	02	12V 471715 6330175	<0.03	<0.03	<0.03	<0.03	100	<0.03	<0.03	113	<0.03	120
AENV-WRC-03-001-Trip	884901-39	Trip Blank	03	12V 464201 6364624	<0.03	<0.03	<0.03	<0.03	99	<0.03	<0.03	110	<0.03	120
AENV-WRC-5-Trip	895939-1	Trip Blank	04	12V 470512 6330815	<1	<1	<1	<1	88	<1	<1	89	<1	92
AENV-WRC-06-Trip	896047-20	Trip Blank	05	12V 463968 6345076	<0.03	<0.03	<0.03	<0.03	94	<0.03	<0.03	100	<0.03	98
AENV-WRC-07-Trip	886741-1	Trip Blank	06	12V 464106 6344648	<0.03	<0.03	<0.03	<0.03	106	<0.03	<0.03	118	<0.03	124
AENV-WRC-08-Trip	886741-20	Trip Blank	07	12V 466958 6366367	<0.03	<0.03	<0.03	<0.03	104	<0.03	<0.03	102	<0.03	122
AENV-WRC-14-Trip	895939-20	Trip Blank	08	12V 484062 6347144	<1	<1	<1	<1	85	<1	<1	92	<1	90
AENV-WRC-15-001 Trip	885598-1	Trip Blank	09	12V 483787 6350408	<0.03	<0.03	<0.03	<0.03	99	<0.03	<0.03	110	<0.03	121
AENV-WRC-16-Trip	896208-1	Trip Blank	10	12V 484152 6347051	<1	<1	<1	<1	90	<1	<1	95	<1	92
AENV-WRC-17-Trip	887081-20	Trip Blank	11	12V 460013 6344599	<2	<2	<2	<2	95	<2	<2	94	<2	93
AENV-WRC-18-Trip	887081-45	Trip Blank	12	12V 459412 6347045	<2	<2	<2	<2	92	<2	<2	92	<2	100
AENV-WRC-19-Trip	886745-1	Trip Blank	13	12V 468223 6310175	<2	<2	<2	<2	94	<2	<2	95	<2	102
AENV-WRC-35-Trip	887081-1	Trip Blank	14	12V 463672 6326286	<2	<2	<2	<2	95	<2	<2	98	<2	107
AENV-WRC-36-Trip	896208-15	Trip Blank	15	12V 463617 6326364	<1	<1	<1	<1	85	<1	<1	89	<1	87
AENV-WRC-40-Trip	894583-21	Trip Blank	16	12V 463891 6290600	<0.8	<0.8	<0.03	<0.8	106	<0.8	<0.8	115	<0.8	123
AENV-WRC-50-Trip	896047-1	Trip Blank	17	12V 460192 6353024	<1	<1	<1	<1	90	<1	<1	96	<1	95
AENV-WRC-58-Trip	886745-26	Trip Blank	18	12V 462844 6363984	<3	<3	<3	<3	93	<3	<3	97	<3	115
AENV-WRC-59-Trip	894583-13	Trip Blank	19	12V 496245 6256692	<0.8	<0.8	<0.8	<0.8	87	<0.8	<0.8	96	<0.8	101
AENV-WRC-01-001-Location	884901-2	Location Blank	01	12V 473516 6330037	<0.03	<0.03	<0.03	<0.03	102	<0.03	<0.03	114	<0.03	125
AENV-WRC-02-001-Location	884901-21	Location Blank	02	12V 471715 6330175	<0.03	<0.03	<0.03	<0.03	103	<0.03	<0.03	118	<0.03	122
AENV-WRC-03-001-Location	884901-40	Location Blank	03	12V 464201 6364624	<0.03	<0.03	<0.03	<0.03	100	<0.03	<0.03	109	<0.03	118
AENV-WRC-5-Location	895939-2	Location Blank	04	12V 470512 6330815	<1	<1	<1	<1	94	<1	<1	98	<1	98
AENV-WRC-06-Location	896047-21	Location Blank	05	12V 463968 6345076	<0.03	<0.03	<0.03	<0.03	92	<0.03	<0.03	98	<0.03	97
AENV-WRC-07-Location	886741-2	Location Blank	06	12V 464106 6344648	<0.03	1.27	<0.03	<0.03	108	<0.03	<0.03	116	<0.03	125
AENV-WRC-08-Location	886741-21	Location Blank	07	12V 466958 6366367	<0.03	<0.03	<0.03	<0.03	105	<0.03	<0.03	119	<0.03	124
AENV-WRC-14-Location	895939-21	Location Blank	08	12V 484062 6347144	<1	<1	<1	<1	94	<1	<1	103	<1	100

					PAH Concentrations (ug/g dry weight)							Surrogate Recovery (%)		
Sample ID	EXOVA Sample ID	Media	Site Number	Location (UTM 12)	Fluoran-thene	Fluorene	Indeno (1,2,3c,d) pyrene	Naphthalene	Naphthalene-d8	Phen-anthrene	Pyrene	2-Fluorobiphenyl	2-Methyl-naphthalene	p-Terpheny l-d14
AENV-WRC-15-001 Location	885598-2	Location Blank	09	12V 483787 6350408	<0.03	<0.03	<0.03	<0.03	104	<0.03	<0.03	116	<0.03	118
AENV-WRC-16-Location	896208-2	Location Blank	10	12V 484152 6347051	<1	<1	<1	<1	92	<1	<1	97	<1	97
AENV-WRC-17-Location	887081-21	Location Blank	11	12V 460013 6344599	<2	<2	<2	<2	89	<2	<2	87	<2	95
AENV-WRC-18-Location	887081-46	Location Blank	12	12V 459412 6347045	<2	<2	<2	<2	90	<2	<2	90	<2	96
AENV-WRC-19-Location	886745-2	Location Blank	13	12V 468223 6310175	<2	<2	<2	<2	93	<2	<2	93	<2	100
AENV-WRC-35-Location	887081-2	Location Blank	14	12V 463672 6326286	<2	<2	<2	<2	88	<2	<2	92	<2	98
AENV-WRC-36-Location	896208-16	Location Blank	15	12V 463617 6326364	<1	<1	<1	<1	89	<1	<1	94	<1	95
AENV-WRC-40-Location	894583-22	Location Blank	16	12V 463891 6290600	<0.8	<0.8	<0.8	<0.8	102	<0.8	<0.8	110	<0.8	119
AENV-WRC-50-Location	896047-2	Location Blank	17	12V 460192 6353024	<1	<1	<1	<1	94	<1	<1	100	<1	96
AENV-WRC-58-Location	886745-27	Location Blank	18	12V 462844 6363984	<3	<3	<3	<3	91	<3	<3	95	<3	115
AENV-WRC-59-Location	894583-14	Location Blank	19	12V 496245 6256692	<0.8	<0.03	<0.8	88	<0.8	<0.8	97	<0.8	100	<0.8

PAHs in Plant Tissue

**Surrogate recoveries and matrix spike recoveries are provided in Appendix 3 and Detection Limits in Appendix 2.

** ND means that no concentration was detected above the method detection limit.

Table 6. The lab & lot number, Pacific Rim ID, sample description, matrix, site number, UTM (NAD83) and duplicate status provided for each sample along with laboratory results of acenaphthene to benzo(a)pyrene.

						Concentration in sample (ug/kg ww)					
Lab&Lot	Pacific Rim ID	Sample Description	Matrix	Site Number	UTM	Duplicate	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a) anthracene	Benzo(a)pyrene
884901-10	PR121425	AENV-WRC-01-002-Berry	Berry	1	12V 473533 6329987	NO	ND	ND	ND	ND	ND
884901-13	PR121426	AENV-WRC-01-003-Berry	Berry	1	12V 473528 6329993	NO	ND	ND	ND	ND	ND
884901-16	PR121427	AENV-WRC-01-004-Berry	Berry	1	12V 473530 6329996	NO	ND	ND	ND	ND	ND
884901-19	PR121428	AENV-WRC-01-005-Berry	Berry	1	12V 473528 6329990	NO	ND	ND	ND	ND	ND
884901-26	PR121429	AENV-WRC-02-001-Berry	Berry	2	12V 471715 6330175	NO	ND	ND	ND	ND	ND
884901-29	PR121430	AENV-WRC-02-002-Berry	Berry	2	12V 471721 6330163	NO	ND	ND	ND	ND	ND
884901-32	PR121431	AENV-WRC-02-003-Berry	Berry	2	12V 471704 6330163	NO	ND	ND	ND	ND	ND

						Concentration in sample (ug/kg ww)					
Lab&Lot	**Pacific Rim ID**	**Sample Description**	**Matrix**	**Site Number**	**UTM**	**Duplicate**	**Acenaphthene**	**Acenaphthylene**	**Anthracene**	**Benzo(a) anthracene**	**Benzo(a)pyrene**
884901-35	PR121432	AENV-WRC-02-004-Berry	Berry	2	12V 471692 6330169	NO	ND	ND	ND	ND	ND
884901-38	PR121433	AENV-WRC-02-005-Berry	Berry	2	12V 471690 6330160	NO	ND	ND	ND	ND	ND
884901-45	PR121434	AENV-WRC-03-001-Berry	Berry	3	12V 464201 6364624	NO	ND	ND	ND	ND	ND
884901-48	PR121435	AENV-WRC-03-002-Berry	Berry	3	12V 464196 6364624	NO	ND	ND	ND	ND	ND
884901-51	PR121436	AENV-WRC-03-003-Berry	Berry	3	12V 464204 6364621	NO	ND	ND	ND	ND	ND
884901-54	PR121437	AENV-WRC-03-004-Berry	Berry	3	12V 464196 6364621	NO	ND	ND	ND	ND	ND
884901-57	PR121438	AENV-WRC-03-005-Berry	Berry	3	12V 464191 6364615	NO	ND	ND	ND	ND	ND
884901-7	PR121424	AENV-WRC-01-001-Berry	Berry	1	12V 473516 6330037	NO	ND	ND	ND	ND	ND
884901-29	PR121430	AENV-WRC-02-002-Berry	Berry	2	12V 471721 6330163	YES	ND	ND	ND	ND	ND
885598-10	PR121440	AENV-WRC-15-002-Berry	Berry	9	12V 483777 6350392	NO	ND	ND	ND	ND	ND
885598-13	PR121441	AENV-WRC-15-003-Berry	Berry	9	12V 483772 6350399	NO	ND	ND	ND	ND	ND
885598-16	PR121442	AENV-WRC-15-004-Berry	Berry	9	12V 483772 6350392	NO	ND	ND	ND	ND	ND
885598-19	PR121443	AENV-WRC-15-005-Berry	Berry	9	12V 483772 6350399	NO	ND	ND	ND	ND	ND
885598-7	PR121439	AENV-WRC-15-001-Berry	Berry	9	12V 483787 6350408	NO	ND	ND	ND	ND	ND
886741-11	PR121469	AENV-WRC-07-003-Berry	Berry	6	12V 464116 6344663	NO	ND	ND	ND	ND	ND
886741-14	PR121470	AENV-WRC-07-004-Berry	Berry	6	12V 464123 6344672	NO	ND	ND	ND	ND	ND
886741-17	PR121471	AENV-WRC-07-005-Berry	Berry	6	12V 464108 6344676	NO	ND	ND	ND	ND	ND
886741-24	PR121472	AENV-WRC-08-001-Berry	Berry	7	12V 466958 6366367	NO	ND	ND	ND	ND	ND
886741-27	PR121473	AENV-WRC-08-002-Berry	Berry	7	12V 466953 6366364	NO	ND	ND	ND	ND	ND
886741-30	PR121474	AENV-WRC-08-003-Berry	Berry	7	12V 466951 6366361	NO	ND	ND	ND	ND	ND
886741-33	PR121475	AENV-WRC-08-004-Berry	Berry	7	12V 466946 6366357	NO	ND	ND	ND	ND	ND
886741-36	PR121476	AENV-WRC-08-005-Berry	Berry	7	12V 466949 6366364	NO	ND	ND	ND	ND	ND
886741-5	PR121467	AENV-WRC-07-001-Berry	Berry	6	12V 464106 6344648	NO	ND	ND	ND	ND	ND
886741-8	PR121468	AENV-WRC-07-002-Berry	Berry	6	12V 464123 6344645	NO	ND	ND	ND	ND	ND
886741-5	PR121467	AENV-WRC-07-001-Berry	Berry	6	12V 464106 6344648	YES	ND	ND	ND	ND	ND
887081-11	PR121483	AENV-WRC-35-003-Fruit	Berry	14	12V 463646 6326280	NO	ND	ND	ND	ND	ND
887081-14	PR121484	AENV-WRC-35-004-Fruit	Berry	14	12V 463677 6326271	NO	ND	ND	ND	ND	ND
887081-17	PR121485	AENV-WRC-35-005-Fruit	Berry	14	12V 463682 6326265	NO	ND	ND	ND	ND	ND

						Concentration in sample (ug/kg ww)					
Lab&Lot	**Pacific Rim ID**	**Sample Description**	**Matrix**	**Site Number**	**UTM**	**Duplicate**	**Acenaphthene**	**Acenaphthylene**	**Anthracene**	**Benzo(a) anthracene**	**Benzo(a)pyrene**
887081-25	PR121486	AENV-WRC-17-001-Fruit	Berry	11	12V 460013 6344599	NO	ND	ND	ND	ND	ND
887081-26	PR121487	AENV-WRC-17-001-Foliage	Foliage	11	12V 460013 6344599	NO	1.379	ND	ND	ND	ND
887081-29	PR121488	AENV-WRC-17-002-Fruit	Berry	11	12V 460012 6344596	NO	ND	ND	ND	ND	ND
887081-30	PR121489	AENV-WRC-17-002-Foliage	Foliage	11	12V 460012 6344596	NO	ND	ND	1.627	ND	0.33
887081-33	PR121490	AENV-WRC-17-003-Fruit	Berry	11	12V 460010 6344596	NO	ND	ND	ND	ND	ND
887081-34	PR121491	AENV-WRC-17-003-Foliage	Foliage	11	12V 460010 6344596	NO	0.986	ND	ND	ND	ND
887081-37	PR121492	AENV-WRC-17-004-Fruit	Berry	11	12V 460005 6344593	NO	ND	ND	ND	ND	ND
887081-38	PR121493	AENV-WRC-17-004-Foliage	Foliage	11	12V 460005 6344593	NO	0.884	ND	ND	ND	ND
887081-41	PR121494	AENV-WRC-17-005-Fruit	Berry	11	12V 460003 6344596	NO	ND	ND	ND	ND	ND
887081-42	PR121495	AENV-WRC-17-005-Foliage	Foliage	11	12V 460003 6344596	NO	ND	ND	ND	ND	0.55
887081-5	PR121481	AENV-WRC-35-001-Fruit	Berry	14	12V 463672 6326286	NO	ND	ND	ND	ND	ND
887081-50	PR121496	AENV-WRC-18-001-Fruit	Berry	12	12V 459412 6347045	NO	ND	ND	ND	ND	ND
887081-51	PR121497	AENV-WRC-18-001-Foliage	Foliage	12	12V 459412 6347045	NO	0.819	ND	ND	ND	ND
887081-54	PR121498	AENV-WRC-18-002-Fruit	Berry	12	12V 459416 6347054	NO	ND	ND	ND	ND	ND
887081-55	PR121499	AENV-WRC-18-002-Foliage	Foliage	12	12V 459416 6347054	NO	0.73	2.889	ND	0.445	0.315
887081-58	PR121500	AENV-WRC-18-003-Fruit	Berry	12	12V 459422 6347054	NO	ND	ND	ND	ND	ND
887081-59	PR121501	AENV-WRC-18-003-Foliage	Foliage	12	12V 459422 6347054	NO	ND	ND	ND	0.43	0.336
887081-62	PR121502	AENV-WRC-18-004-Fruit	Berry	12	12V 459426 6347060	NO	ND	ND	ND	ND	ND
887081-63	PR121503	AENV-WRC-18-004-Foliage	Foliage	12	12V 459426 6347060	NO	ND	ND	0.627	0.594	0.531
887081-66	PR121504	AENV-WRC-18-005-Fruit	Berry	12	12V 459427 6347060	NO	ND	ND	ND	ND	ND
887081-67	PR121505	AENV-WRC-18-005-Foliage	Foliage	12	12V 459427 6347060	NO	ND	ND	ND	ND	0.82
887081-8	PR121482	AENV-WRC-35-002-Fruit	Berry	14	12V 463668 6326271	NO	ND	ND	ND	ND	ND
887081-29	PR121488	AENV-WRC-17-002-Fruit	Berry	11	12V 460012 6344596	YES	ND	ND	ND	ND	ND
887081-66	PR121504	AENV-WRC-18-005-Fruit	Berry	12	12V 459427 6347060	YES	ND	ND	ND	ND	ND
886745-10	PR121513	AENV-WRC 19-002-Foliage	Foliage	13	12V 468123 6310152	NO	ND	ND	ND	0.8	0.96
886745-13	PR121514	AENV-WRC 19-003-Fruit	Berry	13	12V 468079 6310127	NO	ND	ND	ND	ND	ND
886745-14	PR121515	AENV-WRC 19-003-Foliage	Foliage	13	12V 468079 6310127	NO	1.13	ND	ND	0.49	0.58
886745-17	PR121516	AENV-WRC 19-004-Fruit	Berry	13	12V 468066 6310130	NO	ND	ND	ND	ND	ND

						Concentration in sample (ug/kg ww)					
Lab&Lot	**Pacific Rim ID**	**Sample Description**	**Matrix**	**Site Number**	**UTM**	**Duplicate**	**Acenaphthene**	**Acenaphthylene**	**Anthracene**	**Benzo(a) anthracene**	**Benzo(a)pyrene**
886745-18	PR121517	AENV-WRC 19-004-Foliage	Foliage	13	12V 468066 6310130	NO	0.62	ND	ND	1.07	1.44
886745-21	PR121518	AENV-WRC 19-005-Fruit	Berry	13	12V 468106 6310087	NO	ND	ND	ND	ND	ND
886745-22	PR121519	AENV-WRC 19-005-Foliage	Foliage	13	12V 468106 6310087	NO	ND	ND	ND	0.808167939	0.824484733
886745-30	PR121520	AENV-WRC-58-001-Foliage	Foliage	18	12V 462844 6363984	NO	1.533504425	5.369646018	ND	ND	0.311415929
886745-33	PR121521	AENV-WRC-58-002-Foliage	Foliage	18	12V 462848 6363962	NO	ND	ND	ND	0.697764933	ND
886745-36	PR121522	AENV-WRC-58-003-Foliage	Foliage	18	12V 462847 6363962	NO	ND	ND	ND	0.539926874	0.688500914
886745-39	PR121523	AENV-WRC-58-004-Foliage	Foliage	18	12V 462828 6363971	NO	3.91959633	ND	ND	ND	ND
886745-42	PR121524	AENV-WRC-58-005-Foliage	Foliage	18	12V 462838 6363971	NO	ND	ND	ND	0.378563327	0.315387524
886745-5	PR121510	AENV-WRC 19-001-Fruit	Berry	13	12V 468223 6310175	NO	ND	ND	ND	ND	ND
886745-6	PR121511	AENV-WRC 19-001-Foliage	Foliage	13	12V 468223 6310175	NO	ND	ND	ND	0.72	0.94
886745-9	PR121512	AENV-WRC 19-002-Fruit	Berry	13	12V 468123 6310152	NO	ND	ND	ND	ND	ND
886745-17	PR121516	AENV-WRC 19-004-Fruit	Berry	13	12V 468066 6310130	YES	ND	ND	ND	ND	ND
894583-12	PR121868	AENV-WRC-40-005-Foliage	Foliage	16	12V 463896 6290603	NO	ND	ND	ND	ND	0.31
894583-16	PR121869	AENV-WRC-59-001-Rhizome	Rhizome	19	12V 496187 6256732	NO	ND	ND	0.92	ND	ND
894583-17	PR121870	AENV-WRC-59-002-Rhizome	Rhizome	19	12V 496245 6256692	NO	ND	ND	ND	ND	ND
894583-18	PR121871	AENV-WRC-59-003-Rhizome	Rhizome	19	12V 496245 6256689	NO	ND	ND	ND	ND	ND
894583-19	PR121872	AENV-WRC-59-004-Rhizome	Rhizome	19	12V 496245 6256686	NO	ND	ND	0.68	ND	ND
894583-20	PR121873	AENV-WRC-59-005-Rhizome	Rhizome	19	12V 496243 6256689	NO	ND	ND	ND	ND	ND
894583-27	PR121874	AENV-WRC-40-001-Foliage	Foliage	16	12V 463891 6290600	NO	ND	ND	ND	ND	ND
894583-3	PR121865	AENV-WRC-40-002-Foliage	Foliage	16	12V 463892 6290600	NO	ND	ND	ND	ND	ND
894583-6	PR121866	AENV-WRC-40-003-Foliage	Foliage	16	12V 463892 6290603	NO	ND	ND	ND	ND	ND
894583-9	PR121867	AENV-WRC-40-004-Foliage	Foliage	16	12V 463902 6290606	NO	ND	ND	ND	ND	ND
894583-27	PR121874	AENV-WRC-40-001-Foliage	Foliage	16	12V 463891 6290600	YES	ND	ND	0.68	ND	ND
895939-12	PR121956	AENV-WRC-05-003-Foliage	Foliage	4	12V 470519 6330808	NO	2.691	ND	ND	ND	0.477
895939-16	PR121957	AENV-WRC-05-004-Foliage	Foliage	4	12V 470515 6330808	NO	1.852	ND	ND	ND	ND
895939-19	PR121958	AENV-WRC-05-005-Foliage	Foliage	4	12V 470512 6330812	NO	1.448	ND	ND	ND	0.403
895939-26	PR121959	AENV-WRC-14-001-Foliage	Foliage	8	12V 484062 6347144	NO	1.652	ND	ND	ND	ND
895939-29	PR121960	AENV-WRC-14-002-Foliage	Foliage	8	12V 484069 6347138	NO	3.474	ND	ND	ND	ND

						Concentration in sample (ug/kg ww)					
Lab&Lot	**Pacific Rim ID**	**Sample Description**	**Matrix**	**Site Number**	**UTM**	**Duplicate**	**Acenaphthene**	**Acenaphthylene**	**Anthracene**	**Benzo(a) anthracene**	**Benzo(a)pyrene**
895939-32	PR121961	AENV-WRC-14-003-Foliage	Foliage	8	12V 484072 6347157	NO	0.926	ND	ND	ND	0.384
895939-35	PR121962	AENV-WRC-14-004-Foliage	Foliage	8	12V 484059 6347160	NO	1.6769	ND	ND	ND	0.438
895939-38	PR121963	AENV-WRC-14-005-Foliage	Foliage	8	12V 484052 6347151	NO	ND	ND	ND	ND	0.307
895939-6	PR121954	AENV-WRC-5-001-Foliage	Foliage	4	12V 470512 6330815	NO	3.857	ND	ND	ND	0.477
895939-9	PR121955	AENV-WRC-05-002-Foliage	Foliage	4	12V 470514 6330812	NO	3.257	ND	ND	ND	0.669
895939-35	PR121962	AENV-WRC-14-004-Foliage	Foliage	8	12V 484059 6347160	YES	1.711	ND	ND	ND	0.477
896047-10	PR121965	AENV-WRC-50-002-Foliage	Foliage	17	12V 460189 6353024	NO	ND	ND	ND	0.503	0.3711
896047-13	PR121966	AENV-WRC-50-003-Foliage	Foliage	17	12V 460192 6353027	NO	ND	ND	ND	ND	ND
896047-16	PR121967	AENV-WRC-50-004-Foliage	Foliage	17	12V 460198 6353030	NO	ND	ND	ND	ND	0.415
896047-19	PR121968	AENV-WRC-50-005-Foliage	Foliage	17	12V 460204 6353030	NO	ND	ND	ND	0.3992	0.5884
896047-26	PR121969	AENV-WRC-06-001-Foliage	Foliage	5	12V 463968 6345076	NO	ND	ND	ND	0.6578	0.4865
896047-29	PR121970	AENV-WRC-06-002-Foliage	Foliage	5	12V 463974 6345085	NO	ND	ND	ND	ND	ND
896047-32	PR121971	AENV-WRC-06-003-Foliage	Foliage	5	12V 463973 6345088	NO	ND	ND	ND	0.7364	ND
896047-35	PR121972	AENV-WRC-06-004-Foliage	Foliage	5	12V 463973 6345088	NO	ND	ND	ND	0.442	ND
896047-38	PR121973	AENV-WRC-06-005-Foliage	Foliage	5	12V 463895 6344999	NO	ND	ND	ND	0.4724	ND
896047-7	PR121964	AENV-WRC-50-001-Foliage	Foliage	17	12V 460192 6353024	NO	ND	ND	ND	0.4581	ND
896047-35	PR121972	AENV-WRC-06-004-Foliage	Foliage	5	12V 463973 6345088	YES	ND	ND	ND	0.4387	0.3999
896208-10	PR121978	AENV-WRC-16-003-Rhizome	Rhizome	10	12V 484150 6347051	NO	ND	ND	ND	ND	ND
896208-12	PR121979	AENV-WRC-16-004-Rhizome	Rhizome	10	12V 484149 6347051	NO	ND	ND	ND	ND	ND
896208-14	PR121980	AENV-WRC-16-005-Rhizome	Rhizome	10	12V 484127 6347048	NO	ND	ND	ND	ND	ND
896208-21	PR121981	AENV-WRC-36-001-Foliage	Foliage	15	12V 463617 6326364	NO	ND	ND	ND	0.849	0.37
896208-24	PR121982	AENV-WRC-36-002-Foliage	Foliage	15	12V 463620 6326361	NO	1.387	7.004	ND	1.195	1.008
896208-27	PR121983	AENV-WRC-36-003-Foliage	Foliage	15	12V 463647 6326364	NO	1.487	ND	ND	1.04	0.368
896208-30	PR121894	AENV-WRC-36-004-Foliage	Foliage	15	12V 463617 6326367	NO	10.242	15.074	ND	1.003	ND
896208-33	PR121985	AENV-WRC-36-005-Foliage	Foliage	15	12V 463617 6326370	NO	7.712	ND	ND	0.809	0.842
896208-6	PR121976	AENV-WRC-16-001-Rhizome	Rhizome	10	12V 484152 6347051	NO	ND	ND	ND	ND	ND
896208-8	PR121977	AENV-WRC-16-002-Rhizome	Rhizome	10	12V 484164 6347051	NO	ND	ND	ND	ND	ND
896208-21	PR121981	AENV-WRC-36-001-Foliage	Foliage	15	12V 463617 6326364	YES	ND	ND	ND	0.825	0.452

						Concentration in sample (ug/kg ww)					
Lab&Lot	**Pacific Rim ID**	**Sample Description**	**Matrix**	**Site Number**	**UTM**	**Duplicate**	**Acenaphthene**	**Acenaphthylene**	**Anthracene**	**Benzo(a) anthracene**	**Benzo(a)pyrene**
BLANK	PH120628B	-	-	-	-	-	ND	ND	ND	ND	ND
BLANK	PH120616B	-	-	-	-	-	ND	ND	ND	ND	ND
BLANK	PH120624B	-	-	-	-	-	ND	ND	ND	ND	ND
BLANK	PH120608B	-	-	-	-	-	ND	ND	ND	ND	ND
BLANK	PH120611B	-	-	-	-	-	ND	ND	ND	ND	ND
BLANK	PH120612B	-	-	-	-	-	ND	ND	ND	ND	ND
BLANK	PH120605B	-	-	-	-	-	ND	ND	ND	ND	ND
BLANK	PH120602B	-	-	-	-	-	ND	ND	ND	ND	1.25
BLANK	PH120600B	-	-	-	-	-	ND	ND	ND	ND	ND
BLANK	PH120601B	-	-	-	-	-	ND	ND	ND	ND	ND
BLANK	PH120641B	-	-	-	-	-	ND	ND	ND	ND	ND
BLANK	PH120637B	-	-	-	-	-	ND	ND	ND	ND	ND
BLANK	PH120630B	-	-	-	-	-	ND	ND	ND	ND	ND
BLANK	PH120631B	-	-	-	-	-	ND	ND	ND	ND	ND
BLANK	PH120633B	-	-	-	-	-	ND	ND	ND	ND	ND
BLANK	PH120635B	-	-	-	-	-	ND	ND	ND	ND	ND
BLANK	PH120636B	-	-	-	-	-	ND	ND	ND	ND	ND

Table 7. The lab and lot number, Pacific Rim ID, sample description, matrix, site number, UTM and duplicate status provided for each sample along with laboratory results of benzo(b)fluoranthene through dibenzo(a,h)anthracene.

							Concentration in sample (ug/kg ww)				
Lab&Lot	**Pacific Rim ID**	**Sample Description**	**Matrix**	**Site Number**	**UTM**	**Duplicate**	**Benzo(b)fluoranthene**	**Benzo(g,h,i)perylene**	**Benzo(k)fluoranthene**	**Chrysene**	**Dibenzo(a,h)anthracene**
884901-10	PR121425	AENV-WRC-01-002-Berry	Berry	1	12V 473533 6329987	NO	ND	ND	ND	ND	ND
884901-13	PR121426	AENV-WRC-01-003-Berry	Berry	1	12V 473528 6329993	NO	ND	ND	ND	ND	ND
884901-16	PR121427	AENV-WRC-01-004-Berry	Berry	1	12V 473530 6329996	NO	ND	ND	ND	ND	ND
884901-19	PR121428	AENV-WRC-01-005-Berry	Berry	1	12V 473528 6329990	NO	ND	ND	ND	ND	ND

							Concentration in sample (ug/kg ww)				
Lab&Lot	**Pacific Rim ID**	**Sample Description**	**Matrix**	**Site Number**	**UTM**	**Duplicate**	**Benzo(b)fluoranthene**	**Benzo(g,h,i)perylene**	**Benzo(k)fluoranthene**	**Chrysene**	**Dibenzo(a,h)anthracene**
884901-26	PR121429	AENV-WRC-02-001-Berry	Berry	2	12V 471715 6330175	NO	ND	ND	ND	ND	ND
884901-29	PR121430	AENV-WRC-02-002-Berry	Berry	2	12V 471721 6330163	NO	ND	ND	ND	ND	ND
884901-32	PR121431	AENV-WRC-02-003-Berry	Berry	2	12V 471704 6330163	NO	ND	ND	ND	ND	ND
884901-35	PR121432	AENV-WRC-02-004-Berry	Berry	2	12V 471692 6330169	NO	ND	ND	ND	ND	ND
884901-38	PR121433	AENV-WRC-02-005-Berry	Berry	2	12V 471690 6330160	NO	ND	ND	ND	ND	ND
884901-45	PR121434	AENV-WRC-03-001-Berry	Berry	3	12V 464201 6364624	NO	ND	ND	ND	ND	ND
884901-48	PR121435	AENV-WRC-03-002-Berry	Berry	3	12V 464196 6364624	NO	ND	ND	ND	ND	ND
884901-51	PR121436	AENV-WRC-03-003-Berry	Berry	3	12V 464204 6364621	NO	ND	ND	ND	ND	ND
884901-54	PR121437	AENV-WRC-03-004-Berry	Berry	3	12V 464196 6364621	NO	ND	ND	ND	ND	ND
884901-57	PR121438	AENV-WRC-03-005-Berry	Berry	3	12V 464191 6364615	NO	ND	ND	ND	ND	ND
884901-7	PR121424	AENV-WRC-01-001-Berry	Berry	1	12V 473516 6330037	NO	ND	ND	ND	ND	ND
884901-29	PR121430	AENV-WRC-02-002-Berry	Berry	2	12V 471721 6330163	YES	ND	ND	ND	ND	ND
885598-10	PR121440	AENV-WRC-15-002-Berry	Berry	9	12V 483777 6350392	NO	ND	ND	ND	ND	ND
885598-13	PR121441	AENV-WRC-15-003-Berry	Berry	9	12V 483772 6350399	NO	ND	ND	ND	ND	ND
885598-16	PR121442	AENV-WRC-15-004-Berry	Berry	9	12V 483772 6350392	NO	ND	ND	ND	ND	ND
885598-19	PR121443	AENV-WRC-15-005-Berry	Berry	9	12V 483772 6350399	NO	ND	ND	ND	ND	ND
885598-7	PR121439	AENV-WRC-15-001-Berry	Berry	9	12V 483787 6350408	NO	ND	ND	ND	ND	ND
886741-11	PR121469	AENV-WRC-07-003-Berry	Berry	6	12V 464116 6344663	NO	ND	ND	ND	ND	ND
886741-14	PR121470	AENV-WRC-07-004-Berry	Berry	6	12V 464123 6344672	NO	ND	ND	ND	ND	ND
886741-17	PR121471	AENV-WRC-07-005-Berry	Berry	6	12V 464108 6344676	NO	ND	ND	ND	ND	ND
886741-24	PR121472	AENV-WRC-08-001-Berry	Berry	7	12V 466958 6366367	NO	ND	ND	ND	ND	ND
886741-27	PR121473	AENV-WRC-08-002-Berry	Berry	7	12V 466953 6366364	NO	ND	ND	ND	ND	ND
886741-30	PR121474	AENV-WRC-08-003-Berry	Berry	7	12V 466951 6366361	NO	ND	ND	ND	ND	ND
886741-33	PR121475	AENV-WRC-08-004-Berry	Berry	7	12V 466946 6366357	NO	ND	ND	ND	ND	ND
886741-36	PR121476	AENV-WRC-08-005-Berry	Berry	7	12V 466949 6366364	NO	ND	ND	ND	ND	ND
886741-5	PR121467	AENV-WRC-07-001-Berry	Berry	6	12V 464106 6344648	NO	ND	ND	ND	ND	ND
886741-8	PR121468	AENV-WRC-07-002-Berry	Berry	6	12V 464123 6344645	NO	ND	ND	ND	ND	ND
886741-5	PR121467	AENV-WRC-07-001-Berry	Berry	6	12V 464106 6344648	YES	ND	ND	ND	ND	ND

							Concentration in sample (ug/kg ww)				
Lab&Lot	**Pacific Rim ID**	**Sample Description**	**Matrix**	**Site Number**	**UTM**	**Duplicate**	**Benzo(b)fluoranthene**	**Benzo(g,h,i)perylene**	**Benzo(k)fluoranthene**	**Chrysene**	**Dibenzo(a,h)anthracene**
887081-11	PR121483	AENV-WRC-35-003-Fruit	Berry	14	12V 463646 6326280	NO	ND	ND	ND	ND	ND
887081-14	PR121484	AENV-WRC-35-004-Fruit	Berry	14	12V 463677 6326271	NO	ND	ND	ND	ND	ND
887081-17	PR121485	AENV-WRC-35-005-Fruit	Berry	14	12V 463682 6326265	NO	ND	ND	ND	ND	ND
887081-25	PR121486	AENV-WRC-17-001-Fruit	Berry	11	12V 460013 6344599	NO	ND	ND	ND	ND	ND
887081-26	PR121487	AENV-WRC-17-001-Foliage	Foliage	11	12V 460013 6344599	NO	0.575	ND	ND	2.406	ND
887081-29	PR121488	AENV-WRC-17-002-Fruit	Berry	11	12V 460012 6344596	NO	ND	ND	ND	ND	ND
887081-30	PR121489	AENV-WRC-17-002-Foliage	Foliage	11	12V 460012 6344596	NO	0.925	ND	0.24	3.672	ND
887081-33	PR121490	AENV-WRC-17-003-Fruit	Berry	11	12V 460010 6344596	NO	ND	ND	ND	ND	ND
887081-34	PR121491	AENV-WRC-17-003-Foliage	Foliage	11	12V 460010 6344596	NO	1.161	ND	ND	4.879	ND
887081-37	PR121492	AENV-WRC-17-004-Fruit	Berry	11	12V 460005 6344593	NO	ND	ND	ND	ND	ND
887081-38	PR121493	AENV-WRC-17-004-Foliage	Foliage	11	12V 460005 6344593	NO	0.646	ND	ND	2.734	ND
887081-41	PR121494	AENV-WRC-17-005-Fruit	Berry	11	12V 460003 6344596	NO	ND	ND	ND	ND	ND
887081-42	PR121495	AENV-WRC-17-005-Foliage	Foliage	11	12V 460003 6344596	NO	0.74	0.48	ND	3.24	ND
887081-5	PR121481	AENV-WRC-35-001-Fruit	Berry	14	12V 463672 6326286	NO	ND	ND	ND	ND	ND
887081-50	PR121496	AENV-WRC-18-001-Fruit	Berry	12	12V 459412 6347045	NO	ND	ND	ND	ND	ND
887081-51	PR121497	AENV-WRC-18-001-Foliage	Foliage	12	12V 459412 6347045	NO	0.487	ND	ND	2.243	ND
887081-54	PR121498	AENV-WRC-18-002-Fruit	Berry	12	12V 459416 6347054	NO	ND	ND	ND	ND	ND
887081-55	PR121499	AENV-WRC-18-002-Foliage	Foliage	12	12V 459416 6347054	NO	0.927	ND	ND	2.586	ND
887081-58	PR121500	AENV-WRC-18-003-Fruit	Berry	12	12V 459422 6347054	NO	ND	ND	ND	ND	ND
887081-59	PR121501	AENV-WRC-18-003-Foliage	Foliage	12	12V 459422 6347054	NO	0.85	0.449	0.264	3.049	ND
887081-62	PR121502	AENV-WRC-18-004-Fruit	Berry	12	12V 459426 6347060	NO	ND	ND	ND	ND	ND
887081-63	PR121503	AENV-WRC-18-004-Foliage	Foliage	12	12V 459426 6347060	NO	1.361	0.546	ND	4.496	ND
887081-66	PR121504	AENV-WRC-18-005-Fruit	Berry	12	12V 459427 6347060	NO	ND	ND	ND	ND	ND
887081-67	PR121505	AENV-WRC-18-005-Foliage	Foliage	12	12V 459427 6347060	NO	2.76	ND	ND	3.54	ND
887081-8	PR121482	AENV-WRC-35-002-Fruit	Berry	14	12V 463668 6326271	NO	ND	ND	ND	ND	ND
887081-29	PR121488	AENV-WRC-17-002-Fruit	Berry	11	12V 460012 6344596	YES	ND	ND	ND	ND	ND
887081-66	PR121504	AENV-WRC-18-005-Fruit	Berry	12	12V 459427 6347060	YES	ND	ND	ND	ND	ND
886745-10	PR121513	AENV-WRC 19-002-Foliage	Foliage	13	12V 468123 6310152	NO	0.7	0.58	ND	3.45	ND

							Concentration in sample (ug/kg ww)				
Lab&Lot	**Pacific Rim ID**	**Sample Description**	**Matrix**	**Site Number**	**UTM**	**Duplicate**	**Benzo(b)fluoranthene**	**Benzo(g,h,i)perylene**	**Benzo(k)fluoranthene**	**Chrysene**	**Dibenzo(a,h)anthracene**
886745-13	PR121514	AENV-WRC 19-003-Fruit	Berry	13	12V 468079 6310127	NO	ND	ND	ND	ND	ND
886745-14	PR121515	AENV-WRC 19-003-Foliage	Foliage	13	12V 468079 6310127	NO	0.46	0.51	ND	2.44	ND
886745-17	PR121516	AENV-WRC 19-004-Fruit	Berry	13	12V 468066 6310130	NO	ND	ND	ND	ND	ND
886745-18	PR121517	AENV-WRC 19-004-Foliage	Foliage	13	12V 468066 6310130	NO	1.47	0.85	ND	3.6	0.5
886745-21	PR121518	AENV-WRC 19-005-Fruit	Berry	13	12V 468106 6310087	NO	ND	ND	ND	ND	ND
886745-22	PR121519	AENV-WRC 19-005-Foliage	Foliage	13	12V 468106 6310087	NO	0.706240458	0.74	ND	3.369370229	ND
886745-30	PR121520	AENV-WRC-58-001-Foliage	Foliage	18	12V 462844 6363984	NO	0.523044248	ND	ND	1.996672566	ND
886745-33	PR121521	AENV-WRC-58-002-Foliage	Foliage	18	12V 462848 6363962	NO	0.955337187	0.8	ND	5.308400771	ND
886745-36	PR121522	AENV-WRC-58-003-Foliage	Foliage	18	12V 462847 6363962	NO	1.020182815	0.63	0.41	4.343601463	ND
886745-39	PR121523	AENV-WRC-58-004-Foliage	Foliage	18	12V 462828 6363971	NO	0.459853211	ND	ND	1.783247706	ND
886745-42	PR121524	AENV-WRC-58-005-Foliage	Foliage	18	12V 462838 6363971	NO	0.737126654	ND	ND	2.360321361	ND
886745-5	PR121510	AENV-WRC 19-001-Fruit	Berry	13	12V 468223 6310175	NO	ND	ND	ND	ND	ND
886745-6	PR121511	AENV-WRC 19-001-Foliage	Foliage	13	12V 468223 6310175	NO	1.1	0.75	ND	4.63	ND
886745-9	PR121512	AENV-WRC 19-002-Fruit	Berry	13	12V 468123 6310152	NO	ND	ND	ND	ND	ND
886745-17	PR121516	AENV-WRC 19-004-Fruit	Berry	13	12V 468066 6310130	YES	ND	ND	ND	ND	ND
894583-12	PR121868	AENV-WRC-40-005-Foliage	Foliage	16	12V 463896 6290603	NO	ND	ND	ND	0.3	ND
894583-16	PR121869	AENV-WRC-59-001-Rhizome	Rhizome	19	12V 496187 6256732	NO	ND	ND	ND	ND	ND
894583-17	PR121870	AENV-WRC-59-002-Rhizome	Rhizome	19	12V 496245 6256692	NO	ND	ND	ND	ND	ND
894583-18	PR121871	AENV-WRC-59-003-Rhizome	Rhizome	19	12V 496245 6256689	NO	0.65	0.58	ND	0.34	ND
894583-19	PR121872	AENV-WRC-59-004-Rhizome	Rhizome	19	12V 496245 6256686	NO	0.33	ND	ND	ND	ND
894583-20	PR121873	AENV-WRC-59-005-Rhizome	Rhizome	19	12V 496243 6256689	NO	0.48	ND	ND	0.61	ND
894583-27	PR121874	AENV-WRC-40-001-Foliage	Foliage	16	12V 463891 6290600	NO	0.56	0.42	ND	0.29	ND
894583-3	PR121865	AENV-WRC-40-002-Foliage	Foliage	16	12V 463892 6290600	NO	0.334	ND	ND	0.536	ND
894583-6	PR121866	AENV-WRC-40-003-Foliage	Foliage	16	12V 463892 6290603	NO	0.35	ND	ND	0.45	ND
894583-9	PR121867	AENV-WRC-40-004-Foliage	Foliage	16	12V 463902 6290606	NO	0.34	ND	ND	0.38	ND
894583-27	PR121874	AENV-WRC-40-001-Foliage	Foliage	16	12V 463891 6290600	YES	0.52	0.56	ND	0.23	ND
895939-12	PR121956	AENV-WRC-05-003-Foliage	Foliage	4	12V 470519 6330808	NO	1.305	0.815	0.223	6.164	ND
895939-16	PR121957	AENV-WRC-05-004-Foliage	Foliage	4	12V 470515 6330808	NO	1.099	0.699	ND	5.665	ND

							Concentration in sample (ug/kg ww)				
Lab&Lot	**Pacific Rim ID**	**Sample Description**	**Matrix**	**Site Number**	**UTM**	**Duplicate**	**Benzo(b)fluoranthene**	**Benzo(g,h,i)perylene**	**Benzo(k)fluoranthene**	**Chrysene**	**Dibenzo(a,h)anthracene**
895939-19	PR121958	AENV-WRC-05-005-Foliage	Foliage	4	12V 470512 6330812	NO	1.07	0.659	0.232	5.278	ND
895939-26	PR121959	AENV-WRC-14-001-Foliage	Foliage	8	12V 484062 6347144	NO	0.814	ND	ND	2.731	ND
895939-29	PR121960	AENV-WRC-14-002-Foliage	Foliage	8	12V 484069 6347138	NO	0.952	ND	ND	2.639	ND
895939-32	PR121961	AENV-WRC-14-003-Foliage	Foliage	8	12V 484072 6347157	NO	0.804	ND	ND	2.149	ND
895939-35	PR121962	AENV-WRC-14-004-Foliage	Foliage	8	12V 484059 6347160	NO	0.804	ND	ND	2.469	ND
895939-38	PR121963	AENV-WRC-14-005-Foliage	Foliage	8	12V 484052 6347151	NO	0.731	0.6	ND	3.9062	ND
895939-6	PR121954	AENV-WRC-5-001-Foliage	Foliage	4	12V 470512 6330815	NO	1.821	1.03	ND	7.208	ND
895939-9	PR121955	AENV-WRC-05-002-Foliage	Foliage	4	12V 470514 6330812	NO	1.861	1.202	0.306	8.298	ND
895939-35	PR121962	AENV-WRC-14-004-Foliage	Foliage	8	12V 484059 6347160	YES	0.792	ND	ND	2.0974	ND
896047-10	PR121965	AENV-WRC-50-002-Foliage	Foliage	17	12V 460189 6353024	NO	0.5271	ND	ND	3.0023	ND
896047-13	PR121966	AENV-WRC-50-003-Foliage	Foliage	17	12V 460192 6353027	NO	0.3939	ND	ND	1.6542	ND
896047-16	PR121967	AENV-WRC-50-004-Foliage	Foliage	17	12V 460198 6353030	NO	0.503	0.402	ND	1.776	ND
896047-19	PR121968	AENV-WRC-50-005-Foliage	Foliage	17	12V 460204 6353030	NO	0.3588	ND	ND	1.812	ND
896047-26	PR121969	AENV-WRC-06-001-Foliage	Foliage	5	12V 463968 6345076	NO	0.853	0.4649	ND	5.0496	ND
896047-29	PR121970	AENV-WRC-06-002-Foliage	Foliage	5	12V 463974 6345085	NO	1.2116	0.5059	ND	7.3879	ND
896047-32	PR121971	AENV-WRC-06-003-Foliage	Foliage	5	12V 463973 6345088	NO	1.4101	0.6722	ND	7.1444	ND
896047-35	PR121972	AENV-WRC-06-004-Foliage	Foliage	5	12V 463973 6345088	NO	0.621	0.521	ND	3.629	ND
896047-38	PR121973	AENV-WRC-06-005-Foliage	Foliage	5	12V 463895 6344999	NO	0.926	ND	ND	4.3808	ND
896047-7	PR121964	AENV-WRC-50-001-Foliage	Foliage	17	12V 460192 6353024	NO	ND	ND	ND	1.5433	ND
896047-35	PR121972	AENV-WRC-06-004-Foliage	Foliage	5	12V 463973 6345088	YES	0.5261	0.5306	ND	3.7818	ND
896208-10	PR121978	AENV-WRC-16-003-Rhizome	Rhizome	10	12V 484150 6347051	NO	ND	ND	ND	ND	ND
896208-12	PR121979	AENV-WRC-16-004-Rhizome	Rhizome	10	12V 484149 6347051	NO	ND	ND	ND	ND	ND
896208-14	PR121980	AENV-WRC-16-005-Rhizome	Rhizome	10	12V 484127 6347048	NO	ND	ND	ND	ND	ND
896208-21	PR121981	AENV-WRC-36-001-Foliage	Foliage	15	12V 463617 6326364	NO	0.499	0.757	0.221	4.365	ND
896208-24	PR121982	AENV-WRC-36-002-Foliage	Foliage	15	12V 463620 6326361	NO	1.0448	0.976	0.257	5.538	ND
896208-27	PR121983	AENV-WRC-36-003-Foliage	Foliage	15	12V 463647 6326364	NO	0.978	0.923	ND	5.976	ND
896208-30	PR121894	AENV-WRC-36-004-Foliage	Foliage	15	12V 463617 6326367	NO	0.646	1.265	0.267	4.997	ND
896208-33	PR121985	AENV-WRC-36-005-Foliage	Foliage	15	12V 463617 6326370	NO	0.98	0.702	0.246	4.934	ND

							Concentration in sample (ug/kg ww)				
Lab&Lot	**Pacific Rim ID**	**Sample Description**	**Matrix**	**Site Number**	**UTM**	**Duplicate**	**Benzo(b)fluoranthene**	**Benzo(g,h,i)perylene**	**Benzo(k)fluoranthene**	**Chrysene**	**Dibenzo(a,h)anthracene**
896208-6	PR121976	AENV-WRC-16-001-Rhizome	Rhizome	10	12V 484152 6347051	NO	ND	ND	ND	0.373	ND
896208-8	PR121977	AENV-WRC-16-002-Rhizome	Rhizome	10	12V 484164 6347051	NO	ND	ND	ND	0.379	ND
896208-21	PR121981	AENV-WRC-36-001-Foliage	Foliage	15	12V 463617 6326364	YES	1.522	0.84	ND	4.861	ND
BLANK	PH120628B	-	-	-	-	-	ND	ND	ND	ND	ND
BLANK	PH120616B	-	-	-	-	-	ND	ND	ND	ND	ND
BLANK	PH120624B	-	-	-	-	-	ND	ND	ND	ND	ND
BLANK	PH120608B	-	-	-	-	-	ND	ND	ND	ND	ND
BLANK	PH120611B	-	-	-	-	-	ND	ND	ND	ND	ND
BLANK	PH120612B	-	-	-	-	-	ND	ND	ND	ND	ND
BLANK	PH120605B	-	-	-	-	-	ND	ND	ND	ND	ND
BLANK	PH120602B	-	-	-	-	-	0.57	ND	0.21	0.25	ND
BLANK	PH120600B	-	-	-	-	-	ND	ND	ND	ND	ND
BLANK	PH120601B	-	-	-	-	-	ND	ND	ND	ND	ND
BLANK	PH120641B	-	-	-	-	-	ND	ND	ND	ND	ND
BLANK	PH120637B	-	-	-	-	-	ND	ND	ND	ND	ND
BLANK	PH120630B	-	-	-	-	-	ND	ND	ND	ND	ND
BLANK	PH120631B	-	-	-	-	-	ND	ND	ND	ND	ND
BLANK	PH120633B	-	-	-	-	-	ND	ND	ND	ND	ND
BLANK	PH120635B	-	-	-	-	-	ND	ND	ND	ND	ND
BLANK	PH120636B	-	-	-	-	-	ND	ND	ND	ND	ND

Table 8. The lab & lot number, Pacific Rim ID, sample description, matrix, site number, UTM and duplicate status provided for each sample along with laboratory results of fluoranthene to pyrene.

							Concentration in sample (ug/kg ww)					
Lab & Lot	**Pacific Rim ID**	**Sample Description**	**Matrix**	**Site Number**	**UTM**	**Duplicate**	**Fluoranthene**	**Fluorene**	**Indeno(1,2,3-c,d)pyrene**	**Naphthalene**	**Phenanthrene**	**Pyrene**
884901-10	PR121425	AENV-WRC-01-002-Berry	Berry	1	12V 473533 6329987	NO	ND	ND	ND	ND	0.45	ND
884901-13	PR121426	AENV-WRC-01-003-Berry	Berry	1	12V 473528 6329993	NO	ND	ND	ND	ND	0.35	ND
884901-16	PR121427	AENV-WRC-01-004-Berry	Berry	1	12V 473530 6329996	NO	ND	ND	ND	ND	0.3	ND
884901-19	PR121428	AENV-WRC-01-005-Berry	Berry	1	12V 473528 6329990	NO	ND	ND	ND	ND	0.43	ND
884901-26	PR121429	AENV-WRC-02-001-Berry	Berry	2	12V 471715 6330175	NO	ND	ND	ND	ND	0.36	ND
884901-29	PR121430	AENV-WRC-02-002-Berry	Berry	2	12V 471721 6330163	NO	ND	ND	ND	ND	0.33	ND
884901-32	PR121431	AENV-WRC-02-003-Berry	Berry	2	12V 471704 6330163	NO	ND	ND	ND	ND	0.37	ND
884901-35	PR121432	AENV-WRC-02-004-Berry	Berry	2	12V 471692 6330169	NO	ND	ND	ND	ND	0.23	ND
884901-38	PR121433	AENV-WRC-02-005-Berry	Berry	2	12V 471690 6330160	NO	ND	ND	ND	ND	0.42	ND
884901-45	PR121434	AENV-WRC-03-001-Berry	Berry	3	12V 464201 6364624	NO	ND	ND	ND	ND	0.2	ND
884901-48	PR121435	AENV-WRC-03-002-Berry	Berry	3	12V 464196 6364624	NO	ND	ND	ND	ND	ND	ND
884901-51	PR121436	AENV-WRC-03-003-Berry	Berry	3	12V 464204 6364621	NO	ND	ND	ND	ND	0.23	ND
884901-54	PR121437	AENV-WRC-03-004-Berry	Berry	3	12V 464196 6364621	NO	ND	ND	ND	ND	ND	ND
884901-57	PR121438	AENV-WRC-03-005-Berry	Berry	3	12V 464191 6364615	NO	ND	ND	ND	ND	0.27	ND
884901-7	PR121424	AENV-WRC-01-001-Berry	Berry	1	12V 473516 6330037	NO	ND	ND	ND	ND	0.45	ND
884901-29	PR121430	AENV-WRC-02-002-Berry	Berry	2	12V 471721 6330163	YES	ND	ND	ND	ND	0.28	ND
885598-10	PR121440	AENV-WRC-15-002-Berry	Berry	9	12V 483777 6350392	NO	ND	ND	ND	ND	0.27	ND
885598-13	PR121441	AENV-WRC-15-003-Berry	Berry	9	12V 483772 6350399	NO	ND	ND	ND	ND	0.22	ND
885598-16	PR121442	AENV-WRC-15-004-Berry	Berry	9	12V 483772 6350392	NO	ND	0.24	ND	ND	0.54	0.18
885598-19	PR121443	AENV-WRC-15-005-Berry	Berry	9	12V 483772 6350399	NO	ND	ND	ND	ND	0.21	ND
885598-7	PR121439	AENV-WRC-15-001-Berry	Berry	9	12V 483787 6350408	NO	ND	ND	ND	ND	0.27	ND
886741-11	PR121469	AENV-WRC-07-003-Berry	Berry	6	12V 464116 6344663	NO	0.2	0.26	ND	ND	0.81	0.18
886741-14	PR121470	AENV-WRC-07-004-Berry	Berry	6	12V 464123 6344672	NO	ND	ND	ND	ND	0.35	ND
886741-17	PR121471	AENV-WRC-07-005-Berry	Berry	6	12V 464108 6344676	NO	ND	ND	ND	ND	0.34	ND
886741-24	PR121472	AENV-WRC-08-001-Berry	Berry	7	12V 466958 6366367	NO	ND	ND	ND	ND	0.42	ND

							Concentration in sample (ug/kg ww)					
Lab & Lot	Pacific Rim ID	Sample Description	Matrix	Site Number	UTM	Duplicate	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	Phenanthrene	Pyrene
886741-27	PR121473	AENV-WRC-08-002-Berry	Berry	7	12V 466953 6366364	NO	ND	0.16	ND	1.16	0.4	ND
886741-30	PR121474	AENV-WRC-08-003-Berry	Berry	7	12V 466951 6366361	NO	ND	ND	ND	ND	0.38	ND
886741-33	PR121475	AENV-WRC-08-004-Berry	Berry	7	12V 466946 6366357	NO	ND	ND	ND	ND	0.34	ND
886741-36	PR121476	AENV-WRC-08-005-Berry	Berry	7	12V 466949 6366364	NO	ND	ND	ND	ND	0.21	ND
886741-5	PR121467	AENV-WRC-07-001-Berry	Berry	6	12V 464106 6344648	NO	ND	ND	ND	1.23	0.48	ND
886741-8	PR121468	AENV-WRC-07-002-Berry	Berry	6	12V 464123 6344645	NO	ND	0.19	ND	ND	0.42	ND
886741-5	PR121467	AENV-WRC-07-001-Berry	Berry	6	12V 464106 6344648	YES	ND	ND	ND	ND	0.4	ND
887081-11	PR121483	AENV-WRC-35-003-Fruit	Berry	14	12V 463646 6326280	NO	ND	ND	ND	ND	0.278	0.254
887081-14	PR121484	AENV-WRC-35-004-Fruit	Berry	14	12V 463677 6326271	NO	ND	ND	ND	ND	0.306	0.258
887081-17	PR121485	AENV-WRC-35-005-Fruit	Berry	14	12V 463682 6326265	NO	ND	ND	ND	ND	0.33	0.228
887081-25	PR121486	AENV-WRC-17-001-Fruit	Berry	11	12V 460013 6344599	NO	ND	ND	ND	ND	0.255	ND
887081-26	PR121487	AENV-WRC-17-001-Foliage	Foliage	11	12V 460013 6344599	NO	1.192	37.937	ND	ND	2.318	1.49
887081-29	PR121488	AENV-WRC-17-002-Fruit	Berry	11	12V 460012 6344596	NO	ND	ND	ND	ND	0.303	0.165
887081-30	PR121489	AENV-WRC-17-002-Foliage	Foliage	11	12V 460012 6344596	NO	1.846	ND	ND	ND	7.216	1.09
887081-33	PR121490	AENV-WRC-17-003-Fruit	Berry	11	12V 460010 6344596	NO	0.142	ND	ND	ND	0.349	ND
887081-34	PR121491	AENV-WRC-17-003-Foliage	Foliage	11	12V 460010 6344596	NO	1.657	1.101	ND	1.207	4.438	1.871
887081-37	PR121492	AENV-WRC-17-004-Fruit	Berry	11	12V 460005 6344593	NO	ND	0.16	ND	ND	0.52	ND
887081-38	PR121493	AENV-WRC-17-004-Foliage	Foliage	11	12V 460005 6344593	NO	0.492	0.895	ND	1.249	3.459	0.623
887081-41	PR121494	AENV-WRC-17-005-Fruit	Berry	11	12V 460003 6344596	NO	ND	ND	ND	ND	0.316	ND
887081-42	PR121495	AENV-WRC-17-005-Foliage	Foliage	11	12V 460003 6344596	NO	0.69	ND	ND	ND	3.42	0.71
887081-5	PR121481	AENV-WRC-35-001-Fruit	Berry	14	12V 463672 6326286	NO	ND	ND	ND	ND	0.288	0.363
887081-50	PR121496	AENV-WRC-18-001-Fruit	Berry	12	12V 459412 6347045	NO	ND	ND	ND	ND	0.308	ND
887081-51	PR121497	AENV-WRC-18-001-Foliage	Foliage	12	12V 459412 6347045	NO	1.327	3.081	ND	ND	3.152	1.355
887081-54	PR121498	AENV-WRC-18-002-Fruit	Berry	12	12V 459416 6347054	NO	ND	ND	ND	ND	0.427	0.195
887081-55	PR121499	AENV-WRC-18-002-Foliage	Foliage	12	12V 459416 6347054	NO	2.678	ND	ND	1.952	2.409	2.614
887081-58	PR121500	AENV-WRC-18-003-Fruit	Berry	12	12V 459422 6347054	NO	ND	0.19	ND	ND	0.56	ND
887081-59	PR121501	AENV-WRC-18-003-Foliage	Foliage	12	12V 459422 6347054	NO	2.011	ND	ND	2.09	3.946	2.278
887081-62	PR121502	AENV-WRC-18-004-Fruit	Berry	12	12V 459426 6347060	NO	ND	ND	ND	ND	0.283	ND

							Concentration in sample (ug/kg ww)					
Lab & Lot	Pacific Rim ID	Sample Description	Matrix	Site Number	UTM	Duplicate	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	Phenanthrene	Pyrene
887081-63	PR121503	AENV-WRC-18-004-Foliage	Foliage	12	12V 459426 6347060	NO	2.755	0.739	ND	3.757	3.858	3.322
887081-66	PR121504	AENV-WRC-18-005-Fruit	Berry	12	12V 459427 6347060	NO	ND	ND	ND	ND	0.269	ND
887081-67	PR121505	AENV-WRC-18-005-Foliage	Foliage	12	12V 459427 6347060	NO	1.69	ND	ND	3.27	4.9	1.67
887081-8	PR121482	AENV-WRC-35-002-Fruit	Berry	14	12V 463668 6326271	NO	0.343	0.199	ND	ND	0.572	0.463
887081-29	PR121488	AENV-WRC-17-002-Fruit	Berry	11	12V 460012 6344596	YES	ND	ND	ND	ND	0.248	0.18
887081-66	PR121504	AENV-WRC-18-005-Fruit	Berry	12	12V 459427 6347060	YES	ND	ND	ND	ND	0.24	ND
886745-10	PR121513	AENV-WRC 19-002-Foliage	Foliage	13	12V 468123 6310152	NO	1.47	3.78	ND	1.7	6.68	1.6
886745-13	PR121514	AENV-WRC 19-003-Fruit	Berry	13	12V 468079 6310127	NO	0.21	2.59	ND	1.36	2.47	ND
886745-14	PR121515	AENV-WRC 19-003-Foliage	Foliage	13	12V 468079 6310127	NO	1.44	1.31	ND	5.48	4.85	1.26
886745-17	PR121516	AENV-WRC 19-004-Fruit	Berry	13	12V 468066 6310130	NO	0.32	3.27	ND	4.05	2.8	ND
886745-18	PR121517	AENV-WRC 19-004-Foliage	Foliage	13	12V 468066 6310130	NO	1.93	4.76	ND	5.92	8.88	1.95
886745-21	PR121518	AENV-WRC 19-005-Fruit	Berry	13	12V 468106 6310087	NO	ND	0.745079523	ND	ND	ND	ND
886745-22	PR121519	AENV-WRC 19-005-Foliage	Foliage	13	12V 468106 6310087	NO	0.982099237	2.199026718	ND	ND	2.576030534	1.380057252
886745-30	PR121520	AENV-WRC-58-001-Foliage	Foliage	18	12V 462844 6363984	NO	0.936053097	1.04159292	ND	ND	3.484530974	0.750212389
886745-33	PR121521	AENV-WRC-58-002-Foliage	Foliage	18	12V 462848 6363962	NO	1.797591522	9.141599229	ND	ND	6.442504817	1.668709056
886745-36	PR121522	AENV-WRC-58-003-Foliage	Foliage	18	12V 462847 6363962	NO	2.091773309	2.069670932	ND	1.032303474	5.903290676	1.735941499
886745-39	PR121523	AENV-WRC-58-004-Foliage	Foliage	18	12V 462828 6363971	NO	1.11012844	ND	ND	2.722770642	2.770110092	0.925449541
886745-42	PR121524	AENV-WRC-58-005-Foliage	Foliage	18	12V 462838 6363971	NO	0.996521739	1.25536862	ND	1.113024575	4.158355388	0.951379962
886745-5	PR121510	AENV-WRC 19-001-Fruit	Berry	13	12V 468223 6310175	NO	0.25	2.42	ND	2.79	2.38	ND
886745-6	PR121511	AENV-WRC 19-001-Foliage	Foliage	13	12V 468223 6310175	NO	1.23	17.71	ND	ND	6.57	1.54
886745-9	PR121512	AENV-WRC 19-002-Fruit	Berry	13	12V 468123 6310152	NO	ND	2.48	ND	1.28	2.16	ND
886745-17	PR121516	AENV-WRC 19-004-Fruit	Berry	13	12V 468066 6310130	YES	0.18	2.69	ND	4.83	2.4	ND
894583-12	PR121868	AENV-WRC-40-005-Foliage	Foliage	16	12V 463896 6290603	NO	0.38	ND	ND	1.15	1.6	0.44
894583-16	PR121869	AENV-WRC-59-001-Rhizome	Rhizome	19	12V 496187 6256732	NO	0.66	1.89	ND	2.84	6.16	0.25
894583-17	PR121870	AENV-WRC-59-002-Rhizome	Rhizome	19	12V 496245 6256692	NO	0.99	1.59	ND	2.08	18.6	0.34
894583-18	PR121871	AENV-WRC-59-003-Rhizome	Rhizome	19	12V 496245 6256689	NO	0.85	0.94	0.52	2.26	4.2	0.56
894583-19	PR121872	AENV-WRC-59-004-Rhizome	Rhizome	19	12V 496245 6256686	NO	0.74	1.32	ND	2.82	4.78	0.35
894583-20	PR121873	AENV-WRC-59-005-Rhizome	Rhizome	19	12V 496243 6256689	NO	0.45	ND	ND	7.4	2.25	0.56

							Concentration in sample (ug/kg ww)					
Lab & Lot	**Pacific Rim ID**	**Sample Description**	**Matrix**	**Site Number**	**UTM**	**Duplicate**	**Fluoranthene**	**Fluorene**	**Indeno(1,2,3-c,d)pyrene**	**Naphthalene**	**Phenanthrene**	**Pyrene**
894583-27	PR121874	AENV-WRC-40-001-Foliage	Foliage	16	12V 463891 6290600	NO	1.07	1.1	ND	3.35	7.27	0.58
894583-3	PR121865	AENV-WRC-40-002-Foliage	Foliage	16	12V 463892 6290600	NO	0.417	1.112	ND	ND	2.129	0.286
894583-6	PR121866	AENV-WRC-40-003-Foliage	Foliage	16	12V 463892 6290603	NO	0.43	ND	ND	1.03	1.49	0.53
894583-9	PR121867	AENV-WRC-40-004-Foliage	Foliage	16	12V 463902 6290606	NO	0.4	3.09	ND	1.32	1.37	0.43
894583-27	PR121874	AENV-WRC-40-001-Foliage	Foliage	16	12V 463891 6290600	YES	1.02	1.16	ND	2.33	5.7	0.56
895939-12	PR121956	AENV-WRC-05-003-Foliage	Foliage	4	12V 470519 6330808	NO	1.385	2.718	ND	ND	8.214	2.21
895939-16	PR121957	AENV-WRC-05-004-Foliage	Foliage	4	12V 470515 6330808	NO	1.68	0.7942	ND	1.102	7.813	2.156
895939-19	PR121958	AENV-WRC-05-005-Foliage	Foliage	4	12V 470512 6330812	NO	1.442	1.084	ND	ND	6.128	1.968
895939-26	PR121959	AENV-WRC-14-001-Foliage	Foliage	8	12V 484062 6347144	NO	0.968	0.926	ND	ND	5.738	1.289
895939-29	PR121960	AENV-WRC-14-002-Foliage	Foliage	8	12V 484069 6347138	NO	1.151	0.959	ND	1.176	5.679	1.315
895939-32	PR121961	AENV-WRC-14-003-Foliage	Foliage	8	12V 484072 6347157	NO	0.634	0.376	ND	1.075	3.406	1.108
895939-35	PR121962	AENV-WRC-14-004-Foliage	Foliage	8	12V 484059 6347160	NO	0.845	0.9608	ND	1.01	6.0686	1.338
895939-38	PR121963	AENV-WRC-14-005-Foliage	Foliage	8	12V 484052 6347151	NO	0.813	0.671	ND	1.213	6.886	1.179
895939-6	PR121954	AENV-WRC-5-001-Foliage	Foliage	4	12V 470512 6330815	NO	1.601	0.463	ND	1.495	8.594	2.038
895939-9	PR121955	AENV-WRC-05-002-Foliage	Foliage	4	12V 470514 6330812	NO	1.532	0.592	ND	1.763	11.495	2.683
895939-35	PR121962	AENV-WRC-14-004-Foliage	Foliage	8	12V 484059 6347160	YES	1.244	0.795	ND	ND	5.107	1.221
896047-10	PR121965	AENV-WRC-50-002-Foliage	Foliage	17	12V 460189 6353024	NO	0.8308	ND	ND	1.5211	5.7666	1.1012
896047-13	PR121966	AENV-WRC-50-003-Foliage	Foliage	17	12V 460192 6353027	NO	0.6265	0.9921	ND	1.504	4.6696	0.7443
896047-16	PR121967	AENV-WRC-50-004-Foliage	Foliage	17	12V 460198 6353030	NO	1.006	0.939	ND	3.696	8.281	1.619
896047-19	PR121968	AENV-WRC-50-005-Foliage	Foliage	17	12V 460204 6353030	NO	0.7968	1.426	ND	4.6695	6.5758	0.9994
896047-26	PR121969	AENV-WRC-06-001-Foliage	Foliage	5	12V 463968 6345076	NO	0.9875	1.9826	ND	1.2111	8.8223	1.6661
896047-29	PR121970	AENV-WRC-06-002-Foliage	Foliage	5	12V 463974 6345085	NO	1.1307	2.3542	0.5997	1.0485	8.6073	1.7939
896047-32	PR121971	AENV-WRC-06-003-Foliage	Foliage	5	12V 463973 6345088	NO	0.8742	0.6329	ND	ND	7.3705	1.4817
896047-35	PR121972	AENV-WRC-06-004-Foliage	Foliage	5	12V 463973 6345088	NO	1.131	5.671	ND	6.835	10.622	1.446
896047-38	PR121973	AENV-WRC-06-005-Foliage	Foliage	5	12V 463895 6344999	NO	1.1197	1.4134	ND	3.6473	11.3756	1.6059
896047-7	PR121964	AENV-WRC-50-001-Foliage	Foliage	17	12V 460192 6353024	NO	0.6086	ND	ND	1.1338	5.2005	0.8212
896047-35	PR121972	AENV-WRC-06-004-Foliage	Foliage	5	12V 463973 6345088	YES	1.4041	2.8036	ND	2.1425	10.0661	1.5667
896208-10	PR121978	AENV-WRC-16-003-Rhizome	Rhizome	10	12V 484150 6347051	NO	ND	ND	ND	ND	1.6599	ND

							Concentration in sample (ug/kg ww)					
Lab & Lot	**Pacific Rim ID**	**Sample Description**	**Matrix**	**Site Number**	**UTM**	**Duplicate**	**Fluoranthene**	**Fluorene**	**Indeno(1,2,3-c,d)pyrene**	**Naphthalene**	**Phenanthrene**	**Pyrene**
896208-12	PR121979	AENV-WRC-16-004-Rhizome	Rhizome	10	12V 484149 6347051	NO	ND	ND	ND	ND	1.978	0.245
896208-14	PR121980	AENV-WRC-16-005-Rhizome	Rhizome	10	12V 484127 6347048	NO	0.201	ND	ND	1.187	1.2	0.248
896208-21	PR121981	AENV-WRC-36-001-Foliage	Foliage	15	12V 463617 6326364	NO	1.437	5.5614	ND	1.2286	12.1297	2.414
896208-24	PR121982	AENV-WRC-36-002-Foliage	Foliage	15	12V 463620 6326361	NO	1.362	1.062	0.51	1.699	16.064	2.589
896208-27	PR121983	AENV-WRC-36-003-Foliage	Foliage	15	12V 463647 6326364	NO	1.505	1.515	0.578	2.299	15.326	2.602
896208-30	PR121894	AENV-WRC-36-004-Foliage	Foliage	15	12V 463617 6326367	NO	1.074	4.201	0.61	ND	14.773	1.994
896208-33	PR121985	AENV-WRC-36-005-Foliage	Foliage	15	12V 463617 6326370	NO	1.29	2.982	ND	1.765	14.655	2.206
896208-6	PR121976	AENV-WRC-16-001-Rhizome	Rhizome	10	12V 484152 6347051	NO	0.346	ND	ND	1.103	3.985	0.392
896208-8	PR121977	AENV-WRC-16-002-Rhizome	Rhizome	10	12V 484164 6347051	NO	0.323	ND	ND	ND	2.053	0.318
896208-21	PR121981	AENV-WRC-36-001-Foliage	Foliage	15	12V 463617 6326364	YES	1.457	1.245	0.633	ND	12.24	2.303
BLANK	PH120628 B	-	-	-	-	-	0.29	0.24	ND	ND	1.52	0.34
BLANK	PH120616 B	-	-	-	-	-	ND	ND	ND	ND	ND	ND
BLANK	PH120624 B	-	-	-	-	-	0.22	ND	ND	ND	0.23	ND
BLANK	PH120608 B	-	-	-	-	-	ND	0.23	ND	ND	0.70	0.31
BLANK	PH120611 B	-	-	-	-	-	ND	ND	ND	ND	ND	ND
BLANK	PH120612 B	-	-	-	-	-	ND	ND	ND	ND	ND	ND
BLANK	PH120605 B	-	-	-	-	-	ND	ND	ND	ND	0.24	ND
BLANK	PH120602 B	-	-	-	-	-	0.72	0.54	ND	2.27	1.91	1.51
BLANK	PH120600 B	-	-	-	-	-	ND	ND	ND	ND	ND	ND
BLANK	PH120601 B	-	-	-	-	-	ND	ND	ND	ND	ND	ND
BLANK	PH120641 B	-	-	-	-	-	ND	ND	ND	ND	1.62	ND
BLANK	PH120637 B	-	-	-	-	-	ND	0.23	ND	ND	1.62	0.23
BLANK	PH120630 B	-	-	-	-	-	ND	ND	ND	2.10	1.40	0.24
BLANK	PH120631 B	-	-	-	-	-	ND	0.24	ND	1.90	0.80	ND
BLANK	PH120633 B	-	-	-	-	-	ND	0.21	ND	1.19	0.92	ND
BLANK	PH120635 B	-	-	-	-	-	ND	ND	ND	ND	0.58	ND
BLANK	PH120636 B	-	-	-	-	-	ND	0.19	ND	1.14	0.59	ND

Moisture Content

EXOVA presented concentrations as a dry weight. Table 9 displays the available moisture content data by sample. Unfortunately moisture was not calculated for every sample (represented by blank cells in Table 9). Moisture content information provided by Pacific Rim where also displayed in this table where available. The detection limit reported by EXOVA was 0.1% moisture content in soil and 0% moisture in plant tissue.

Table 9. Moisture content percentage by sample.

Sample ID	EXOVA ID	EXOVA Calculated Moisture Content (%)	Pacific Rim Calculated Moisture Content (%)
AENV-WRC-01-001-PAH	884901-5	11.8	-
AENV-WRC-01-002-PAH	884901-8	7.2	-
AENV-WRC-01-003-PAH	884901-11	8.9	-
AENV-WRC-01-004-PAH	884901-14	10.1	-
AENV-WRC-01-005-PAH	884901-17	13	-
AENV-WRC-02-001-PAH	884901-24	4.6	-
AENV-WRC-02-002-PAH	884901-27	4	-
AENV-WRC-02-003-PAH	884901-30	4.4	-
AENV-WRC-02-004-PAH	884901-33	2.6	-
AENV-WRC-02-005-PAH	884901-36	3.3	-
AENV-WRC-03-001-PAH	884901-43	5.6	-
AENV-WRC-03-002-PAH	884901-46	4.5	-
AENV-WRC-03-003-PAH	884901-49	6.6	-
AENV-WRC-03-004-PAH	884901-52	6.8	-
AENV-WRC-03-005-PAH	884901-55	4.8	-
AENV-WRC-05-002-PAH	895939-7	-	-
AENV-WRC-05-003-PAH	895939-10	-	-
AENV-WRC-05-004-PAH	895939-14	-	-
AENV-WRC-05-005-PAH	895939-17	-	-
AENV-WRC-5-001-PAH	895939-4	-	-
AENV-WRC-06-001-PAH	896047-24	-	-

Sample ID	EXOVA ID	EXOVA Calculated Moisture Content (%)	Pacific Rim Calculated Moisture Content (%)
AENV-WRC-06-002-PAH	896047-27	-	-
AENV-WRC-06-003-PAH	896047-30	-	-
AENV-WRC-06-004-PAH	896047-33	-	-
AENV-WRC-06-005-PAH	896047-36	-	-
AENV-WRC-07-001-PAH	886741-6	5	-
AENV-WRC-07-002-PAH	886741-9	2.8	-
AENV-WRC-07-003-PAH	886741-12	4.9	-
AENV-WRC-07-004-PAH	886741-15	2.9	-
AENV-WRC-07-005-PAH	886741-18	2.4	-
AENV-WRC-08-001-PAH	886741-25	1.1	-
AENV-WRC-08-002-PAH	886741-28	1.7	-
AENV-WRC-08-003-PAH	886741-31	0.8	-
AENV-WRC-08-004-PAH	886741-34	0.6	-
AENV-WRC-08-005-PAH	886741-37	0.8	-
AENV-WRC-14-001-PAH	895939-24	-	-
AENV-WRC-14-002-PAH	895939-27	-	-
AENV-WRC-14-003-PAH	895939-30	-	-
AENV-WRC-14-004-PAH	895939-33	-	-
AENV-WRC-14-005-PAH	895939-36	-	-
AENV-WRC-15-001-PAH	885598-5	8.5	-
AENV-WRC-15-002-PAH	885598-8	3	-
AENV-WRC-15-003-PAH	885598-11	8.5	-
AENV-WRC-15-004-PAH	885598-14	5.2	-
AENV-WRC-15-005-PAH	885598-17	10.9	-
AENV-WRC-16-001-PAH/Metal	896208-5	-	-
AENV-WRC-16-002-PAH/Metal	896208-7	-	-
AENV-WRC-16-003-PAH/Metal	896208-9	-	-
AENV-WRC-16-004-PAH/Metal	896208-11	-	-

Sample ID	EXOVA ID	EXOVA Calculated Moisture Content (%)	Pacific Rim Calculated Moisture Content (%)
AENV-WRC-16-005-PAH/Metal	896208-13	-	-
AENV-WRC-17-001-PAH	887081-27	17.6	-
AENV-WRC-17-002-PAH	887081-31	17.8	-
AENV-WRC-17-003-PAH	887081-35	18.6	-
AENV-WRC-17-004-PAH	887081-39	29.2	-
AENV-WRC-17-005-PAH	887081-43	21.6	-
AENV-WRC-18-001-PAH	887081-52	10.1	-
AENV-WRC-18-002-PAH	887081-56	7.5	-
AENV-WRC-18-003-PAH	887081-60	9.2	-
AENV-WRC-18-004-PAH	887081-64	9.5	-
AENV-WRC-18-005-PAH	887081-68	11.5	-
AENV-WRC-19-001-PAH	886745-7	7.3	-
AENV-WRC-19-002-PAH	886745-11	9.1	-
AENV-WRC-19-003-PAH	886745-15	7	-
AENV-WRC-19-004-PAH	886745-19	5	-
AENV-WRC-19-005-PAH	886745-23	11.2	-
AENV-WRC-35-001-PAH	887081-6	1.5	-
AENV-WRC-35-002-PAH	887081-9	4	-
AENV-WRC-35-003-PAH	887081-12	4.6	-
AENV-WRC-35-004-PAH	887081-15	6.4	-
AENV-WRC-35-005-PAH	887081-18	4.1	-
AENV-WRC-36-001-PAH	896208-19	-	-
AENV-WRC-36-002-PAH	896208-22	-	-
AENV-WRC-36-003-PAH	896208-25	-	-
AENV-WRC-36-004-PAH	896208-28	-	-
AENV-WRC-36-005-PAH	896208-31	-	-
AENV-WRC-40-001-PAH	894583-25	-	-
AENV-WRC-40-002-PAH	894583-1	-	-

Sample ID	EXOVA ID	EXOVA Calculated Moisture Content (%)	Pacific Rim Calculated Moisture Content (%)
AENV-WRC-40-003-PAH	894583-4	-	-
AENV-WRC-40-004-PAH	894583-7	-	-
AENV-WRC-40-005-PAH	894583-10	-	-
AENV-WRC-50-001-PAH	896047-5	-	-
AENV-WRC-50-002-PAH	896047-8	-	-
AENV-WRC-50-003-PAH	896047-11	-	-
AENV-WRC-50-004-PAH	896047-14	-	-
AENV-WRC-50-005-PAH	896047-17	-	-
AENV-WRC-58-001-PAH	886745-31	10.7	-
AENV-WRC-58-002-PAH	886745-34	23.2	-
AENV-WRC-58-003-PAH	886745-37	10.6	-
AENV-WRC-58-004-PAH	886745-40	53.8	-
AENV-WRC-58-005-PAH	886745-43	10.6	-
AENV-WRC-01-001-Trip	884901-1	-	-
AENV-WRC-02-001-Trip	884901-20	-	-
AENV-WRC-03-001-Trip	884901-39	-	-
AENV-WRC-5-Trip	895939-1	-	-
AENV-WRC-06-Trip	896047-20	-	-
AENV-WRC-07-Trip	886741-1	-	-
AENV-WRC-08-Trip	886741-20	-	-
AENV-WRC-14-Trip	895939-20	-	-
AENV-WRC-15-001 Trip	885598-1	-	-
AENV-WRC-16-Trip	896208-1	-	-
AENV-WRC-17-Trip	887081-20	-	-
AENV-WRC-18-Trip	887081-45	-	-
AENV-WRC-19-Trip	886745-1	-	-
AENV-WRC-35-Trip	887081-1	-	-
AENV-WRC-36-Trip	896208-15	-	-

Sample ID	EXOVA ID	EXOVA Calculated Moisture Content (%)	Pacific Rim Calculated Moisture Content (%)
AENV-WRC-40-Trip	894583-21	-	-
AENV-WRC-50-Trip	896047-1	-	-
AENV-WRC-58-Trip	886745-26	-	-
AENV-WRC-59-Trip	894583-13	-	-
AENV-WRC-01-001-Location	884901-2	-	-
AENV-WRC-02-001-Location	884901-21	-	-
AENV-WRC-03-001-Location	884901-40	-	-
AENV-WRC-5-Location	895939-2	-	-
AENV-WRC-06-Location	896047-21	-	-
AENV-WRC-07-Location	886741-2	-	-
AENV-WRC-08-Location	886741-21	-	-
AENV-WRC-14-Location	895939-21	-	-
AENV-WRC-15-001 Location	885598-2	-	-
AENV-WRC-16-Location	896208-2	-	-
AENV-WRC-17-Location	887081-21	-	-
AENV-WRC-18-Location	887081-46	-	-
AENV-WRC-19-Location	886745-2	-	-
AENV-WRC-35-Location	887081-2	-	-
AENV-WRC-36-Location	896208-16	-	-
AENV-WRC-40-Location	894583-22	-	-
AENV-WRC-50-Location	896047-2	-	-
AENV-WRC-58-Location	886745-27	-	-
AENV-WRC-59-Location	894583-14	-	-
AENV-WRC-01-001-Berry	884901-7	84.9	85.37
AENV-WRC-01-002-Berry	884901-10	84.8	86.89
AENV-WRC-01-003-Berry	884901-13	85.2	86.41
AENV-WRC-01-004-Berry	884901-16	85.2	85.71
AENV-WRC-01-005-Berry	884901-19	84.9	86.48

Sample ID	EXOVA ID	EXOVA Calculated Moisture Content (%)	Pacific Rim Calculated Moisture Content (%)
AENV-WRC-02-001-Berry	884901-26	84.6	73.37
AENV-WRC-02-002-Berry	884901-29	85.7	75.27
AENV-WRC-02-003-Berry	884901-32	85.2	86.12
AENV-WRC-02-004-Berry	884901-35	86	86.53
AENV-WRC-02-005-Berry	884901-38	84.6	74.95
AENV-WRC-03-001-Berry	884901-45	85.6	86.1
AENV-WRC-03-002-Berry	884901-48	85.6	86.03
AENV-WRC-03-003-Berry	884901-51	85.8	86.76
AENV-WRC-03-004-Berry	884901-54	85.8	86.48
AENV-WRC-03-005-Berry	884901-57	85	86.01
AENV-WRC-07-001-Berry	886741-5	81.7	82.86
AENV-WRC-07-002-Berry	886741-8	83.9	84.66
AENV-WRC-07-003-Berry	886741-11	84.3	84.96
AENV-WRC-07-004-Berry	886741-14	85.1	85.1
AENV-WRC-07-005-Berry	886741-17	84.3	85.95
AENV-WRC-08-001-Berry	886741-24	85.6	85.2
AENV-WRC-08-002-Berry	886741-27	84.8	84.98
AENV-WRC-08-003-Berry	886741-30	85.2	84.99
AENV-WRC-08-004-Berry	886741-33	84.1	84.68
AENV-WRC-08-005-Berry	886741-36	82.7	84.87
AENV-WRC-15-001-Berry	885598-7	85.7	85.33
AENV-WRC-15-002-Berry	885598-10	85.8	86.7
AENV-WRC-15-003-Berry	885598-13	86.8	87.14
AENV-WRC-15-004-Berry	885598-16	86.4	86
AENV-WRC-15-005-Berry	885598-19	85.8	87.12
AENV-WRC-17-001-Fruit	887081-25	85.2	n/a
AENV-WRC-17-002-Fruit	887081-29	83.9	87.56
AENV-WRC-17-003-Fruit	887081-33	84.2	86.17

Sample ID	EXOVA ID	EXOVA Calculated Moisture Content (%)	Pacific Rim Calculated Moisture Content (%)
AENV-WRC-17-004-Fruit	887081-37	85.6	88.59
AENV-WRC-17-005-Fruit	887081-41	84.3	88.16
AENV-WRC-18-001-Fruit	887081-50	82.4	84.95
AENV-WRC-18-002-Fruit	887081-54	82.8	86.59
AENV-WRC-18-003-Fruit	887081-58	82.8	85.3
AENV-WRC-18-004-Fruit	887081-62	82.9	86.45
AENV-WRC-18-005-Fruit	887081-66	83.4	85.85
AENV-WRC 19-001-Fruit	886745-5	85.4	84.22
AENV-WRC 19-002-Fruit	886745-9	84.6	82.5
AENV-WRC 19-003-Fruit	886745-13	83.7	84.51
AENV-WRC 19-004-Fruit	886745-17	84.2	83.91
AENV-WRC 19-005-Fruit	886745-21	84.8	84.65
AENV-WRC-35-001-Fruit	887081-5	81.6	n/a
AENV-WRC-35-002-Fruit	887081-8	80.5	91
AENV-WRC-35-003-Fruit	887081-11	81.2	83.77
AENV-WRC-35-004-Fruit	887081-14	80	85.92
AENV-WRC-35-005-Fruit	887081-17	81.6	85.52
AENV-WRC-05-002-Foliage	895939-9	49.5	49.5
AENV-WRC-05-003-Foliage	895939-12	52.1	52.1
AENV-WRC-05-004-Foliage	895939-16	52.3	52.3
AENV-WRC-05-005-Foliage	895939-19	50.4	50.4
AENV-WRC-5-001-Foliage	895939-6	54.9	54.9
AENV-WRC-06-001-Foliage	896047-26	56.1	56.1
AENV-WRC-06-002-Foliage	896047-29	63.7	63.7
AENV-WRC-06-003-Foliage	896047-32	58.2	58.2
AENV-WRC-06-004-Foliage	896047-35	50.7	50.7
AENV-WRC-06-005-Foliage	896047-38	63.8	63.8
AENV-WRC-14-001-Foliage	895939-26	55.6	55.6

Sample ID	EXOVA ID	EXOVA Calculated Moisture Content (%)	Pacific Rim Calculated Moisture Content (%)
AENV-WRC-14-002-Foliage	895939-29	53.1	53.1
AENV-WRC-14-003-Foliage	895939-32	58.4	58.4
AENV-WRC-14-004-Foliage	895939-35	53.8	53.8
AENV-WRC-14-005-Foliage	895939-38	53.3	n/a
AENV-WRC-17-001-Foliage	887081-26	-	65.64
AENV-WRC-17-002-Foliage	887081-30	-	51.9
AENV-WRC-17-003-Foliage	887081-34	-	54.42
AENV-WRC-17-004-Foliage	887081-38	-	50.07
AENV-WRC-17-005-Foliage	887081-42	-	53.12
AENV-WRC-18-001-Foliage	887081-51	-	52.32
AENV-WRC-18-002-Foliage	887081-55	-	25.86
AENV-WRC-18-003-Foliage	887081-59	-	n/a
AENV-WRC-18-004-Foliage	887081-63	-	59.56
AENV-WRC-18-005-Foliage	887081-67	-	n/a
AENV-WRC 19-001-Foliage	886745-6	-	n/a
AENV-WRC 19-002-Foliage	886745-10	-	n/a
AENV-WRC 19-003-Foliage	886745-14	-	58.93
AENV-WRC 19-004-Foliage	886745-18	-	50.71
AENV-WRC 19-005-Foliage	886745-22	-	55.13
AENV-WRC-36-001-Foliage	896208-21	52.8	52.8
AENV-WRC-36-002-Foliage	896208-24	51.4	51.38
AENV-WRC-36-003-Foliage	896208-27	54.8	54.75
AENV-WRC-36-004-Foliage	896208-30	55.2	55.24
AENV-WRC-36-005-Foliage	896208-33	55.6	55.56
AENV-WRC-40-001-Foliage	894583-27	82	82
AENV-WRC-40-002-Foliage	894583-3	50.2	50.2
AENV-WRC-40-003-Foliage	894583-6	51.6	51.6
AENV-WRC-40-004-Foliage	894583-9	55	50.7

Sample ID	EXOVA ID	EXOVA Calculated Moisture Content (%)	Pacific Rim Calculated Moisture Content (%)
AENV-WRC-40-005-Foliage	894583-12	49.1	49.1
AENV-WRC-50-001-Foliage	896047-7	52.9	52.86
AENV-WRC-50-002-Foliage	896047-10	54.4	54.4
AENV-WRC-50-003-Foliage	896047-13	55	55
AENV-WRC-50-004-Foliage	896047-16	51.8	51.8
AENV-WRC-50-005-Foliage	896047-19	52.9	52.9
AENV-WRC-58-001-Foliage	886745-30	-	98.52
AENV-WRC-58-002-Foliage	886745-33	-	66.4
AENV-WRC-58-003-Foliage	886745-36	-	51.27
AENV-WRC-58-004-Foliage	886745-39	-	53.95
AENV-WRC-58-005-Foliage	886745-42	-	58.52
AENV-WRC-16-001-Rhizome	896208-6	85.8	85.79
AENV-WRC-16-002-Rhizome	896208-8	82.4	82.4
AENV-WRC-16-003-Rhizome	896208-10	79.7	79.67
AENV-WRC-16-004-Rhizome	896208-12	77.8	77.78
AENV-WRC-16-005-Rhizome	896208-14	77.5	77.5
AENV-WRC-59-001-Rhizome	894583-16	84.7	84.7
AENV-WRC-59-002-Rhizome	894583-17	83.2	83.2
AENV-WRC-59-003-Rhizome	894583-18	79.9	79.9
AENV-WRC-59-004-Rhizome	894583-19	92.4	92.4
AENV-WRC-59-005-Rhizome	894583-20	55.9	55.9
AENV-WRC-01-001-Metal	884901-6	-	-
AENV-WRC-01-002-Metal	884901-9	-	-
AENV-WRC-01-003-Metal	884901-12	-	-
AENV-WRC-01-004-Metal	884901-15	-	-
AENV-WRC-01-005-Metal	884901-18	-	-
AENV-WRC-02-001-Metal	884901-25	-	-
AENV-WRC-02-002-Metal	884901-28	-	-

Sample ID	EXOVA ID	EXOVA Calculated Moisture Content (%)	Pacific Rim Calculated Moisture Content (%)
AENV-WRC-02-003-Metal	884901-31	-	-
AENV-WRC-02-004-Metal	884901-34	-	-
AENV-WRC-02-005-Metal	884901-37	-	-
AENV-WRC-03-001-Metal	884901-44	-	-
AENV-WRC-03-002-Metal	884901-47	-	-
AENV-WRC-03-003-Metal	884901-50	-	-
AENV-WRC-03-004-Metal	884901-53	-	-
AENV-WRC-03-005-Metal	884901-56	-	-
AENV-WRC-05-002-Metal	895939-8	-	-
AENV-WRC-05-003-Metal	895939-11	-	-
AENV-WRC-05-004-Metal	895939-15	-	-
AENV-WRC-05-005-Metal	895939-18	-	-
AENV-WRC-5-001-Metal	895939-5	-	-
AENV-WRC-06-001-Metal	896047-25	-	-
AENV-WRC-06-002-Metal	896047-28	-	-
AENV-WRC-06-003-Metal	896047-31	-	-
AENV-WRC-06-004-Metal	896047-34	-	-
AENV-WRC-06-005-Metal	896047-37	-	-
AENV-WRC-07-001-Metal	886741-7	-	-
AENV-WRC-07-002-Metal	886741-10	-	-
AENV-WRC-07-003-Metal	886741-13	-	-
AENV-WRC-07-004-Metal	886741-16	-	-
AENV-WRC-07-005-Metal	886741-19	-	-
AENV-WRC-08-001-Metal	886741-26	-	-
AENV-WRC-08-002-Metal	886741-29	-	-
AENV-WRC-08-003-Metal	886741-32	-	-
AENV-WRC-08-004-Metal	886741-35	-	-
AENV-WRC-14-001-Metal	895939-25	-	-

Sample ID	EXOVA ID	EXOVA Calculated Moisture Content (%)	Pacific Rim Calculated Moisture Content (%)
AENV-WRC-14-002-Metal	895939-28	-	-
AENV-WRC-14-003-Metal	895939-31	-	-
AENV-WRC-14-004-Metal	895939-34	-	-
AENV-WRC-14-005-Metal	895939-37	-	-
AENV-WRC-15-001-Metal	885598-6	-	-
AENV-WRC-15-002-Metal	885598-9	-	-
AENV-WRC-15-003-Metal	885598-12	-	-
AENV-WRC-15-004-Metal	885598-15	-	-
AENV-WRC-15-005-Metal	885598-18	-	-
AENV-WRC-16-001-Metal/PAH	896208-5	-	-
AENV-WRC-16-002-Meta/PAHl	896208-7	-	-
AENV-WRC-16-003-Metal/PAH	896208-9	-	-
AENV-WRC-16-004-Metal/PAH	896208-11	-	-
AENV-WRC-16-005-Metal/PAH	896208-13	-	-
AENV-WRC-17-001-Metal	887081-28	-	-
AENV-WRC-17-002-Metal	887081-32	-	-
AENV-WRC-17-003-Metal	887081-36	-	-
AENV-WRC-17-004-Metal	887081-40	-	-
AENV-WRC-17-005-Metal	887081-44	-	-
AENV-WRC-18-001-Metal	887081-53	-	-
AENV-WRC-18-002-Metal	887081-57	-	-
AENV-WRC-18-003-Metal	887081-61	-	-
AENV-WRC-18-004-Metal	887081-65	-	-
AENV-WRC-18-005-Metal	887081-69	-	-
AENV-WRC 19-001-Metal	886745-8	-	-
AENV-WRC 19-002-Metal	886745-12	-	-
AENV-WRC 19-003-Metal	886745-16	-	-
AENV-WRC 19-004-Metal	886745-20	-	-

Sample ID	EXOVA ID	EXOVA Calculated Moisture Content (%)	Pacific Rim Calculated Moisture Content (%)
AENV-WRC 19-005-Metal	886745-24	-	-
AENV-WRC-35-001-Metal	887081-7	-	-
AENV-WRC-35-002-Metal	887081-10	-	-
AENV-WRC-35-003-Metal	887081-13	-	-
AENV-WRC-35-004-Metal	887081-16	-	-
AENV-WRC-35-005-Metal	887081-19	-	-
AENV-WRC-36-001-Metal	896208-20	-	-
AENV-WRC-36-002-Metal	896208-23	-	-
AENV-WRC-36-003-Metal	896208-26	-	-
AENV-WRC-36-004-Metal	896208-29	-	-
AENV-WRC-36-005-Metal	896208-32	-	-
AENV-WRC-40-001-Metal	894583-26	-	-
AENV-WRC-40-002-Metal	894583-2	-	-
AENV-WRC-40-003-Metal	894583-5	-	-
AENV-WRC-40-004-Metal	894583-8	-	-
AENV-WRC-40-005-Metal	894583-11	-	-
AENV-WRC-50-001-Metal	896047-6	-	-
AENV-WRC-50-002-Metal	896047-9	-	-
AENV-WRC-50-003-Metal	896047-12	-	-
AENV-WRC-50-004-Metal	896047-15	-	-
AENV-WRC-50-005-Metal	896047-18	-	-
AENV-WRC-58-001-Metal	886745-32	-	-
AENV-WRC-58-002-Metal	886745-35	-	-
AENV-WRC-58-003-Metal	886745-38	-	-
AENV-WRC-58-004-Metal	886745-41	-	-
AENV-WRC-58-005-Metal	886745-44	-	-
AENV-WRC-01-001-Trip-Metal	884901-1	-	-
AENV-WRC-02-001-Trip-Metal	884901-20	-	-

Sample ID	EXOVA ID	EXOVA Calculated Moisture Content (%)	Pacific Rim Calculated Moisture Content (%)
AENV-WRC-03-001-Trip-Metal	884901-39	-	-
AENV-WRC-07-Trip Blank	886741-1	-	-
AENV-WRC-08-Trip Blank	886741-20	-	-
AENV-WRC-17-Trip Blank	887081-20	-	-
AENV-WRC-18-Trip Blank	887081-45	-	-
AENV-WRC 19-Trip Blank	886745-1	-	-
AENV-WRC-35-Trip Blank	887081-1	-	-
AENV-WRC-58-Trip Blank	886745-26	-	-
AENV-WRC-07-Location Blank	886741-2	-	-
AENV-WRC-08-Location Blank	886741-21	-	-
AENV-WRC-17-Location Blank	887081-21	-	-
AENV-WRC-18-Location Blank	887081-46	-	-
AENV-WRC 19-Location Blank	886745-2	-	-
AENV-WRC-35-Location Blank	887081-2	-	-
AENV-WRC-58-Location Blank	886745-27	-	-

Methyl Mercury

The methyl mercury analysis was performed by Flett Research Ltd. Quality control measurements such as matrix spikes were included where available. Concentrations marked with a "<" are below the method or sample detection limit. Details on the method detection limit can be found in Appendix 2.

Table 9. The lab and lot number, sample ID, duplicate status, location and UTM (NAD83) provided for each sample along with laboratory results of methyl mercury.

Lab and Lot Number	Sample ID	Duplicate	Matrix	Location Code	Location (UTM 12)	Concentration (ng/g ww)
895939-23	AENV-WRC-14-Foliage	-	Foliage	8	12V 484062 6347144	<0.11
895939-22	AENV-WRC-14-Soil	-	Soil	8	12V 484062 6347144	<0.09
885598-4	*	-	Berry	9	-	<0.01
885598-3	*	-	Soil	9	-	<0
896208-4	AENV-WRC-16-Rhizome	-	Rhizome	10	12V 484152 6347051	<0.12
896208-3	AENV-WRC-16	-	Soil	10	12V 484152 6347051	0.82
887081-22	AENV-WRC-17-Berry-MethylMercury	-	Berry	11	12V 460013 6344599	<0.02
887081-22	AENV-WRC-17-Berry-MethylMercury	Duplicate	Berry	11	12V 460013 6344599	<0.02

Lab and Lot Number	Sample ID	Duplicate	Matrix	Location Code	Location (UTM 12)	Concentration (ng/g ww)
887081-23	AENV-WRC-17-Foliage-MethylMercury	-	Foliage	11	12V 460013 6344599	<0.02
887081-23	AENV-WRC-17-Foliage-MethylMercury	Duplicate	Foliage	11	12V 460013 6344599	<0.04
887081-24	AENV-WRC-17-MethylMercury	-	Soil	11	12V 460013 6344599	<0.02
887081-47	AENV-WRC-18-Berry-MethylMercury	-	Berry	12	12V 459412 6347045	<0
887081-48	AENV-WRC-18-Foliage-MethylMercury	-	Foliage	12	12V 459412 6347045	<0
887081-48	AENV-WRC-18-Foliage-MethylMercury	Duplicate	Foliage	12	12V 459412 6347045	<0.03
887081-49	AENV-WRC-18-MethylMercury	-	Soil	12	12V 459412 6347045	<0.02
887081-49	AENV-WRC-18-MethylMercury	Duplicate	Soil	12	12V 459412 6347045	<0.01
886745-3	AENV-WRC-19-Berry-MethylMercury	-	Berry	13	12V 468223 6310175	<0.01
886745-3	AENV-WRC-19-Berry-MethylMercury	Duplicate	Berry	13	12V 468223 6310175	<0.02
886745-4	AENV-WRC-19-Foliage-MethylMercury	-	Foliage	13	12V 468223 6310175	<0.0
886745-25	AENV-WRC-19-MethylMercury	-	Soil	13	12V 468223 6310175	<0.0
884901-4	AENV-WRC-01-Berry-MethylMercury	-	Berry	1	12V 473516 6330037	<0.02
884901-4	AENV-WRC-01-Berry-MethylMercury	Duplicate	Berry	1	12V 473516 6330037	<0.03
884901-3	AENV-WRC-01-MethylMercury	-	Soil	1	12V 473516 6330037	<-0.02
884901-3	AENV-WRC-01-MethylMercury	Duplicate	Soil	1	12V 473516 6330037	<0.04
884901-23	AENV-WRC-02-Berry-MethylMercury	-	Berry	2	12V 471716 6330175	<0.04
884901-23	AENV-WRC-02-Berry-MethylMercury	Duplicate	Berry	2	12V 471716 6330175	<0.04
884901-22	AENV-WRC-02-MethylMercury	-	Soil	2	12V 471716 6330175	<0.02
887081-3	AENV-WRC-35-Berry-MethylMercury	-	Berry	14	12V 473775 6326210	<0.02
887081-4	AENV-WRC-35-MethylMercury	-	Soil	14	12V 473775 6326210	<0.1
896208-18	AENV-WRC-36-Foliage	-	Foliage	15	12V 463617 6326364	<0.06
896208-18	AENV-WRC-36-Foliage	Duplicate	Foliage	15	12V 463617 6326364	<0.06
896208-17	AENV-WRC-36-Soil	-	Soil	15	12V 463617 6326364	<.18
896208-17	AENV-WRC-36-Soil	Duplicate	Soil	15	12V 463617 6326364	<0.22
884901-42	AENV-WRC-03-Berry-MethylMercury	-	Berry	3	12V 464201 6364624	<0.01
884901-42	AENV-WRC-03-Berry-MethylMercury	Duplicate	Berry	3	12V 464201 6364624	<0.02
884901-41	AENV-WRC-03-MethylMercury	-	Soil	3	12V 464201 6364624	<0
894583-24	AENV-WRC-40-Foliage	-	Foliage	16	12V 464856 6401918	<0.04
894583-23	AENV-WRC-40-Soil	-	Soil	16	12V 464856 6401918	0.97
896047-4	AENV-WRC-50-Foliage	-	Foliage	17	12V 460192 6353024	<0.05
896047-3	AENV-WRC-50-Soil	-	Soil	17	12V 460192 6353024	1.94
886745-28	AENV-WRC-58-Foliage-MethylMercury	-	Foliage	18	12V 462844 6363984	<0.01
886745-29	AENV-WRC-58-MethylMercury	-	Soil	18	12V 462844 6363984	<0.03
894583-15	AENV-WRC-59-Rhizome	-	Rhizome	19	12V 496187 6256732	0.26
894583-15	AENV-WRC-59-Rhizome	Duplicate	Rhizome	19	12V 496187 6256732	<0.23
895939-13	AENV-WRC-5-Foliage	-	Foliage	4	12V 470512 6330815	<0.09
895939-3	AENV-WRC-5-Soil	-	Soil	4	12V 470512 6330815	<0.04
896047-23	AENV-WRC-06-Foliage	-	Foliage	5	12V 463968 6345076	<0.09
896047-22	AENV-WRC-06-Soil	-	Soil	5	12V 463968 6345076	<0.56
886741-4	AENV-WRC-07-Berry-MethylMercury	-	Berry	6	12V 464106 6344648	<0.01
886741-3	AENV-WRC-07-MethylMercury	-	Soil	6	12V 464106 6344648	<0.05
886741-22	AENV-WRC-08-Berry-MethylMercury	-	Berry	7	12V 466958 6366367	<0.02
886741-23	AENV-WRC-08-MethylMercury	-	Soil	7	12V 466958 6366367	<0.02

* Missing chain of custody so the exact GPS location is not available

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