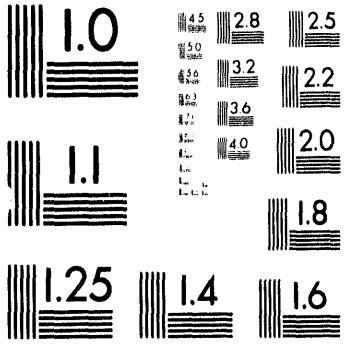
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Radiological Survey of Shoreline Vegetation from the Hanford Reach of the Columbia River, 1990-1992

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MASTER

Summary

A great deal of interest exists concerning the seepage of radiologically contaminated groundwater into the Columbia River where it borders the U.S. Department of Energy's Hanford Site (Hanford Reach). Areas of particular interest include the 100-N Area, the Old Hanford Townsite, and the 300 Area springs. While the radiological character of the seeps and springs along the Hanford Site shoreline has been studied, less attention has been given to characterizing the radionuclides that may be present in shoreline vegetation.

The objective of this study was to characterize radionuclide concentrations in shoreline plants along the Hanford Reach of the Columbia River that were usable by humans for food or other purposes. Vegetation was sampled from 1990 to 1992 along the shoreline where contaminated seeps and springs were known to exist. In 1992, vegetation was sampled at the same locations and at a control location upstream from the Vernita Bridge as well as other areas of the Hanford Reach. Vegetation in two areas was found to have elevated levels of radionuclides. Those areas were the 100-N Area and the Old Hanford Townsite. There was also some indication of uranium accumulation in milfoil and onions collected from the 300 Area. Tritium was elevated above background in all areas; ^{60}Co and ^{90}Sr were found in highest concentrations in vegetation from the 100-N Area. Technetium-99 was found in 2 of 12 plants collected from the Old Hanford Townsite and 1 of 10 samples collected upstream from the Vernita Bridge. The concentrations of ^{137}Cs, ^{238}Pu, $^{239,240}Pu$, and isotopes of uranium were just above background in all three areas (100-N Area, Old Hanford Townsite, and 300 Area).

The committed effective dose equivalent was estimated based on consumption of a kilogram of the highest concentrations found in the edible portions of vegetation. The highest dose was three orders of magnitude less than the 100-mrem dose limit set by the U.S. Department of Energy.

Acknowledgments

Environmental monitoring for radioactive materials both near the Hanford Site and on the Site is the responsibility of the Pacific Northwest Laboratory (PNL), Office of Hanford Environment (OHE). As part of OHE, the Surface Environmental Surveillance Project (SESP) routinely monitors radionuclide concentrations in natural vegetation, commercially grown crops, and other environmental media. This study on shoreline vegetation was also conducted by SESP staff. The authors appreciate the work of R. W. Hanf, K. R. Price, and R. K. Woodruff, who reviewed early versions of the manuscript, and R. E. Lundgren, who edited the final manuscript. K. R. Price provided early direction in the conceptualization of the study. This work was supported and directed by the U.S. Department of Energy, Richland Field Office, under Contract DE-AC06-76RL0 1830.

Concurrently with this project, other vegetation studies have been conducted for the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Remedial Investigations. Along the 100 and 300 Areas, samples of trees (mostly mulberry), reed canary grass, and asparagus were collected to evaluate environmental pathways and contribute to an ecological risk assessment. The results from the 100 Areas environmental evaluation are expected to be published in spring 1993. Some results from the 300 Area biota sampling have been published (Brandt and Rickard 1992); others will be published in spring 1993.

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Introduction

A great deal of interest exists concerning the seepage of radiologically contaminated groundwater into the Columbia River along the Hanford Reach. The Hanford Reach is that stretch of the Columbia River that borders the U.S. Department of Energy's (DOE's) Hanford Site. Areas of particular interest include the 100-N Area, the Old Hanford Townsite, and the 300 Area springs (Dirkes 1990). A contaminated groundwater plume originating in the 200 Areas extends from the Old Hanford Townsite to the 300 Area (Woodruff et al. 1991). While the radiological character of the seeps and springs along the Hanford Site shoreline has been studied (Dirkes 1990; McCormack and Carlile 1984), less attention has been given to characterizing the radionuclides that may be present in shoreline vegetation.

The shoreline vegetation along the Hanford Reach consists of a narrow zone of broadleafed deciduous trees and shrubs intermingled with perennial grasses and forbs (Sackschewsky et al. 1992). These plants tend to remain green and succulent throughout the hot, dry, summer months because their rooting zones are wetted by river water or groundwater. Of particular interest are plant species that may be consumed or used by people, including those of ceremonial, medicinal, or religious significance to regional Native Americans. These plants include native and alien species (see Appendix A).

One of the most abundant trees along the river is the mulberry, *Morus alba*, an alien species that is capable of reproducing from seeds. Over the past decade or so mulberry trees have become increasingly abundant. The leaves of mulberry are eaten by mule deer, and the fruit (berries) is eaten by birds and mammals. The fresh berries can also be harvested and eaten by people, who use them in pastry, preserves, and jelly. Willows (*Salix* spp.) provide most of the shrub population along the shorelines. One of the most abundant shoreline grasses is reed canary grass (*Phalaris arundinacea*), a tall, coarse plant that provides forage for Canada geese (*Branta canadensis*) but provides no direct food to people. Mulberry trees and reed canary grass appear to be well adapted to the fluctuating river levels that result from regulation of river flows by the upstream hydroelectric dam at Priest Rapids. The abundance of these species is increasing at the expense of smaller-statured, native plants.

The objective of this study was to conduct a survey of radionuclides in plants along the Columbia River on the Hanford Site that could potentially be consumed or used by humans. Most samples consisted of wild plants but some farm crops that had been planted on the Site were also sampled. The collection process involved traveling along the Hanford shoreline and sampling selected species in areas where seeps were known to have radioactive contamination, rather than exhaustively sampling the entire shoreline. Samples

were collected from 1990 to 1992. Radionuclide concentrations in shoreline samples were compared to concentrations in plants collected at an upstream control location.

Methods

Samples were obtained for various plant species including asparagus (*Asparagus officinalis*), chicory (*Cichorium intybus*), chokecherry (*Prunus virginiana*), dogbane (*Apocynum sp.*), milfoil (*Myriophyllum spicatum*), mulberry, onion (*Allium spp*), reed canary grass, squawberry (*Ribes sp.*), willow, and yarrow (*Achillea millefolium*). Garden tomatoes and pumpkins that were planted along the river's shoreline were also collected. Sampling locations along the Columbia River were selected where vegetation was available and seeps were known to occur (Figure 1). Plants growing near the shoreline (within 3 m of high water) were identified, photographed, and sampled. Leafy twigs of trees and shrubs were clipped from living branches. The aboveground portions of herbaceous plants were clipped near ground level, except for onions, where the whole plant was collected.

Samples were placed into paper bags, labeled, and archived until analysis. There was a delay of six months to a year between sample collection and radiochemical analysis for the 1990 samples. Most of the samples were analyzed by International Technology Corporation (IT); however, a few were processed by PNL. Results by PNL were reported on a wet-weight basis; all other vegetation analyses were reported on a dry-weight basis. Results in the text of this report are reported as a concentration with the 2-sigma propagated analytical error reported in parentheses [e.g., 350 (± 12) pCi/g]. The analytical data including counting and propagated analytical error are given in Appendix B and summarized in figures in the text. The text figures include only data reported by IT for 1990, 1991, and 1992 collections. Several samples had negative concentrations (sample counts were less than the sample blank counts) and could not be shown on logarithmically scaled graphs. All data, however, are listed in Appendix B and C.

Dried samples were analyzed for various radionuclides including, but not limited to, ^{60}Co, ^{90}Sr, ^{99}Tc, ^{137}Cs, ^{234}U, ^{235}U, ^{238}U, ^{238}Pu, and $^{239,240}Pu$. Gamma-emitting radionuclides were analyzed by directly counting the dried pulverized plant tissue using a lithium-ion drifted germanium [Ge(Li)] detector with a multichannel pulse-height analyzer.

Sample preparation for ^{3}H analyses was conducted by placing vegetation into large, translucent plastic bags; sealing the bags; and incubating them in direct sunlight to "sweat" water out of the plant. The condensate was collected in vials and submitted for ^{3}H analysis by liquid scintillation. The ^{3}H results were reported as pCi/L of condensate.

Strontium, plutonium, and uranium were analyzed in samples that were first ashed in a muffle furnace and then dissolved in nitric acid. For ^{90}Sr, the dissolved ash was scavenged with barium nitrate, and the strontium was precipitated as a carbonate. The strontium carbonate precipitate was transferred to a stainless-steel planchet and counted on a gas flow proportional counter. Plutonium was concentrated on an anion exchange resin,

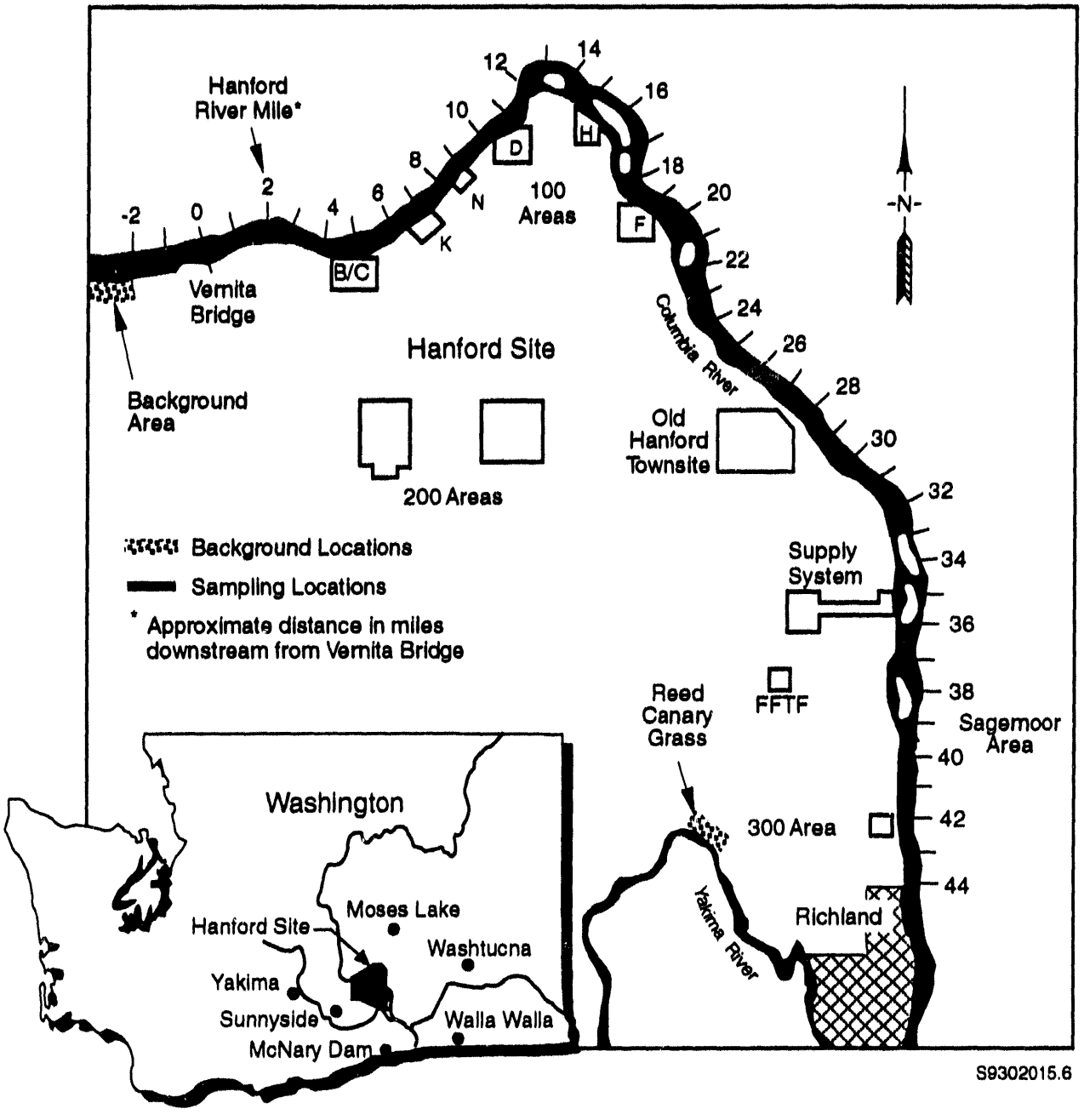

FIGURE 1. Shoreline Vegetation Study Area, 1990 to 1992

eluted with nitric and hydrofluoric acids, electrodeposited onto a stainless-steel disk, and analyzed on an alpha spectrometer. Analysis for ^{234}U, ^{235}U, and ^{238}U required purification of the dissolved ash by anion exchange followed by extraction of uranium into an organic solvent. The sample extract was electrodeposited on a planchet, dried, and analyzed by alpha spectroscopy.

Technetium-99 was leached from the dried vegetation using nitric acid; it was then precipitated out of solution using iron, calcium, and barium carriers. The precipitate was reacidified and passed through an ion-exchange column to separate technetium from other radionuclides. Scintillation cocktail was added to the technetium eluted off the column, and the sample was counted on a liquid scintillation detector.

Potentially contaminated samples were compared to the following:

- shoreline plants collected in 1990 to 1992 at or downstream from the Vernita Bridge, Hanford River Mile (HRM) 0, are compared to shoreline plants collected in 1992 upstream from the Vernita Bridge at HRM -2.

- agricultural crops planted near the 100-F Area and the Old Hanford Townsite were collected in 1990 and compared to farm crops collected during routine 1989 SESP environmental sampling of the Riverview area west of Pasco, Washington.

- milfoil, a submergent rooted aquatic plant, was collected in a special study in 1992 from the 100-N and 300 Areas and compared to milfoil collected at HRM -2.

- reed canary grass was also collected from the 100-N Area in the special 1992 study and compared to reed canary grass collected in 1992 from the Yakima River shoreline west of the Hanford Site (see Figure 1).

Results

Three distinct groups of plants were sampled: 1) naturally propagated Hanford shoreline vegetation collected in 1990 and 1991, 2) tomatoes and pumpkins intentionally planted in 1990, and 3) naturally propagated Hanford shoreline vegetation collected in 1992. The results for ten radionuclides observed in naturally propagated vegetation indicated concentrations ranging from below detection to greatly in excess of background levels (Table 1).

Shoreline Vegetation

Concentrations of ten radionuclides in natural shoreline vegetation are evaluated by HRM. Areas with elevated levels of radioactivity included the 100-N Area (HRM 9) and the Old Hanford Townsite (HRM 26 to 29). Both areas contain seeps along the Hanford Site shoreline with elevated levels of specific radionuclides (Table 2). Analytical results for each analysis are tabulated in Appendix B by species and HRM. Concentrations of most gamma emitters (^{65}Zn, ^{95}ZrNb, ^{103}Ru, ^{106}Ru, ^{125}Sb, ^{134}Cs, ^{144}CePr, ^{154}Eu, ^{155}Eu, ^{212}Pb, ^{214}Pb, and ^{226}Ra) were below detection limits and are not reported here. However, ^{60}Co and ^{137}Cs were detected in some samples. Generally, the contractual detection limit for these radionuclides ranged from 0.02 to 0.3 pCi/g dry weight.

Tritium

Tritium (as HTO) concentrations measured in plant condensate ranged from -70 (±200) pCi/L (less than minimum detectable concentration) in pumpkin at HRM 19 to 97,000 (±7,200) pCi/L in mulberry foliage at the Old Hanford Townsite (HRM 26.25, Figure 2). The 100-N Area and the Old Hanford Townsite had the highest frequency of elevated ^{3}H in vegetation; elevated levels were also seen in mulberry [600 (±228) pCi/L] vegetation; collected from the 100-H Area (HRM 15) and in mulberry [27,000 (±380) pCi/L] from north of the 300 Area (HRM 41). Generally, the minimum detectable concentration was about 300 pCi/L condensate.

Cobalt

Cobalt-60 concentrations ranged from -0.03 (±0.05) to 0.34 (±0.36) pCi/g in dried mulberry foliage (Figure 3). Both of these values are less than detection limits because the error term was larger than the concentration (in 91% of samples analyzed by IT). Cobalt-60 was detected in mulberry samples taken from near the 100-N Area (HRM 9), but concentrations were close to detection limits (typically about 0.01 to 0.03 pCi/g). Separate analyses by PNL of mulberry fruit collected from HRM 9 indicated concentrations of 0.02 (±0.004) to 0.10 (±0.06) pCi/g on a wet-weight basis (Appendix C).

Table 1. Summary of Maximum Radionuclide Concentrations in Vegetation Collected Along the Columbia River Shoreline and at an Upstream Control Location, 1990 to 1992

	Shoreline Concentration			Upstream Control Location (HRM -2)	
Radionuclide	Species	Concentrations[a]	Location, HRM	Species	Concentrations[a]
^{3}H	Mulberry	9.7 E+4 ± 7.2 E+3	26	Mulberry	3.6 E+2 ± 3.7 E+2
^{60}Co	Mulberry	3.4 E - 1 ± 3.6 E - 1	9	Milkweed	5.4 E - 2 ± 2.7 E - 2
^{90}Sr	Mulberry	4.4 E+2 ± 8.5 E+1	9	Mulberry	1.7 E - 1 ± 3.9 E - 2
^{99}Tc	Mulberry	1.7 E+1 ± 2.3 E 0	30	Asparagus	1.4 E 0 ± 6.9 E - 1
^{137}Cs	Mulberry	2.4 E - 1 ± 2.2 E - 1	9	Willow	1.9 E - 2 ± 1.3 E - 2
^{234}U	Onion	3.6 E - 1 ± 3.8 E - 2	42	Onion	1.2 E - 1 ± 1.5 E - 2
^{235}U	Onion	1.5 E - 2 ± 4.1 E - 3	42	Onion	1.9 E - 3 ± 2.1 E - 3
^{238}U	Onion	3.4 E - 1 ± 3.6 E - 2	42	Onion	9.3 E - 2 ± 1.3 E - 2
^{238}Pu	Dogbane	5.4 E - 3 ± 2.4 E - 3	9	Onion	2.8 E - 4 ± 3.4 E - 4
$^{239/240}Pu$	Dogbane	5.3 E - 3 ± 1.0 E - 3	9	Asparagus	2.9 E - 4 ± 1.8 E - 4

(a) Concentrations are in pCi/g dry weight except ^{3}H, which is pCi/L condensate; uncertainties are the 2-sigma total propagated analytical error.

Table 2. Maximum Radionuclide Concentrations in Columbia River Shoreline Springs, 1988 Data (Dirkes 1990)

		Concentration, pCi/L[a]		
Radionuclide	Minimum Detectable Concentration[b]	N Springs HRM 9	Old Hanford Townsite HRM 26-28	300 Area HRM 42
^{3}H	300	1.1 E+5 ± 9.0 E+2	1.6 E+5 ± 1.3 E+3	3.5 E+2 ± 1.7 E+2
^{60}Co	9	5.3 E+1 ± 1.9 E+1	4.7 E 0 ± 4.8 E 0	1.6 E 0 ± 2.2 E 0
^{90}Sr	0.06	7.3 E+3 ± 1.9 E+2	7.0 E - 2 ± 3.0 E - 1	1.6 E - 1 ± 7.0 E - 2
^{137}Cs	8	4.0 E - 1 ± 4.4 E 0	6.0 E - 1 ± 2.8 E 0	4.0 E - 1 ± 6.0 E - 1
^{234}U	0.06	--[c]	--	4.5 E 0 ± 2.0 E - 1
^{235}U	0.06	--	--	3.6 E - 1 ± 6.0 E - 2
^{238}U	0.06	--	--	4.6 E 0 ± 2.0 E - 1

(a) Concentration ± 2-sigma counting error.
(b) Minimum detectable concentration, pCi/L.
(c) Not available.

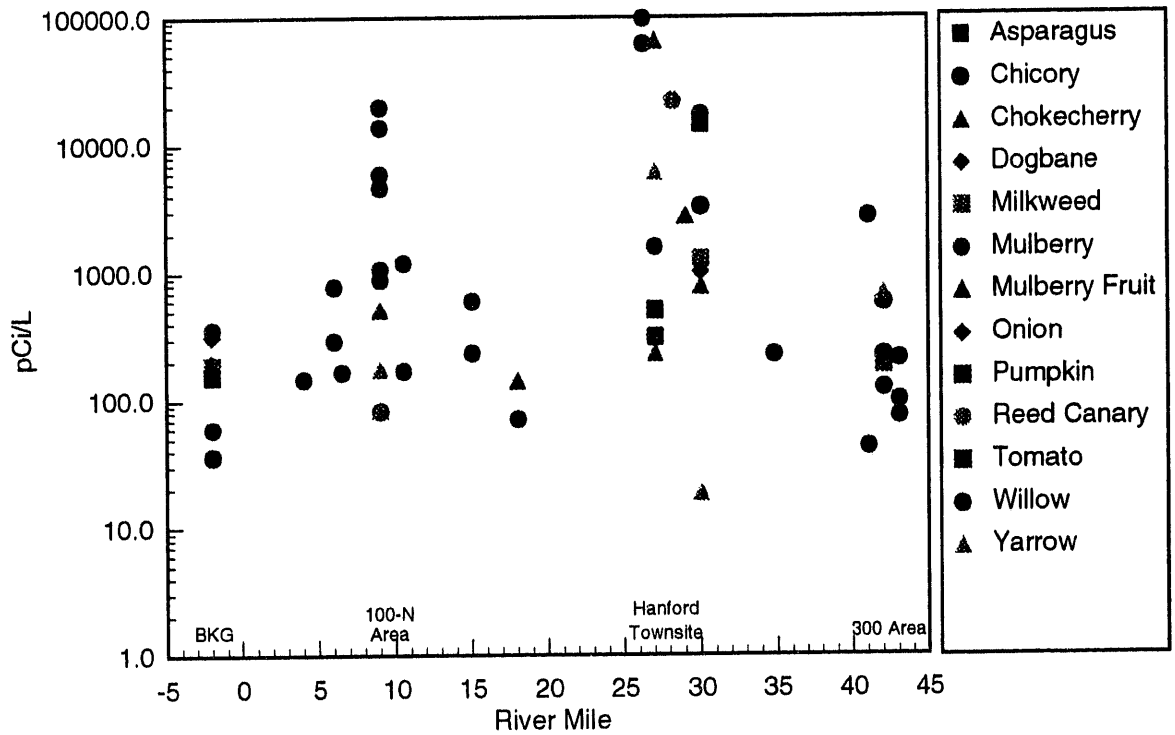

FIGURE 2. Tritium Concentrations in Vegetation Collected Along the Columbia River Shoreline

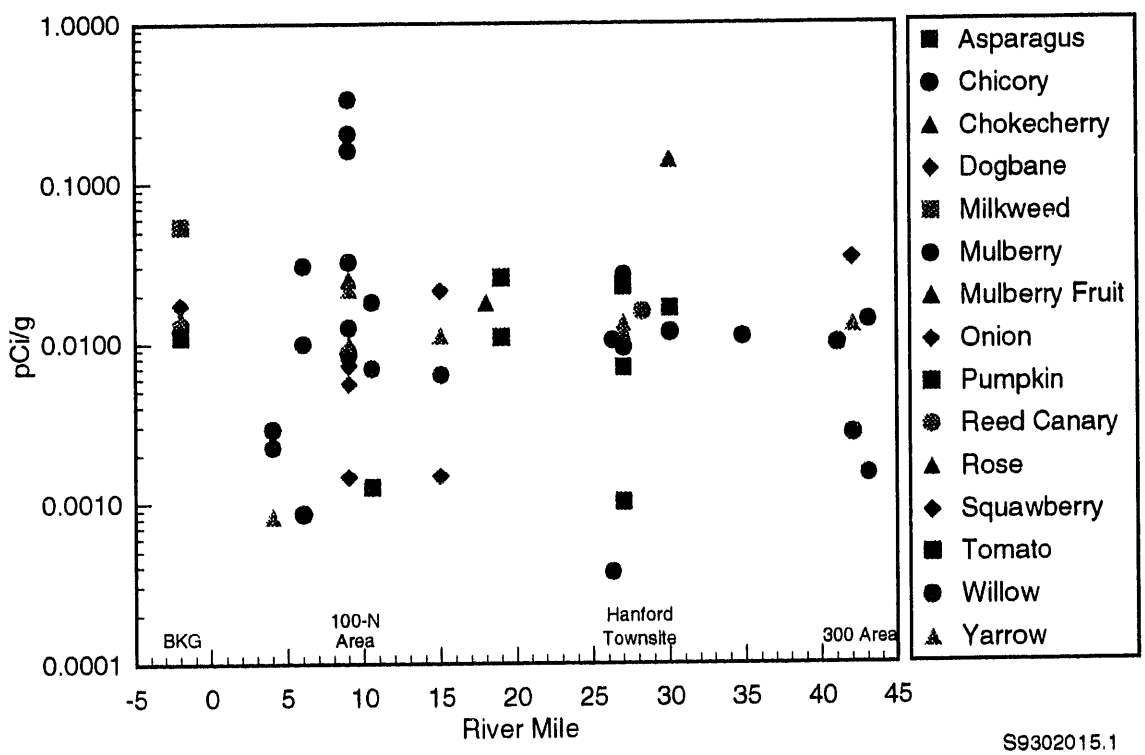

FIGURE 3. Cobalt-60 Concentrations in Vegetation Collected Along the Columbia River Shoreline

Strontium

Concentrations of ^{90}Sr in dried shoreline vegetation ranged from -0.0008 (±0.002) pCi/g in chokecherry vegetation obtained near the White Bluffs slough (HRM 18) to 440 (±80) pCi/g in mulberry foliage and twigs taken downstream from the 100-N Area pump house (HRM 9, Figure 4). In a number of samples, ^{90}Sr in shoreline vegetation from the 100-N Area exceeded background levels found in the upstream control location (HRM -2). Analyses conducted by PNL of mulberry fruit and foliage from the 100-N Area (HRM 10) indicated concentrations of 19 (±1.9) pCi/g and 78 (±7.8) pCi/g, respectively, on a wet-weight basis (Appendix C).

Special sampling of reed canary grass from just downstream from the 100-N Area compared to samples from the Yakima River indicated elevated concentrations of ^{90}Sr ($P=0.077$, Table 3). Milfoil collected in the 100-N Area also indicated slightly elevated concentrations of ^{90}Sr; however, the differences were not significant ($P=0.112$, Table 3).

Technetium

Concentrations of ^{99}Tc ranged from -0.26 (±0.56) to 17 (±2.3) pCi/g. The minimum value was obtained from a dogbane sample taken from the control location upstream from the Vernita Bridge, and the maximum was from a mulberry sample taken from HRM 30. Of the 22 samples analyzed for ^{99}Tc, only three had detectable concentrations (Appendix B). They were an asparagus sample at HRM -2 [1.4 (±0.69) pCi/g], a chicory sample at HRM 30 [0.85 (±0.63 pCi/g)], and a mulberry sample from HRM 30 [17 (±2.3) pCi/g].

Cesium

Cesium-137 concentrations ranged from -0.0242 (±0.028) to 0.24 (±0.22) pCi/g (Figure 5). The low and high values were measured in mulberry foliage taken near the 100-N Area (HRM 9). The limits of detection range from 0.01 to 0.03 pCi/g, and several samples were above the detection limit. Separate analyses conducted by PNL of 100-N Area mulberry fruit indicated concentrations of <0.0081 to 0.014 (±0.007) pCi/g on a wet-weight basis.

Uranium

The analysis of Hanford Site shoreline vegetation samples for ^{234}U, ^{235}U, and ^{238}U did not identify any locations with distinctly elevated uranium concentrations. The four highest concentrations of uranium in vegetation were found in onion with no major differences between the upstream location and Hanford Reach samples.

Table 3. Concentrations of ^{90}Sr in Milfoil and Reed Canary Grass, 1992 Data

Location	pCi/g Dry[a]	No. of Samples
Reed canary grass[b]		
Yakima River	5.0 E - 3 ± 2.0 E - 3	3
100-N Area (HRM 10)	1.7 E - 2 ± 1.0 E - 2	3
Milfoil		
Vernita (HRM -2)	9.6 E - 2 ± 2.2 E - 2	3
100-N Area (HRM 9)	1.2 E - 1 ± 1.8 E - 2	3
300 Area (HRM 42)	8.7 E - 2 ± 1.0 E - 2	3

(a) Error is 2 sigma total propagated analytical error.
(b) Analysis of Variance indicates P = 0.077; significant differences between locations.

The concentrations of ^{234}U ranged from a low of -0.0023 (±0.0050) pCi/g in a mulberry sample taken from the 100-N Area (HRM 9) to a maximum of 0.36 (±0.038) pCi/g in an onion sample obtained from the 300 Area shoreline (HRM 42, Figure 6). Uranium-235 concentrations ranged from a low of -0.0012 (±0.0015) pCi/g in a dogbane sample taken from the shoreline upstream from the Vernita Bridge to a maximum of 0.015 (±0.0041) pCi/g in an onion sample obtained near the 300 Area (Figure 7). Uranium-238 concentrations ranged from a low of -0.0012 (±0.0035) pCi/g in a mulberry sample taken from the 100-N Area to a maximum of 0.34 (±0.036) pCi/g in an onion sample obtained near the 300 Area (HRM 42, Figure 8). The minimum detectable concentrations were about 0.02 pCi/g for each isotope.

Inspection of the uranium figures suggests that there were no differences between locations. Based on Analysis of Variance (ANOVA) of log-transformed ^{238}U data by location, there were significant differences between locations (P = 0.0255) for all species combined. An ANOVA by species and location was significant only for mulberry foliage (P = 0.0261). Multiple comparisons using Scheffe's correction indicated significant differences at the 10% level of significance between the 300 Area and the Hanford Townsite only. Other comparisons between the background location (HRM -2), 100-B/C and 100-K Areas combined (HRM 4 to 6.5), 100-N Area (HRM 9 to 10.5), 100-D and 100-F Areas combined (HRM 15 to 18), Hanford Townsite (HRM 26 to 30), and the 300 Area (HRM 40 to 44) were not significant.

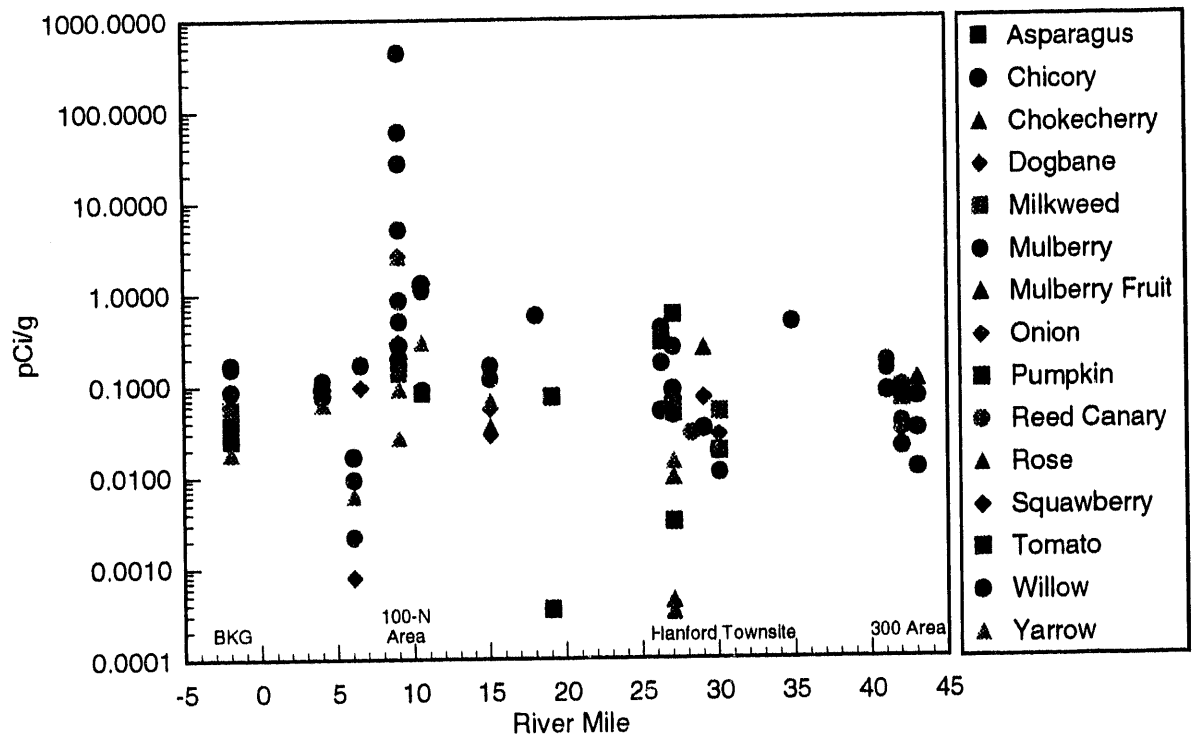

FIGURE 4. Strontium-90 Concentrations in Vegetation Collected Along the Columbia River Shoreline

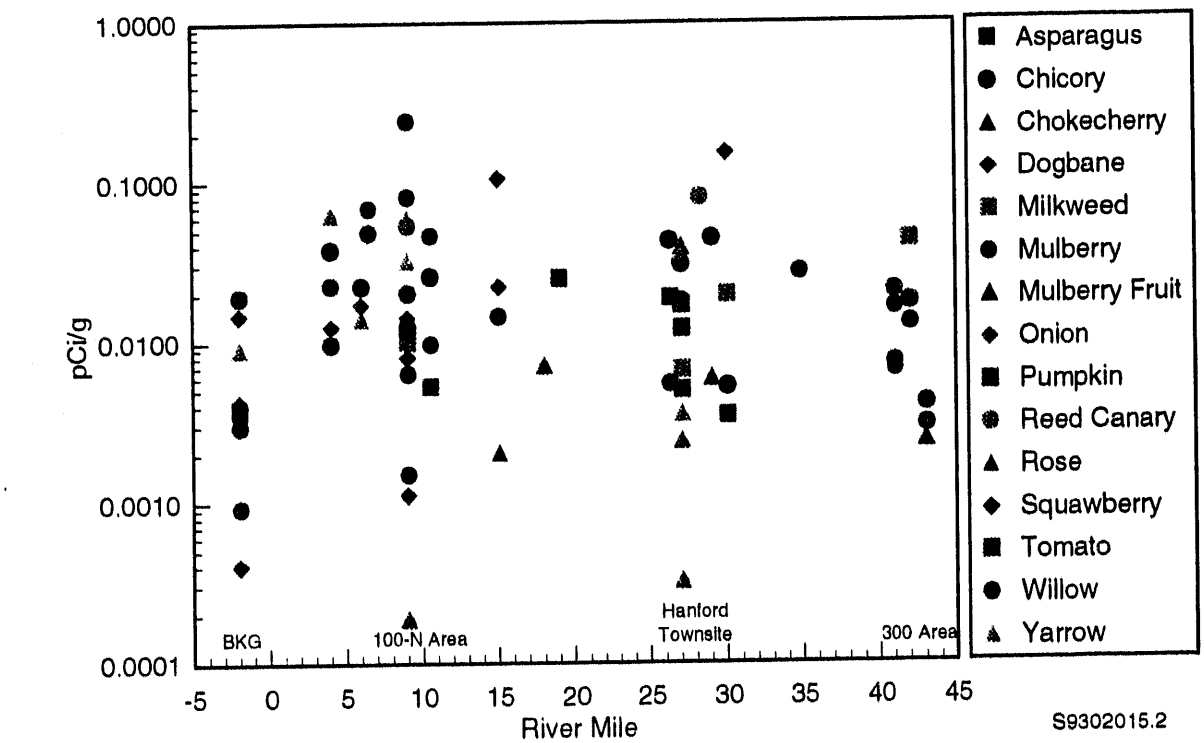

FIGURE 5. Cesium-137 Concentrations in Vegetation Collected Along the Columbia River Shoreline

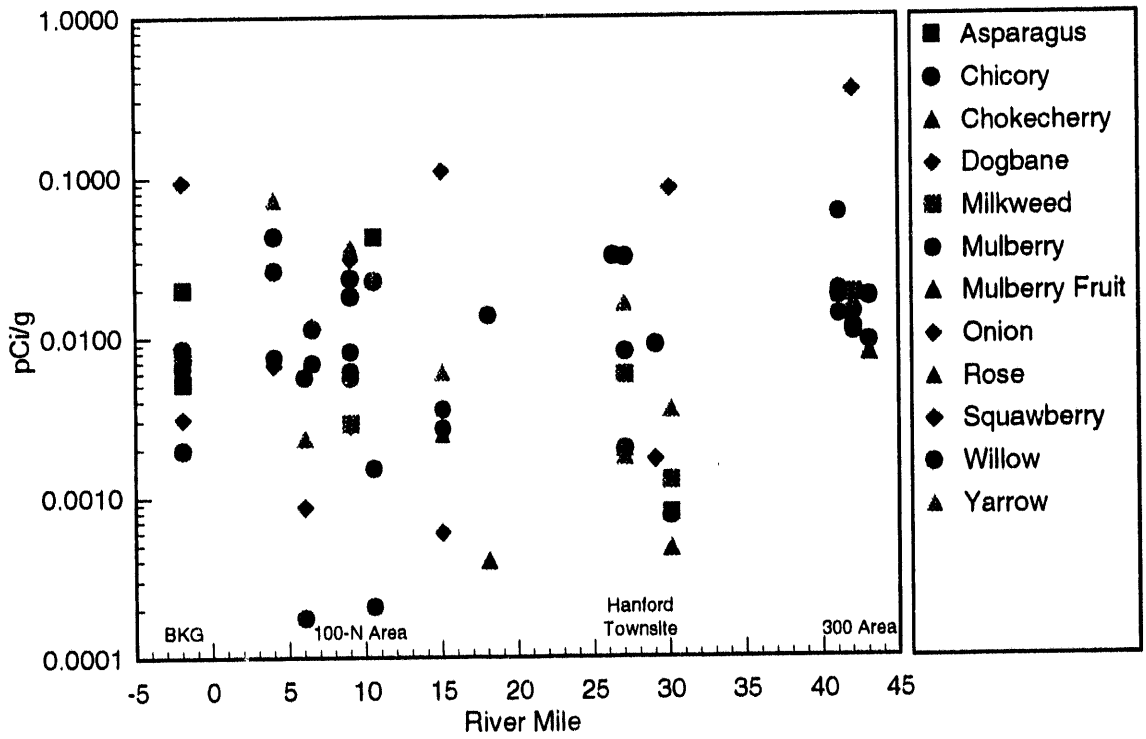

FIGURE 6. Uranium-234 Concentrations in Vegetation Collected Along the Columbia River Shoreline

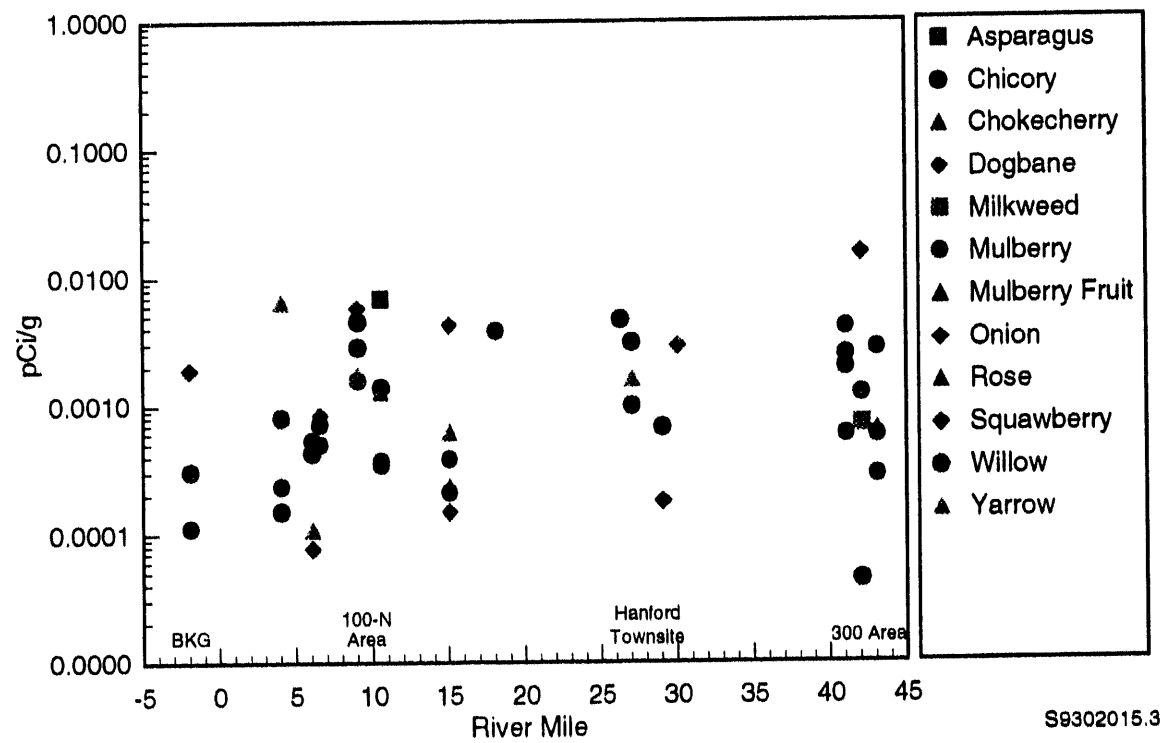

FIGURE 7. Uranium-235 Concentrations in Vegetation Collected Along the Columbia River Shoreline

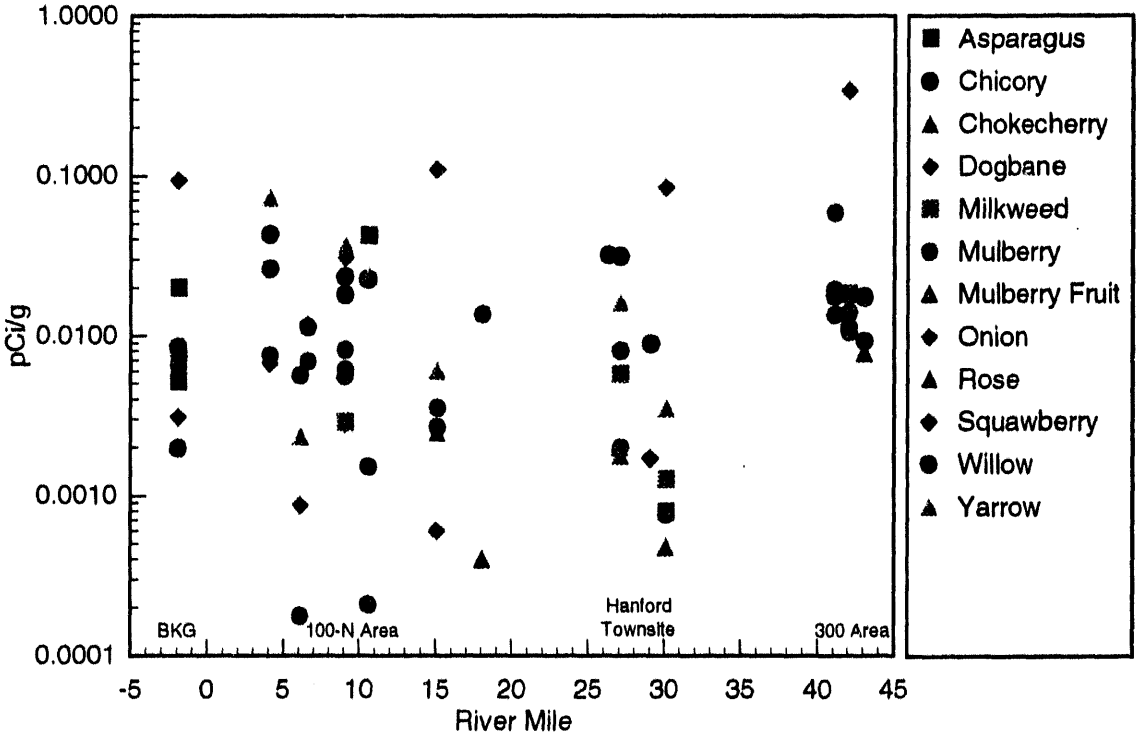

FIGURE 8. Uranium-238 Concentrations in Vegetation Collected Along the Columbia River Shoreline

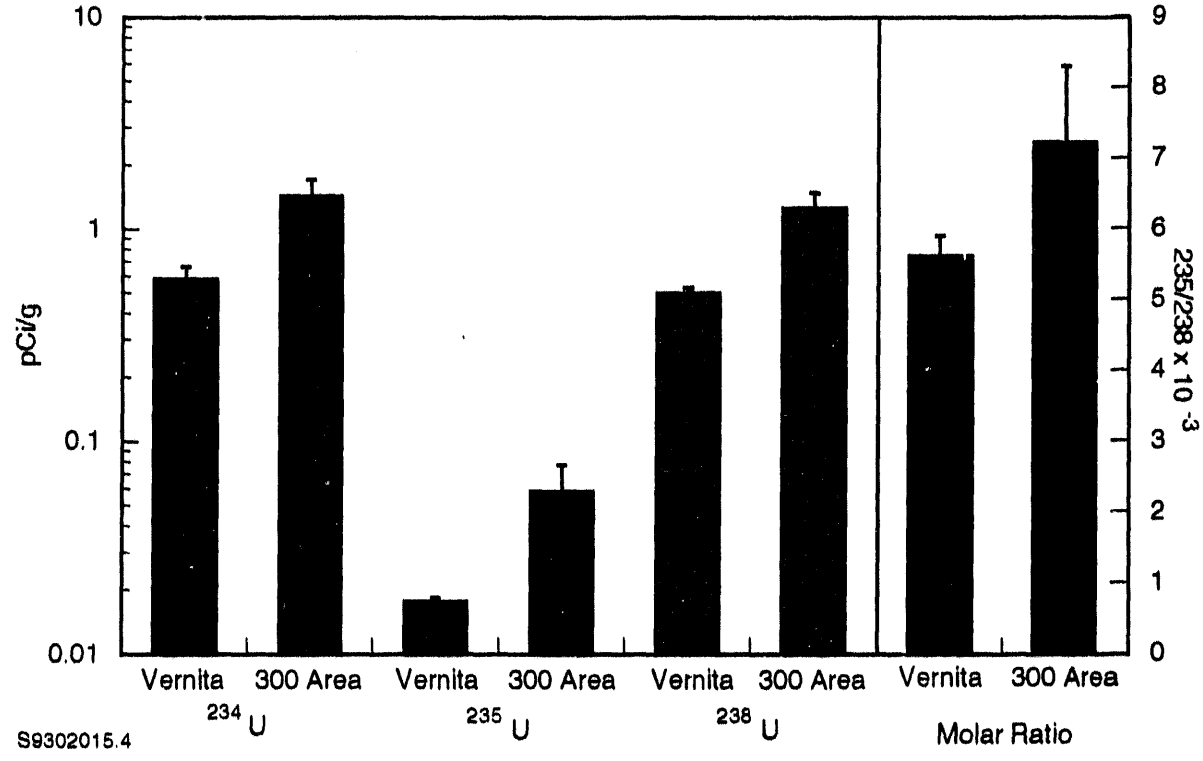

FIGURE 9. Mean Concentrations (±2SE) of U Isotopes and Molar Ratios of Uranium in Milfoil

Samples of milfoil collected in 1992 from the 300 Area, the 100-N Area, and upstream from the Vernita Bridge indicated an increase in the concentrations of uranium isotopes at the 300 Area. The isotopic ratios of ^{235}U to ^{238}U suggest that the source of uranium around the 300 Area is enriched with ^{235}U (Figure 9). The ability to examine isotopic ratios in other shoreline samples was hampered by the large variability in different plant species and the low and sometimes negative values that were found in the data.

Plutonium

Samples were analyzed for ^{238}Pu and $^{239,240}Pu$. Plutonium-238 concentrations ranged from -0.00012 (±0.00013) pCi/g in a mulberry fruit sample taken near HRM 27 to 0.0054 (±0.0024) pCi/g in a dogbane sample obtained from the 100-N Area shoreline (HRM 9, Figure 10). The minimum detectable concentration was about 0.0004 pCi/g. There was no area with distinctly elevated concentrations of ^{238}Pu relative to the upstream control location (HRM -2).

Plutonium-239,240 concentrations ranged from -6.0E-5 (±0.0001) pCi/g in mulberry foliage and twigs taken from the shoreline above the 100-B/C Area (HRM 4) to 0.0053 (±0.0010) pCi/g in dogbane sampled near the 100-N Area (Figure 11). The minimum detectable concentration was about 0.0004 pCi/g. A chicory and a dogbane sample from the 100-N Area both contained levels in excess of 0.001 pCi/g, which were higher than the remainder of the shoreline samples.

Agricultural Products

The tomato and pumpkin plants that were planted along the shoreline in 1990 were sampled and the fruit analyzed. The results from the individual plants collected from the 100-F Area shoreline (HRM 19) and the Old Hanford Townsite (HRM 28) are compared to tomatoes and melons collected at Riverview in 1989 (Table 4). The concentrations of ^{60}Co and ^{137}Cs were at or below detection limits in both the shoreline samples and Riverview vegetables. Tritium concentrations ranged from -20 (±200) to 500 (±230) pCi/L. Some ^{90}Sr [0.074 (±0.009) pCi/g] was found in a pumpkin sampled from HRM 19 (Appendix B). A mature asparagus plant sampled downstream of the 100-N Area (HRM 10.5) contained 0.082 (±0.02) pCi/g ^{90}Sr, and concentrations of uranium isotopes were comparable to other species of shoreline vegetation (Table 1 and Appendix B).

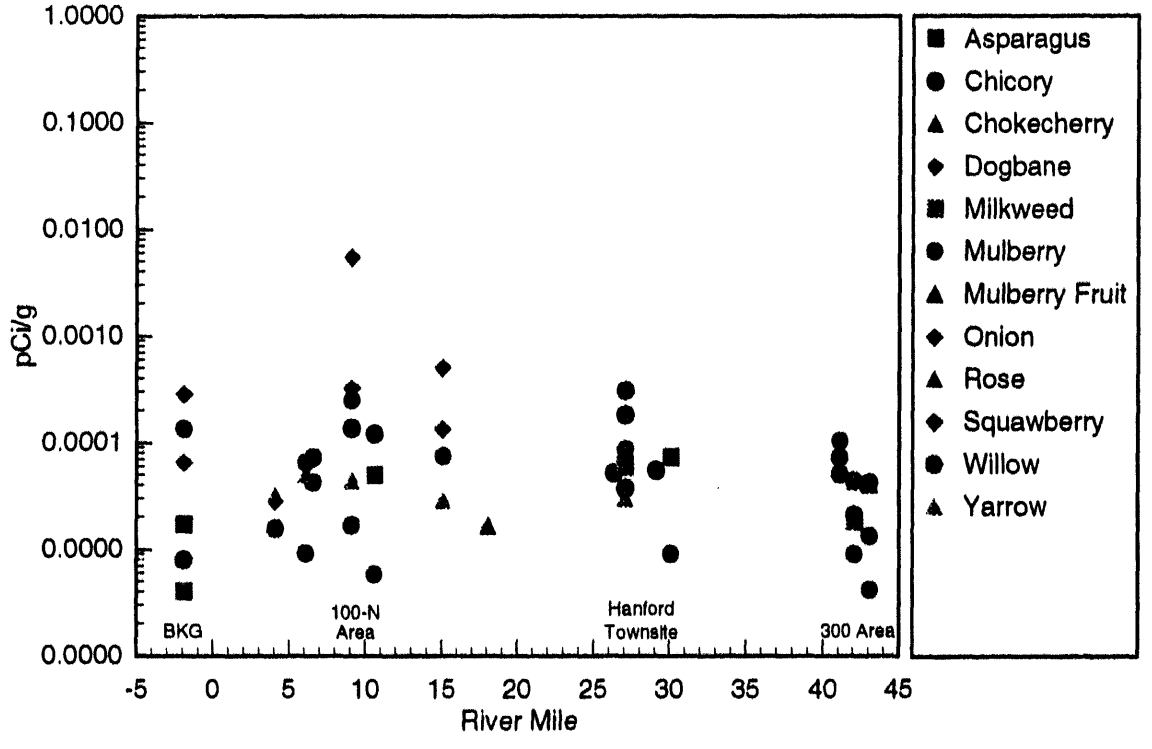

FIGURE 10. Plutonium-238 Concentrations in Vegetation Collected Along the Columbia River Shoreline

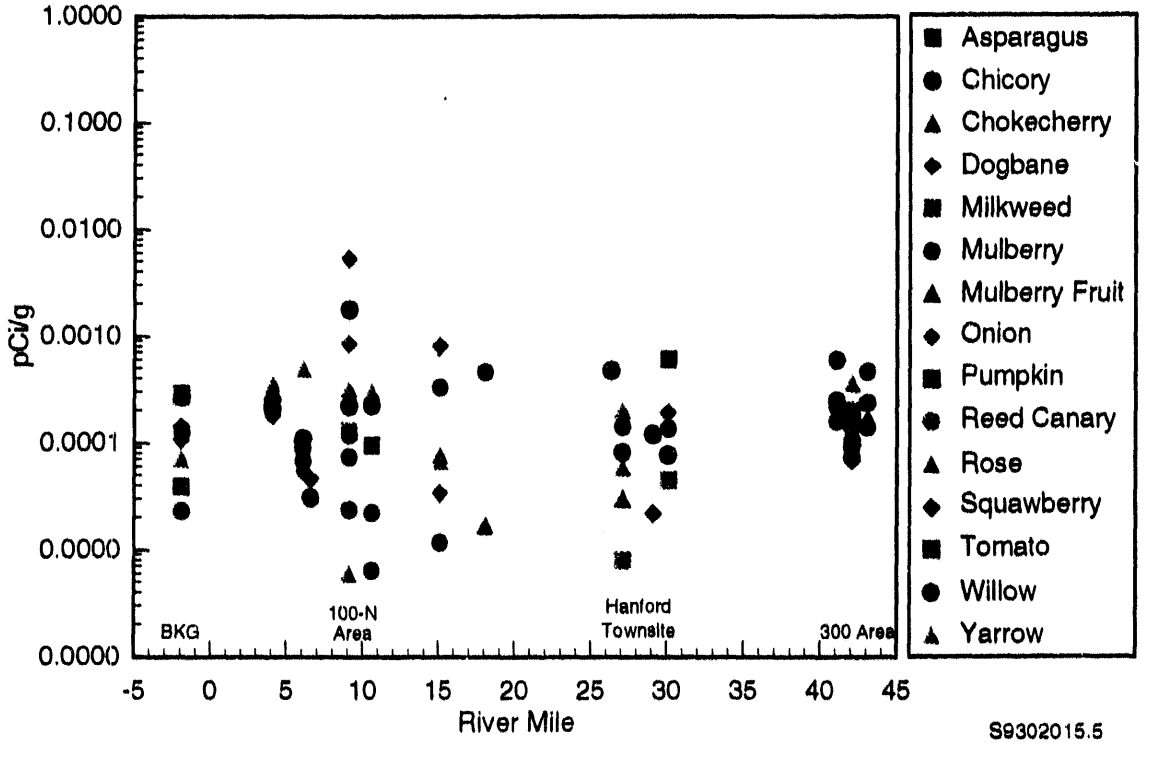

FIGURE 11. Plutonium-239, 240 Concentrations in Vegetation Collected Along the Columbia River Shoreline

Table 4. Comparison of Radionuclides in Tomatoes, Pumpkins, and Melons Collected from Riverview and the Columbia River Shoreline[a]

Radionuclide	Location	Tomatoes	Pumpkins	Melons
^{3}H[b]	HRM 19	-1.6 E+1 ± 2.0 E+2	-7.4 E+1 ± 2.0 E+2	NS[c]
	HRM 27	5.0 E+2 ± 2.3 E+2	3.1 E+2 ± 2.2 E+2	NS
	Riverview	NS	NS	2.4 E+1 ± 1.4 E+2
^{60}Co	HRM 19	1.1 E - 2 ± 1.1 E - 2	2.6 E - 2 ± 2.2 E - 2	NS
	HRM 27	2.3 E - 2 ± 2.9 E - 2	1.0 E - 3 ± 9.3 E - 3	NS
	Riverview	2.5 E - 3 ± 7.6 E - 3	NS	-3.4 E - 4 ± 1.2 E - 2
^{90}Sr	HRM 19	3.5 E - 4 ± 2.6 E - 3	7.4 E - 2 ± 1.6 E - 1	NS
	HRM 27	-3.7 E - 4 ± 4.5 E - 3	3.1 E - 3 ± 3.5 E - 3	NS
	Riverview	1.0 E - 3 ± 6.0 E - 4	NS	2.9 E - 3 ± 1.7 E - 3
^{137}Cs	HRM 19	-2.4 E - 3 ± 9.9 E - 2	2.5 E - 2 ± 2.1 E - 2	NS
	HRM 27	1.7 E - 2 ± 2.9 E - 2	1.2 E - 2 ± 6.0 E - 3	NS
	Riverview	2.6 E - 3 ± 3.4 E - 3	NS	1.5 E - 4 ± 9.6 E - 4

(a) Error terms for shoreline samples are the 2 sigma propagated error; error terms for Riverview samples are 2 times the standard error of the mean of triplicate samples.
(b) Tritium concentrations are in pCi/L of extracted water.
(c) NS = Not sampled.

Discussion

This study of shoreline vegetation identified three areas of elevated concentrations of Hanford-derived radionuclides in plant material: the 100-N Area (HRM 9), the Old Hanford Townsite (HRM 29), and north of the 300 Area (HRM 41). At these locations, activity levels in vegetation correspond to activities in areas with known elevated concentrations in seep water. In the 100-N Area, this was apparent for ^{3}H and ^{90}Sr, and to a lesser degree ^{60}Co (Table 2).

Maximum concentrations of radionuclides in shoreline vegetation were compared to maximum levels in plants from the upstream control location (HRM -2, upstream from the Vernita Bridge). While the sampling location at HRM 4 is upstream from the Hanford reactor sites, it is located on the Site and could have been affected by past atmospheric releases of radioactive effluents from Hanford operations. There is also a tritium groundwater plume in the vicinity of this sampling location (Woodruff et al. 1991).

The presence of elevated ^{3}H in shoreline vegetation indicates plant roots extending into contaminated seep water; elevated levels were observed at several locations from HRM 9 to HRM 41. Elevated ^{3}H has previously been reported in the leaves of black locust trees (*Robina pseudo-acacia*) from the 100-K Area where contaminated groundwater was located about 8 m below the surface (Rickard and Price 1989). The existence of several Hanford Site ^{3}H plumes that extend to the Columbia River is well documented (Woodruff et al. 1991). Although uranium is known to exist in soil and groundwater in the 300 Area (Dirkes 1990; Poston 1990), the only species showing a statistically significant elevated level of ^{238}U was mulberry foliage. Other comparisons by location were not significantly different as a partial result of the high variation of environmental concentrations of radionuclides in vegetation. This variation is related to exposure, which for mulberry trees is a function of age and depth of penetration of roots into groundwater seeps along the shoreline. Additionally, one mulberry sample with elevated levels of ^{3}H was found. Uranium in milfoil, an aquatic macrophyte, was elevated at the 300 Area.

The maximum concentrations of ^{137}Cs, ^{238}Pu, and $^{239,240}Pu$ were similar to or less than those at either of the upstream control location; however, some plutonium in shoreline vegetation appeared to be slightly elevated above concentrations at the upstream control location. Seven plant samples were analyzed in which $^{239,240}Pu$ was found above the minimum detectable concentration; they included chicory, dogbane, and yarrow from around the 100-N Area; onions from HRM 15; a chicory plant sampled near the Old Hanford Townsite; and a mulberry tree and a willow tree sampled around the 300 Area. There was no conclusive evidence of elevated plutonium contamination in shoreline vegetation; however, more sampling may be warranted at HRM 9.

The mature asparagus plant sampled at HRM 10.5 (0.2 pCi/g) had levels of uranium in excess of those measured in any asparagus plants sampled in another 1990 study (Tiller and Poston 1992). In that study, the highest concentrations of uranium were found in asparagus shoots grown in the Sagemoor area, where concentrations ranged from 0.003 (±0.0008) pCi/g dry weight for ^{234}U to 0.0022 (±0.0007) pCi/g dry weight for ^{238}U. These concentrations are two orders of magnitude lower than the concentrations of the sample collected downstream from the 100-N Area at HRM 10.5.

Tritium, ^{60}Co, ^{90}Sr, an U are the only radionuclides that appear at levels distinctly higher than levels measured at the upstream control locations. Strontium-90 in reed canary grass has previously been reported to be in higher concentrations just downstream from the 100-N Area than at other downstream locations (Rickard and Price 1990). The majority of the shoreline vegetation data fall within the range of natural vegetation, further corroborating the supposition that the 100-N Area and the Old Hanford Townsite are areas of elevated contamination in shoreline vegetation.

Potential Dose to Humans

The shoreline vegetation sampled in this study was collected from areas where collection of plants for human consumption was not expected to occur. Doses to human consumers (Table 5), however, have been calculated based on the consumption of 1.0 kg of edible plant material (DOE 1988). In many instances, the highest concentrations of radionuclides were found in nonedible portions of the plant like mulberry twigs and foliage, or the vegetation had other uses (medicinal purposes or for fiber products). The most significant contribution to dose (0.2 mrem for a 50-year dose commitment) resulted from ^{90}Sr in mulberries collected from HRM 9 in 1990.

Summary of Key Findings and Research Needs

The documentation of elevated levels of radionuclides in vegetation at the Old Hanford Townsite (HRM 26 through 29) and the 100-N Area (HRM 9) established a need for continued monitoring of radioactivity in shoreline vegetation. The observations of ^{3}H in vegetation at other locations apart from these areas of distinctly elevated concentrations may indicate a need for additional surveillance along the shoreline. Additional 1992 samples were collected and analyzed for ^{99}Tc, a constituent that was not analyzed for in the 1990 survey. Technetium-99 is a constituent found in seep water around the Old Hanford Townsite (HRM 26 through 29, Dirkes 1990). However, ^{99}Tc was found in only two out of 12 samples collected there.

Table 5. Estimated 50-Year Committed Effective Dose Equivalent (CEDE) from Consuming 1 kg of Edible Shoreline Vegetation and Farm Crops

Species	Location	Radionuclide	pCi/g, dry	CEDE, mrem
Asparagus	HRM 27	^{90}Sr	5.7 E - 01	7 E - 04
Mulberries	HRM 9	^{60}Co	3.4 E - 01	4 E - 04
Mulberries	HRM 9	^{90}Sr	9.2 E+01	2 E - 01
Mulberries	HRM 27	^{3}H	6.6 E+04	4 E - 03
Pumpkin	HRM 19	^{90}Sr	7.4 E - 02	4 E - 05
Pumpkin	HRM 26	^{137}Cs	1.2 E - 02	3 E - 05
Pumpkin	HRM 27	^{3}H	3.1 E+02	2 E - 05
Tomato	HRM 27	^{60}Co	2.3 E - 02	3 E - 05
Tomato	HRM 27	^{3}H	5.0 E+02	3 E - 05

The observations of elevated uranium isotopes in the 300 Area in onion and milfoil are less significant because the levels are not elevated on a scale comparable to ^{3}H and ^{90}Sr. The increase in the ^{236}U:^{238}U in milfoil ratio requires additional supporting data collection to corroborate this relationship.

Continued monitoring of potentially elevated levels of radionuclides is desirable for those portions of the Columbia River shoreline open to the public for recreational purposes. As was demonstrated with black locust trees by Rickard and Price (1989), trees may be tapping into groundwater and creating a potential pathway for the movement of radionuclides to the surface. Therefore, additional surveillance of this pathway may also be desirable.

The potential doses associated with radioactive contamination in edible vegetation or fruit are three orders of magnitude less than the 100-mrem protection standard established by DOE Order 5400.5 (DOE 1990). Mulberry trees bearing the contaminated fruit have been removed from around the 100-N Area shoreline, and additional sampling locations for vegetation have been added to the routine SESP schedule.

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Appendix A

Examples of Edible Plants of the Hanford Site and Their General Distribution

Table A.1. Examples of Edible Plants of the Hanford Site and Their General Distribution. Taken from Soldat et al. 1990.

Common Name/Species	Edible Parts	Distribution
Asparagus (exotic) ***Asparagus officinalis***	Very young shoots	Found mostly on abandoned cultivated fields at the Hanford and White Bluffs townsites, near the 300 Area, and at scattered locations along the Columbia River shoreline
Mulberry (exotic) ***Morus alba***	Fruit	Many trees scattered along the Columbia River shoreline
Chokecherry (native) ***Prunus virginiana***	Fruit	A few bushes scattered along the Columbia River and near springs in the Rattlesnake Hills
Squawberry (native) ***Ribes aureum***	Fruit	A few bushes scattered along the Columbia River and near springs in the Rattlesnake Hills
Wild rose (native) ***Rosa spp.***	Fruit	A few bushes scattered along the Columbia River and near springs in the Rattlesnake Hills
Willow (native) ***Salix spp.***	Bark and foliage	Scattered along the shoreline of the Columbia River and near springs in the Rattlesnake Hills
Watercress (exotic) ***Rotippa nasturtium-aquaticum***	Foliage	Semi-aquatic plant found near seeps along the shoreline of the Columbia River and near springs in the Rattlesnake Hills
Cattail (native) ***Typha latifolia***	Foliage, pollen, and roots	Semi-aquatic plant found along the shoreline of the Columbia River and near springs in the Rattlesnake Hills
Chicory (exotic) ***Cichorium intybus***	Foliage and roots	Scattered along the shoreline of the Columbia River and near springs in the Rattlesnake Hills
Dogbane (native) ***Apocynum sibiricum***	Bark	Scattered along the shoreline of the Columbia River; also known as "Indian hemp"
Yarrow (native) ***Achillea millefolium***	Foliage	Scattered over the Hanford Site and along the shoreline of the Columbia River
Dandelion (exotic) ***Taraxacum officinale***	Foliage	Scarce along the shoreline of the Columbia River
Wild onions (native) ***Allium spp.***	Leaves and bulbs	Scattered over the Hanford Site and along the shoreline of the Columbia River
Dock (native) ***Rumex salicifolius***	Leaves and stems	Scattered along the shoreline of the Columbia River

Appendix B

Shoreline Vegetation 1990-1992

Species	Radionuclide	Rivermile	pCi/g dry weight	Counting Error (2 Sigma)	Propagated Error (2 Sigma)	Sample Number
* Asparagus	Be-7	-2	2.48E+00	4.42E-01	5.07E-01	92113
* Asparagus	Be-7	-2	1.68E+00	1.46E-01	2.23E-01	92130
Asparagus	Be-7	10.5	-1.27E+00	4.33E+00	4.33E+00	90303
* Asparagus	Be-7	26.25	9.55E+00	7.07E+00	7.07E+00	90336
Asparagus	Be-7	27	1.67E+00	7.47E+00	7.47E+00	90335
* Asparagus	Be-7	30	1.98E+00	3.87E-01	4.35E-01	92102
Chicory	Be-7	4	3.64E+00	4.10E+00	4.11E+00	90297
Chicory	Be-7	6	7.87E+00	1.80E+01	1.80E+01	90320
Chicory	Be-7	9	1.08E+00	1.63E+00	1.63E+00	90258
Chicory	Be-7	9	1.82E+00	4.95E+00	4.95E+00	90312
Chicory	Be-7	10.5	-9.18E-01	5.03E+00	5.03E+00	90304
Chicory	Be-7	26.25	-2.51E+01	2.90E+01	2.91E+01	90413
Chicory	Be-7	27	-1.51E+00	1.79E+01	1.79E+01	90418
Chicory	Be-7	29	-8.65E+00	2.17E+01	2.18E+01	90410
* Chicory	Be-7	30	2.44E+00	5.53E-01	6.04E-01	92101
Chokecherry	Be-7	18	-1.35E+00	1.95E+01	1.95E+01	90408
Chokecherry	Be-7	29	2.60E+00	4.45E+00	4.46E+00	90337
* Chokecherry	Be-7	43	1.73E+00	1.47E+00	1.49E+00	90263
* Dogbane	Be-7	-2	6.73E-01	3.95E-01	4.00E-01	92108
* Dogbane	Be-7	-2	1.05E+00	3.60E-01	3.75E-01	92126
Dogbane	Be-7	4	1.92E+00	3.80E+00	3.80E+00	90299
Dogbane	Be-7	6	-9.64E+00	1.88E+01	1.88E+01	90319
Dogbane	Be-7	6.5	-9.14E+00	2.20E+01	2.20E+01	90325
Dogbane	Be-7	9	-1.04E+00	1.56E+00	1.57E+00	90259
Dogbane	Be-7	9	3.69E+00	6.50E+00	6.51E+00	90333
Dogbane	Be-7	9	3.17E-01	3.51E+00	3.51E+00	90314
* Dogbane	Be-7	15	2.27E-01	1.60E-01	1.62E-01	90425
* Milkweed	Be-7	-2	4.11E+00	7.81E-01	8.83E-01	92132
* Milkweed	Be-7	9	6.49E+00	9.23E-01	1.13E+00	92104
* Milkweed	Be-7	27	4.65E+00	8.14E-01	9.37E-01	92116
* Milkweed	Be-7	30	6.44E+00	8.81E-01	1.09E+00	92099
* Milkweed	Be-7	42	4.22E+00	8.79E-01	9.76E-01	92092
* Mulberry	Be-7	-2	3.96E+00	4.30E-01	5.85E-01	92109
* Mulberry	Be-7	-2	1.60E+00	3.30E-01	3.67E-01	92128
Mulberry	Be-7	4	-1.85E+00	5.55E+00	5.55E+00	90300
Mulberry	Be-7	6	-1.06E+01	1.94E+01	1.95E+01	90321
Mulberry	Be-7	6	-1.58E+00	1.86E+01	1.86E+01	90322
Mulberry	Be-7	6.5	5.64E+00	2.10E+01	2.10E+01	90327
Mulberry	Be-7	9	2.63E-01	2.07E+00	2.07E+00	90257
Mulberry	Be-7	9	1.16E+00	6.71E+00	6.71E+00	90329
* Mulberry	Be-7	9	1.41E+02	1.14E+02	1.15E+02	90330
Mulberry	Be-7	9	-4.28E+01	1.46E+02	1.46E+02	90331
Mulberry	Be-7	9	-4.61E+00	1.96E+01	1.96E+01	90332
* Mulberry	Be-7	9	4.28E+00	1.40E+00	1.46E+00	92105
Mulberry	Be-7	9	4.15E+00	5.49E+00	5.51E+00	90316
Mulberry	Be-7	10.5	1.37E+00	3.11E+00	3.11E+00	90306
Mulberry	Be-7	10.5	1.00E+00	3.17E+00	3.17E+00	90307
Mulberry	Be-7	15	1.08E+01	1.56E+01	1.57E+01	90403
Mulberry	Be-7	15	-6.33E+00	1.75E+01	1.75E+01	90405
Mulberry	Be-7	18	-1.07E+00	9.66E+00	9.66E+00	90310
Mulberry	Be-7	26.25	-1.84E+00	7.17E+00	7.17E+00	90359
Mulberry	Be-7	26.25	1.08E+00	7.71E+00	7.71E+00	90360
Mulberry	Be-7	27	-6.55E-01	2.12E+01	2.12E+01	90334
* Mulberry	Be-7	27	2.20E+00	6.55E-01	6.91E-01	92118
* Mulberry	Be-7	30	4.27E+00	4.71E-01	6.36E-01	92097
Mulberry	Be-7	34.75	5.73E+00	1.23E+01	1.23E+01	90361
Mulberry	Be-7	41	4.52E-01	2.16E+00	2.16E+00	90268
Mulberry	Be-7	41	6.64E-01	1.69E+00	1.69E+00	90275
Mulberry	Be-7	42	3.59E-01	2.09E+00	2.09E+00	90271
* Mulberry	Be-7	42	4.16E+00	5.79E-01	7.13E-01	92095
* Mulberry	Be-7	43	2.70E+00	1.49E+00	1.51E+00	90261
* Mulberry	Be-7	43	2.04E+00	1.42E+00	1.44E+00	90265
* Mulberry	Be-7	43	1.99E+00	1.21E+00	1.22E+00	90273
Mulberry Fruit	Be-7	9	2.82E-03	1.34E-01	1.34E-01	91010

	Species	Radionuclide	Rivermile	pCi/g dry weight	Counting Error (2 Sigma)	Propagated Error (2 Sigma)	Sample Number
*	Mulberry Fruit	Be-7	27	1.21E-01	6.65E-02	6.73E-02	91011
*	Mulberry Fruit	Be-7	27	1.59E+00	9.46E-01	9.59E-01	92122
	Mulberry Fruit	Be-7	30	2.14E-02	2.19E+00	2.19E+00	92098
	Mulberry Fruit	Be-7	27	3.96E-02	1.07E-01	1.07E-01	91012
	Onion	Be-7	-2	8.45E-01	1.19E+00	1.20E+00	92111
	Onion	Be-7	15	2.13E+01	1.36E+02	1.36E+02	90407
*	Onion	Be-7	30	1.05E+00	1.03E+00	1.03E+00	92100
	Onion	Be-7	42	-2.18E-01	1.35E+00	1.35E+00	92094
	Pumpkin	Be-7	19	-2.40E-01	1.62E+00	1.62E+00	90251
	Pumpkin	Be-7	27	-3.34E-01	6.71E-01	6.72E-01	90249
	Reed Canary	Be-7	28.2	-2.03E+01	2.54E+01	2.55E+01	91002
	Rose	Be-7	15	-2.39E+00	1.54E+01	1.54E+01	90401
	Squawberry	Be-7	29	9.14E+00	2.03E+01	2.04E+01	90412
	Tomato	Be-7	19	2.72E-01	5.96E-01	5.97E-01	90252
	Tomato	Be-7	27	-1.91E-01	2.78E+00	2.78E+00	90250
*	Willow	Be-7	-2	5.37E+00	6.96E-01	8.81E-01	92112
*	Willow	Be-7	-2	3.48E+00	2.77E-01	4.45E-01	92124
	Willow	Be-7	6.5	6.93E+00	1.42E+01	1.42E+01	90326
*	Willow	Be-7	9	3.89E+00	2.86E+00	2.88E+00	90313
*	Willow	Be-7	27	1.85E+01	1.76E+01	1.77E+01	90417
	Willow	Be-7	41	1.08E+00	1.80E+00	1.80E+00	90267
	Willow	Be-7	41	1.41E+00	1.78E+00	1.78E+00	90276
	Willow	Be-7	42	1.65E+00	2.02E+00	2.02E+00	90270
*	Willow	Be-7	42	3.38E+00	1.18E+00	1.23E+00	92093
*	Yarrow	Be-7	-2	4.67E+00	8.66E-01	9.84E-01	92107
	Yarrow	Be-7	4	2.28E+00	3.74E+00	3.75E+00	90298
	Yarrow	Be-7	6	-9.53E+00	2.36E+01	2.36E+01	90318
*	Yarrow	Be-7	9	5.52E+00	6.71E-01	8.69E-01	92103
	Yarrow	Be-7	9	2.28E+00	3.81E+00	3.81E+00	90315
	Yarrow	Be-7	15	9.91E+00	2.69E+01	2.69E+01	90402
	Yarrow	Be-7	27	-9.30E+00	1.97E+01	1.97E+01	90419
*	Yarrow	Be-7	27	5.26E+00	7.35E-01	9.04E-01	92120
*	Yarrow	Be-7	30	5.04E+00	9.08E-01	1.04E+00	92096
*	Yarrow	Be-7	42	4.24E+00	7.41E-01	8.54E-01	92091
	Willow	Be-7	4	3.28E+00	3.88E+00	3.90E+00	90301
	Yarrow	Be-7	10.5	3.61E+00	6.02E+00	6.03E+00	90305
	Asparagus	CePr-144	-2	5.68E-02	1.20E-01	1.20E-01	92113
	Asparagus	CePr-144	-2	3.16E-02	7.26E-02	7.27E-02	92130
	Asparagus	CePr-144	30	-2.64E-02	1.47E-01	1.47E-01	92102
	Asparagus	CePr-144	10.5	-1.42E-01	3.69E-01	3.69E-01	90303
	Asparagus	CePr-144	26.25	2.21E-02	2.83E-01	2.83E-01	90336
	Asparagus	CePr-144	27	4.57E-03	2.74E-01	2.74E-01	90335
	Chicory	CePr-144	4	1.57E-01	3.16E-01	3.16E-01	90297
	Chicory	CePr-144	6	2.42E-01	3.21E-01	3.22E-01	90320
	Chicory	CePr-144	9	1.66E-03	1.47E-01	1.47E-01	90256
	Chicory	CePr-144	9	-2.26E-01	4.37E-01	4.38E-01	90312
	Chicory	CePr-144	10.5	2.09E-01	3.47E-01	3.48E-01	90304
	Chicory	CePr-144	26.25	-4.37E-01	6.48E-01	6.50E-01	90413
	Chicory	CePr-144	27	1.03E-01	3.59E-01	3.59E-01	90418
	Chicory	CePr-144	29	9.30E-02	3.74E-01	3.74E-01	90410
	Chicory	CePr-144	30	-1.29E-01	2.23E-01	2.24E-01	92101
	Chokecherry	CePr-144	18	-4.48E-01	4.01E-01	4.03E-01	90408
*	Chokecherry	CePr-144	29	2.30E-01	1.55E-01	1.57E-01	90337
	Chokecherry	CePr-144	43	-3.63E-02	1.71E-01	1.71E-01	90263
	Dogbane	CePr-144	-2	1.54E-03	1.53E-01	1.53E-01	92108
	Dogbane	CePr-144	-2	-3.09E-02	1.29E-01	1.29E-01	92126
	Dogbane	CePr-144	4	1.40E-02	3.06E-01	3.06E-01	90299
	Dogbane	CePr-144	6	1.87E-01	3.30E-01	3.31E-01	90319
	Dogbane	CePr-144	6.5	-1.13E-01	3.69E-01	3.69E-01	90325
	Dogbane	CePr-144	9	7.00E-02	1.44E-01	1.44E-01	90259
	Dogbane	CePr-144	9	8.70E-02	2.52E-01	2.52E-01	90333
	Dogbane	CePr-144	9	1.31E-01	2.66E-01	2.67E-01	90314
	Dogbane	CePr-144	15	-4.71E-03	1.37E-01	1.37E-01	90425
	Milkweed	CePr-144	-2	5.06E-03	2.04E-01	2.04E-01	92132

Species	Radionuclide	Rivermile	pCi/g dry weight	Counting Error (2 Sigma)	Propagated Error (2 Sigma)	Sample Number
Milkweed	CePr-144	9	-1.36E-02	1.77E-01	1.77E-01	92104
Milkweed	CePr-144	27	-2.12E-01	3.62E-01	3.63E-01	92116
Milkweed	CePr-144	30	-6.05E-02	2.24E-01	2.24E-01	92099
Milkweed	CePr-144	42	6.96E-02	2.10E-01	2.10E-01	92092
Mulberry	CePr-144	-2	-3.79E-02	1.32E-01	1.32E-01	92109
Mulberry	CePr-144	-2	-1.07E-01	1.46E-01	1.46E-01	92126
Mulberry	CePr-144	4	-1.69E-01	4.73E-01	4.73E-01	90300
Mulberry	CePr-144	6	-9.65E-02	3.16E-01	3.16E-01	90321
Mulberry	CePr-144	6	1.75E-01	3.26E-01	3.26E-01	90322
Mulberry	CePr-144	6.5	7.19E-02	3.72E-01	3.72E-01	90327
Mulberry	CePr-144	9	9.75E-02	2.63E-01	2.63E-01	90257
Mulberry	CePr-144	9	8.48E-02	2.30E-01	2.30E-01	90329
Mulberry	CePr-144	9	-8.16E-01	4.11E+00	4.11E+00	90330
Mulberry	CePr-144	9	1.77E+00	7.23E+00	7.23E+00	90331
Mulberry	CePr-144	9	-9.78E-01	1.09E+00	1.10E+00	90332
Mulberry	CePr-144	9	1.45E-02	3.02E-01	3.02E-01	92105
Mulberry	CePr-144	9	5.36E-01	4.27E-01	4.31E-01	90316
Mulberry	CePr-144	10.5	-1.63E-02	2.24E-01	2.24E-01	90306
Mulberry	CePr-144	10.5	-3.92E-02	2.22E-01	2.22E-01	90307
Mulberry	CePr-144	15	1.20E-01	2.98E-01	2.98E-01	90403
Mulberry	CePr-144	15	7.90E-03	2.83E-01	2.83E-01	90405
Mulberry	CePr-144	18	4.76E-01	7.39E-01	7.41E-01	90310
Mulberry	CePr-144	26.25	-1.87E-01	2.52E-01	2.52E-01	90359
Mulberry	CePr-144	26.25	-6.66E-02	2.83E-01	2.83E-01	90360
Mulberry	CePr-144	27	6.94E-02	6.85E-01	6.85E-01	90334
Mulberry	CePr-144	27	-5.49E-02	2.94E-01	2.94E-01	92118
Mulberry	CePr-144	30	-4.59E-02	1.47E-01	1.47E-01	92097
Mulberry	CePr-144	34.75	1.40E-03	5.64E-01	5.64E-01	90361
Mulberry	CePr-144	41	6.78E-02	2.02E-01	2.02E-01	90268
Mulberry	CePr-144	41	-6.51E-02	1.91E-01	1.92E-01	90275
Mulberry	CePr-144	42	9.11E-03	1.89E-01	1.89E-01	90271
Mulberry	CePr-144	42	-3.74E-02	1.41E-01	1.41E-01	92095
Mulberry	CePr-144	43	-7.76E-02	1.51E-01	1.52E-01	90261
Mulberry	CePr-144	43	1.79E-02	1.12E-01	1.12E-01	90265
Mulberry	CePr-144	43	4.26E-02	1.13E-01	1.13E-01	90273
Mulberry Fruit	CePr-144	9	-1.35E-01	7.26E-02	7.26E-02	91010
Mulberry Fruit	CePr-144	27	1.56E-03	5.41E-02	5.41E-02	91011
Mulberry Fruit	CePr-144	27	4.48E-02	6.54E-02	6.55E-02	91012
Mulberry Fruit	CePr-144	27	1.74E-01	4.36E-01	4.36E-01	92122
Mulberry Fruit	CePr-144	30	-5.41E-01	1.03E+00	1.03E+00	92096
Onion	CePr-144	-2	2.03E-02	5.78E-01	5.78E-01	92111
Onion	CePr-144	15	-5.22E-01	2.57E+00	2.57E+00	90407
Onion	CePr-144	30	2.30E-01	5.01E-01	5.02E-01	92100
Onion	CePr-144	42	-1.75E-01	5.69E-01	5.69E-01	92094
Pumpkin	CePr-144	19	-6.30E-02	3.10E-01	3.10E-01	90251
Pumpkin	CePr-144	27	-6.10E-02	1.18E-01	1.18E-01	90249
Reed Canary	CePr-144	28.2	2.22E-01	6.16E-01	6.16E-01	91002
Rose	CePr-144	15	-5.21E-02	2.58E-01	2.58E-01	90401
Squawberry	CePr-144	29	4.52E-02	4.79E-01	4.79E-01	90412
Tomato	CePr-144	19	9.11E-02	1.15E-01	1.16E-01	90252
Tomato	CePr-144	27	-8.04E-02	4.50E-01	4.50E-01	90250
Willow	CePr-144	-2	-8.35E-02	1.41E-01	1.41E-01	92112
Willow	CePr-144	-2	-6.26E-02	1.51E-01	1.51E-01	92124
Willow	CePr-144	6.5	8.94E-03	2.76E-01	2.76E-01	90326
Willow	CePr-144	9	4.82E-02	2.10E-01	2.10E-01	90313
Willow	CePr-144	27	-2.14E-03	3.07E-01	3.07E-01	90417
Willow	CePr-144	41	-1.55E-01	1.75E-01	1.76E-01	90267
Willow	CePr-144	41	-9.89E-02	1.80E-01	1.80E-01	90276
Willow	CePr-144	42	-1.30E-01	2.09E-01	2.10E-01	90270
Willow	CePr-144	42	9.60E-02	2.53E-01	2.53E-01	92093
Yarrow	CePr-144	-2	-5.79E-02	2.28E-01	2.28E-01	92107
Yarrow	CePr-144	4	-1.21E-02	2.62E-01	2.62E-01	90298
Yarrow	CePr-144	6	-4.11E-01	4.16E-01	4.18E-01	90318
Yarrow	CePr-144	9	-1.63E-01	2.37E-01	2.38E-01	92103

Species	Radionuclide	Rivermile	pCi/g dry weight	Counting Error (2 Sigma)	Propagated Error (2 Sigma)	Sample Number
Yarrow	CePr-144	9	6.16E-02	2.87E-01	2.87E-01	90315
Yarrow	CePr-144	10.5	-1.82E-01	6.21E-01	6.21E-01	90305
Yarrow	CePr-144	15	1.74E-02	6.50E-01	6.50E-01	90402
Yarrow	CePr-144	27	1.13E-01	3.46E-01	3.46E-01	90419
Yarrow	CePr-144	27	6.62E-02	2.02E-01	2.02E-01	92120
Yarrow	CePr-144	.7	-6.77E-02	2.01E-01	2.01E-01	92096
Yarrow	CePr-144	42	2.61E-02	2.72E-01	2.72E-01	92091
Willow	CePr-144	4	3.37E-02	4.16E-01	4.16E-01	90301
Asparagus	Co-60	-2	1.20E-02	1.37E-02	1.38E-02	92113
Asparagus	Co-60	-2	1.10E-02	1.21E-02	1.21E-02	92130
Asparagus	Co-60	30	1.64E-02	1.86E-02	1.87E-02	92102
Asparagus	Co-60	10.5	1.26E-03	2.99E-02	2.99E-02	90303
Asparagus	Co-60	26.25	-7.71E-04	2.37E-02	2.37E-02	90336
Asparagus	Co-60	27	6.97E-03	1.86E-02	1.86E-02	90335
Chicory	Co-60	4	-2.73E-03	2.56E-02	2.56E-02	90297
Chicory	Co-60	6	8.68E-04	2.17E-02	2.17E-02	90320
Chicory	Co-60	9	-1.35E-04	1.26E-02	1.26E-02	90258
Chicory	Co-60	9	-2.12E-02	2.83E-02	2.84E-02	90312
Chicory	Co-60	10.5	-1.64E-02	3.19E-02	3.20E-02	90304
Chicory	Co-60	26.25	-9.44E-03	3.00E-02	3.01E-02	90413
Chicory	Co-60	27	9.34E-03	2.23E-02	2.23E-02	90418
Chicory	Co-60	29	0.00E+00	2.64E-02	2.64E-02	90410
Chicory	Co-60	30	1.17E-02	2.77E-02	2.77E-02	92101
Chokecherry	Co-60	18	1.79E-02	1.88E-02	1.89E-02	90408
Chokecherry	Co-60	29	-5.29E-03	1.05E-02	1.05E-02	90337
Chokecherry	Co-60	43	-3.13E-03	1.18E-02	1.18E-02	90263
Dogbane	Co-60	-2	-5.18E-03	2.02E-02	2.02E-02	92108
Dogbane	Co-60	-2	1.36E-02	1.63E-02	1.64E-02	92126
Dogbane	Co-60	4	-1.39E-03	2.14E-02	2.14E-02	90299
Dogbane	Co-60	6	-1.72E-02	2.27E-02	2.28E-02	90319
Dogbane	Co-60	6.5	-2.51E-03	2.56E-02	2.56E-02	90325
Dogbane	Co-60	9	5.60E-03	1.24E-02	1.24E-02	90259
Dogbane	Co-60	9	1.46E-03	1.80E-02	1.80E-02	90333
Dogbane	Co-60	9	7.24E-03	2.20E-02	2.20E-02	90314
Dogbane	Co-60	15	1.48E-03	1.91E-02	1.91E-02	90425
* Milkweed	Co-60	-2	5.43E-02	2.61E-02	2.67E-02	92132
Milkweed	Co-60	9	-2.02E-02	2.34E-02	2.35E-02	92104
Milkweed	Co-60	27	-2.27E-03	3.73E-02	3.73E-02	92116
Milkweed	Co-60	30	-2.37E-02	3.04E-02	3.05E-02	92099
Milkweed	Co-60	42	-1.97E-02	3.02E-02	3.02E-02	92092
Mulberry	Co-60	-2	1.20E-02	1.73E-02	1.73E-02	92109
Mulberry	Co-60	-2	-2.12E-03	1.77E-02	1.77E-02	92128
Mulberry	Co-60	4	2.24E-03	2.58E-02	2.58E-02	90300
* Mulberry	Co-60	6	3.07E-02	1.99E-02	2.01E-02	90321
Mulberry	Co-60	6	1.00E-02	2.05E-02	2.06E-02	90322
Mulberry	Co-60	6.5	-1.61E-02	2.44E-02	2.44E-02	90327
Mulberry	Co-60	9	8.78E-03	1.47E-02	1.47E-02	90257
* Mulberry	Co-60	9	3.22E-02	2.03E-02	2.05E-02	90329
Mulberry	Co-60	9	3.37E-01	3.57E-01	3.59E-01	90330
Mulberry	Co-60	9	2.06E-01	4.03E-01	4.04E-01	90331
* Mulberry	Co-60	9	1.61E-01	5.26E-02	5.50E-02	90332
Mulberry	Co-60	9	-2.40E-02	3.19E-02	3.20E-02	92105
Mulberry	Co-60	9	1.26E-02	2.88E-02	2.88E-02	90316
Mulberry	Co-60	10.5	6.97E-03	1.70E-02	1.70E-02	90306
Mulberry	Co-60	10.5	1.82E-02	1.89E-02	1.90E-02	90307
Mulberry	Co-60	15	6.38E-03	1.80E-02	1.80E-02	90403
Mulberry	Co-60	15	-2.06E-03	1.85E-02	1.86E-02	90405
Mulberry	Co-60	18	-2.91E-02	4.89E-02	4.89E-02	90310
Mulberry	Co-60	26.25	3.71E-04	2.02E-02	2.02E-02	90359
Mulberry	Co-60	26.25	1.03E-02	1.79E-02	1.79E-02	90360
Mulberry	Co-60	27	-7.16E-03	4.03E-02	4.03E-02	90334
Mulberry	Co-60	27	2.67E-02	3.23E-02	3.24E-02	92118
Mulberry	Co-60	30	-6.15E-03	1.75E-02	1.75E-02	92097
Mulberry	Co-60	34.75	1.09E-02	2.67E-02	2.67E-02	90361

Species	Radionuclide	Rivermile	pCi/g dry weight	Counting Error (2 Sigma)	Propagated Error (2 Sigma)	Sample Number
Mulberry	Co-60	41	-6.75E-03	1.84E-02	1.84E-02	90268
Mulberry	Co-60	41	-5.31E-03	1.32E-02	1.32E-02	90275
Mulberry	Co-60	42	-2.14E-03	1.69E-02	1.69E-02	90271
Mulberry	Co-60	42	-1.40E-02	1.62E-02	1.63E-02	92095
Mulberry	Co-60	43	-2.55E-03	1.34E-02	1.34E-02	90261
* Mulberry	Co-60	43	1.37E-02	1.05E-02	1.06E-02	90265
Mulberry	Co-60	43	1.81E-03	1.60E-02	1.06E-02	90273
* Mulberry Fruit	Co-60	9	2.51E-02	1.09E-02	1.12E-02	91010
Mulberry Fruit	Co-60	27	-5.78E-04	5.64E-03	5.64E-03	91011
Mulberry Fruit	Co-60	27	-3.17E-03	6.16E-03	6.17E-03	91012
Mulberry Fruit	Co-60	27	-2.04E-02	5.83E-02	5.83E-02	92122
* Mulberry Fruit	Co-60	30	1.40E-01	1.21E-01	1.22E-01	92096
Onion	Co-60	-2	1.73E-02	6.92E-02	6.93E-02	92111
Onion	Co-60	15	2.11E-02	1.52E-01	1.52E-01	90407
Onion	Co-60	30	-7.43E-03	6.02E-02	6.02E-02	92100
Onion	Co-60	42	3.35E-02	7.20E-02	7.21E-02	92094
* Pumpkin	Co-60	19	2.56E-02	2.15E-02	2.16E-02	90251
Pumpkin	Co-60	27	1.01E-03	9.27E-03	9.27E-03	90249
Reed Canary	Co-60	26.2	1.57E-02	2.96E-02	2.97E-02	91002
Rose	Co-60	15	-9.04E-03	1.64E-02	1.64E-02	90401
Squawberry	Co-60	29	-9.26E-03	2.64E-02	2.64E-02	90412
* Tomato	Co-60	19	1.09E-02	1.05E-02	1.06E-02	90252
Tomato	Co-60	27	2.25E-02	2.85E-02	2.85E-02	90250
Willow	Co-60	-2	-8.04E-04	1.43E-02	1.43E-02	92112
Willow	Co-60	-2	-1.25E-02	2.07E-02	2.08E-02	92124
Willow	Co-60	6.5	-1.68E-03	1.74E-01	1.74E-01	90326
Willow	Co-60	9	8.42E-03	1.56E-02	1.56E-02	90313
Willow	Co-60	27	-4.31E-03	1.99E-02	1.99E-02	90417
Willow	Co-60	41	-4.54E-03	1.37E-02	1.37E-02	90267
Willow	Co-60	41	9.84E-03	1.38E-02	1.39E-02	90276
Willow	Co-60	42	-9.06E-03	1.30E-02	1.31E-02	90270
Willow	Co-60	42	2.70E-03	2.73E-02	2.73E-02	92093
Yarrow	Co-60	-2	1.45E-02	2.59E-02	2.60E-02	92107
Yarrow	Co-60	4	8.36E-04	2.19E-02	2.19E-02	90298
Yarrow	Co-60	6	-2.10E-02	2.68E-02	2.69E-02	90318
Yarrow	Co-60	9	2.19E-02	2.77E-02	2.78E-02	92103
Yarrow	Co-60	9	1.00E-02	2.38E-02	2.38E-02	90315
Yarrow	Co-60	10.5	-1.37E-02	4.74E-02	4.74E-02	90305
Yarrow	Co-60	15	1.12E-02	2.74E-02	2.74E-02	90402
Yarrow	Co-60	27	1.17E-02	2.02E-02	2.02E-02	90419
Yarrow	Co-60	27	1.33E-02	2.60E-02	2.60E-02	92120
Yarrow	Co-60	30	-1.11E-02	2.41E-02	2.41E-02	92096
Yarrow	Co-60	42	1.29E-02	2.76E-02	2.77E-02	92091
Willow	Co-60	4	2.91E-03	3.24E-02	3.24E-02	90301
Asparagus	Cs-134	-2	-6.32E-03	1.19E-02	1.19E-02	92113
Asparagus	Cs-134	-2	-5.73E-03	6.90E-03	6.92E-03	92130
Asparagus	Cs-134	30	-2.12E-02	1.59E-02	1.61E-02	92102
Asparagus	Cs-134	10.5	3.41E-03	2.54E-02	2.54E-02	90303
Asparagus	Cs-134	26.25	-1.68E-02	1.64E-02	1.64E-02	90336
Asparagus	Cs-134	27	2.69E-03	1.43E-02	1.43E-02	90335
Chicory	Cs-134	4	5.68E-03	2.13E-02	2.13E-02	90297
Chicory	Cs-134	6	-1.97E-02	2.25E-02	2.26E-02	90320
Chicory	Cs-134	9	-7.01E-03	1.27E-02	1.27E-02	90258
Chicory	Cs-134	9	-2.19E-02	2.77E-02	2.78E-02	90312
Chicory	Cs-134	10.5	-1.29E-02	2.46E-02	2.46E-02	90304
Chicory	Cs-134	26.25	-5.98E-03	3.29E-02	3.29E-02	90413
Chicory	Cs-134	27	-3.59E-02	2.29E-02	2.32E-02	90418
Chicory	Cs-134	29	-8.21E-03	2.16E-02	2.16E-02	90410
Chicory	Cs-134	30	-1.50E-02	2.15E-02	2.15E-02	92101
Chokecherry	Cs-134	16	-1.81E-02	2.22E-02	2.23E-02	90408
Chokecherry	Cs-134	29	-1.79E-02	1.11E-02	1.12E-02	90337
Chokecherry	Cs-134	43	-2.62E-02	1.17E-02	1.20E-02	90263
Dogbane	Cs-134	-2	-3.01E-02	1.76E-02	1.79E-02	92108
Dogbane	Cs-134	-2	-9.63E-03	1.47E-02	1.47E-02	92126

Species	Radionuclide	Rivermile	pCi/g dry weight	Counting Error (2 Sigma)	Propagated Error (2 Sigma)	Sample Number
Dogbane	Cs-134	4	-9.93E-03	2.18E-02	2.19E-02	90299
Dogbane	Cs-134	6	-8.93E-03	1.90E-02	1.90E-02	90319
Dogbane	Cs-134	6.5	-2.56E-03	2.13E-02	2.13E-02	90325
Dogbane	Cs-134	9	6.50E-03	1.04E-02	1.04E-02	90259
Dogbane	Cs-134	9	-7.95E-03	1.63E-02	1.63E-02	90333
Dogbane	Cs-134	9	-3.63E-03	1.92E-02	1.92E-02	90314
Dogbane	Cs-134	15	-3.03E-02	1.65E-02	1.66E-02	90426
Milkweed	Cs-134	-2	-1.77E-02	2.33E-02	2.33E-02	92132
Milkweed	Cs-134	9	-6.36E-03	1.92E-02	1.92E-02	92104
Milkweed	Cs-134	27	-4.01E-02	3.46E-02	3.49E-02	92116
Milkweed	Cs-134	30	1.16E-02	2.32E-02	2.32E-02	92099
Milkweed	Cs-134	42	-1.36E-02	2.24E-02	2.24E-02	92092
Mulberry	Cs-134	-2	-3.56E-02	1.47E-02	1.52E-02	92109
Mulberry	Cs-134	-2	-1.98E-03	1.52E-02	1.52E-02	92128
Mulberry	Cs-134	4	-9.61E-03	2.81E-02	2.81E-02	90300
Mulberry	Cs-134	6	-3.78E-02	2.17E-02	2.20E-02	90321
Mulberry	Cs-134	6	-1.15E-02	2.06E-02	2.06E-02	90322
Mulberry	Cs-134	6.5	-2.02E-02	2.33E-02	2.34E-02	90327
Mulberry	Cs-134	9	-1.51E-02	1.47E-02	1.48E-02	90257
Mulberry	Cs-134	9	-1.16E-02	1.51E-02	1.52E-02	90329
Mulberry	Cs-134	9	-1.13E-01	1.94E-01	2.94E-01	90330
Mulberry	Cs-134	9	1.72E-01	2.64E-01	2.64E-01	90331
Mulberry	Cs-134	9	-4.81E-02	4.12E-02	4.15E-02	90332
Mulberry	Cs-134	9	-3.32E-02	2.92E-02	2.94E-02	92105
Mulberry	Cs-134	9	2.66E-02	3.16E-02	3.19E-02	90316
Mulberry	Cs-134	10.5	-2.27E-03	1.83E-02	1.83E-02	90306
Mulberry	Cs-134	10.5	-1.80E-02	1.76E-02	1.77E-02	90307
Mulberry	Cs-134	15	-2.21E-02	1.76E-02	1.77E-02	90403
Mulberry	Cs-134	15	-2.20E-02	1.99E-02	2.00E-02	90405
Mulberry	Cs-134	18	-3.62E-02	4.83E-02	4.84E-02	90310
Mulberry	Cs-134	26.25	-1.67E-03	1.53E-02	1.53E-02	90359
Mulberry	Cs-134	26.25	-3.97E-03	1.74E-02	1.74E-02	90360
Mulberry	Cs-134	27	5.75E-03	4.89E-02	4.89E-02	90334
Mulberry	Cs-134	27	-1.36E-02	2.76E-02	2.76E-02	92118
Mulberry	Cs-134	30	-1.11E-03	1.42E-02	1.42E-02	92097
Mulberry	Cs-134	34.75	-4.34E-02	2.90E-02	2.93E-02	90361
Mulberry	Cs-134	41	-7.64E-03	1.42E-02	1.43E-02	90268
Mulberry	Cs-134	41	-6.19E-03	1.20E-02	1.20E-02	90275
Mulberry	Cs-134	42	-8.67E-03	1.49E-02	1.50E-02	90271
Mulberry	Cs-134	42	3.16E-03	1.19E-02	1.20E-02	92095
Mulberry	Cs-134	43	-1.76E-02	1.19E-02	1.20E-02	90261
Mulberry	Cs-134	43	1.88E-03	9.96E-03	9.96E-03	90265
Mulberry	Cs-134	43	2.85E-04	8.59E-03	8.59E-03	90273
Mulberry Fruit	Cs-134	9	-5.90E-03	7.47E-03	7.49E-03	91010
Mulberry Fruit	Cs-134	27	-5.50E-03	4.67E-03	4.70E-03	91011
Mulberry Fruit	Cs-134	27	-7.28E-03	6.20E-03	6.24E-03	91012
Mulberry Fruit	Cs-134	27	-4.63E-02	5.19E-02	5.21E-02	92122
Mulberry Fruit	Cs-134	30	-1.13E-01	1.13E-01	1.13E-01	92098
Onion	Cs-134	-2	5.95E-02	5.42E-02	5.45E-02	92111
Onion	Cs-134	15	-2.52E-01	1.61E-01	1.63E-01	90407
Onion	Cs-134	30	2.76E-02	4.84E-02	4.85E-02	92100
Onion	Cs-134	42	-2.40E-02	6.75E-02	6.76E-02	92094
Pumpkin	Cs-134	19	1.14E-03	2.16E-02	2.16E-02	90251
Pumpkin	Cs-134	27	-4.75E-04	7.80E-03	7.80E-03	90249
Reed Canary	Cs-134	28.2	-7.04E-02	3.37E-02	3.44E-02	91002
Rose	Cs-134	15	-2.96E-02	1.89E-02	1.91E-02	90401
Squawberry	Cs-134	29	-3.61E-02	2.43E-02	2.45E-02	90412
Tomato	Cs-134	19	-5.44E-04	1.08E-02	1.08E-02	90252
Tomato	Cs-134	27	-1.24E-02	3.29E-02	3.29E-02	90250
Willow	Cs-134	-2	6.84E-03	1.37E-02	1.37E-02	92112
Willow	Cs-134	-2	-1.01E-02	1.65E-02	1.66E-02	92124
Willow	Cs-134	6.5	-2.14E-02	1.70E-02	1.71E-02	90326
Willow	Cs-134	9	1.76E-03	1.66E-02	1.66E-02	90313
Willow	Cs-134	27	-4.28E-03	2.06E-02	2.06E-02	90417

Species	Radionuclide	Rivermile	pCi/g dry weight	Counting Error (2 Sigma)	Propagated Error (2 Sigma)	Sample Number
Willow	Cs-134	41	5.67E-04	1.26E-02	1.27E-02	90267
Willow	Cs-134	41	1.11E-03	1.14E-02	1.14E-02	90276
Willow	Cs-134	42	-6.32E-03	1.36E-02	1.37E-02	90270
Willow	Cs-134	42	-2.48E-02	2.52E-02	2.53E-02	92093
* Yarrow	Cs-134	-2	2.57E-02	2.45E-02	2.46E-02	92107
* Yarrow	Cs-134	4	2.00E-02	1.93E-02	1.94E-02	90298
* Yarrow	Cs-134	6	4.49E-02	2.68E-02	2.72E-02	90318
Yarrow	Cs-134	9	-1.17E-03	2.17E-02	2.17E-02	92103
Yarrow	Cs-134	9	6.49E-03	1.98E-02	1.98E-02	90315
Yarrow	Cs-134	10.5	-2.97E-02	4.02E-02	4.03E-02	90305
Yarrow	Cs-134	15	-1.85E-02	3.06E-02	3.07E-02	90402
Yarrow	Cs-134	27	-7.51E-03	2.15E-02	2.15E-02	90419
Yarrow	Cs-134	27	-9.53E-03	2.02E-02	2.02E-02	92120
Yarrow	Cs-134	30	-6.46E-03	1.94E-02	1.94E-02	92096
Yarrow	Cs-134	42	-1.46E-02	2.71E-02	2.72E-02	92091
Willow	Cs-134	4	7.86E-03	3.22E-02	3.22E-02	90301
Asparagus	Cs-137	-2	3.76E-03	1.28E-02	1.28E-02	92113
Asparagus	Cs-137	-2	3.61E-03	6.97E-03	6.98E-03	92130
Asparagus	Cs-137	30	3.48E-03	1.41E-02	1.41E-02	92102
Asparagus	Cs-137	10.5	5.37E-03	2.69E-02	2.69E-02	90303
* Asparagus	Cs-137	26.25	1.88E-02	1.55E-02	1.56E-02	90336
Asparagus	Cs-137	27	5.03E-03	1.36E-02	1.38E-02	90335
* Chicory	Cs-137	4	3.82E-02	2.10E-02	2.14E-02	90297
* Chicory	Cs-137	6	2.27E-02	1.61E-02	1.63E-02	90320
Chicory	Cs-137	9	1.13E-02	1.15E-02	1.15E-02	90258
Chicory	Cs-137	9	1.26E-02	2.34E-02	2.34E-02	90312
* Chicory	Cs-137	10.5	2.60E-02	2.26E-02	2.27E-02	90304
* Chicory	Cs-137	26.25	4.29E-02	2.38E-02	2.42E-02	90413
* Chicory	Cs-137	27	3.07E-02	1.87E-02	1.90E-02	90418
* Chicory	Cs-137	29	4.46E-02	1.77E-02	1.83E-02	90410
Chicory	Cs-137	30	5.30E-03	2.30E-02	2.30E-02	92101
Chokecherry	Cs-137	18	7.19E-03	1.90E-02	1.90E-02	90408
Chokecherry	Cs-137	29	5.98E-03	7.84E-03	7.87E-03	90337
Chokecherry	Cs-137	43	2.43E-03	1.02E-02	1.02E-02	90263
Dogbane	Cs-137	-2	4.07E-04	1.59E-02	1.59E-02	92108
Dogbane	Cs-137	-2	1.48E-02	1.69E-02	1.69E-02	92126
Dogbane	Cs-137	4	1.26E-02	1.90E-02	1.91E-02	90299
* Dogbane	Cs-137	6	1.72E-02	1.46E-02	1.47E-02	90319
Dogbane	Cs-137	6.5	-1.98E-03	1.69E-02	1.69E-02	90325
Dogbane	Cs-137	9	1.12E-03	9.66E-03	9.66E-03	90259
Dogbane	Cs-137	9	8.08E-03	1.29E-02	1.29E-02	90333
Dogbane	Cs-137	9	1.43E-02	1.66E-02	1.67E-02	90314
* Dogbane	Cs-137	15	2.22E-02	1.68E-02	1.70E-02	90425
Milkweed	Cs-137	-2	-7.23E-03	2.15E-02	2.15E-02	92132
Milkweed	Cs-137	9	1.01E-02	1.89E-02	1.89E-02	92104
Milkweed	Cs-137	27	6.75E-03	3.20E-02	3.20E-02	92116
Milkweed	Cs-137	30	1.98E-02	2.36E-02	2.36E-02	92099
* Milkweed	Cs-137	42	4.32E-02	2.30E-02	2.34E-02	92092
Mulberry	Cs-137	-2	9.36E-04	1.36E-02	1.36E-02	92109
Mulberry	Cs-137	-2	4.01E-03	1.70E-02	1.70E-02	92128
Mulberry	Cs-137	4	2.28E-02	2.30E-02	2.31E-02	90300
Mulberry	Cs-137	6	-1.11E-02	1.58E-02	1.58E-02	90321
Mulberry	Cs-137	6	-7.83E-03	1.57E-02	1.58E-02	90322
* Mulberry	Cs-137	6.5	6.91E-02	1.66E-02	1.80E-02	90327
Mulberry	Cs-137	9	-6.58E-04	1.36E-02	1.36E-02	90257
Mulberry	Cs-137	9	1.51E-03	1.25E-02	1.25E-02	90329
Mulberry	Cs-137	9	5.43E-02	2.06E-01	2.06E-01	90330
* Mulberry	Cs 137	9	2.44E-01	2.16E-01	2.17E-01	90331
* Mulberry	Cs-137	9	8.21E-02	3.76E-02	3.84E-02	90332
Mulberry	Cs-137	9	-2.42E-02	2.75E-02	2.76E-02	92105
Mulberry	Cs-137	9	6.41E-03	2.65E-02	2.65E-02	90316
Mulberry	Cs-137	10.5	9.81E-03	1.56E-02	1.56E-02	90306
* Mulberry	Cs-137	10.5	4.69E-02	1.61E-02	1.68E-02	90307
Mulberry	Cs-137	15	-7.13E-03	1.39E-02	1.40E-02	90403

Species	Radionuclide	Rivermile	pCi/g dry weight	Counting Error (2 Sigma)	Propagated Error (2 Sigma)	Sample Number
Mulberry	Cs-137	18	1.45E-02	1.51E-02	1.52E-02	90405
Mulberry	Cs-137	18	-5.87E-03	3.93E-02	3.93E-02	90310
Mulberry	Cs-137	26.25	5.49E-03	1.33E-02	1.33E-02	90359
Mulberry	Cs-137	26.25	-1.10E-02	1.44E-02	1.45E-02	90360
Mulberry	Cs-137	27	-6.11E-03	3.91E-02	3.91E-02	90334
Mulberry	Cs-137	27	1.80E-02	2.79E-02	2.80E-02	92118
Mulberry	Cs-137	30	-2.26E-03	1.41E-02	1.42E-02	92097
* Mulberry	Cs-137	34.75	2.73E-02	2.36E-02	2.38E-02	90361
Mulberry	Cs-137	41	6.70E-03	1.30E-02	1.30E-02	90268
* Mulberry	Cs-137	41	1.64E-02	1.05E-02	1.06E-02	90275
Mulberry	Cs-137	42	-8.83E-03	1.38E-02	1.39E-02	90271
Mulberry	Cs-137	42	1.30E-02	1.29E-02	1.30E-02	92095
Mulberry	Cs-137	43	4.13E-03	1.11E-02	1.11E-02	90261
Mulberry	Cs-137	43	4.07E-03	9.05E-03	9.06E-03	90265
Mulberry	Cs-137	43	3.02E-03	7.32E-03	7.32E-03	90273
Mulberry Fruit	Cs-137	9	1.90E-04	7.57E-03	7.57E-03	91010
Mulberry Fruit	Cs-137	27	2.43E-03	4.20E-03	4.20E-03	91011
Mulberry Fruit	Cs-137	27	3.25E-04	6.13E-03	6.13E-03	91012
Mulberry Fruit	Cs-137	27	3.94E-02	4.38E-02	4.40E-02	92122
Mulberry Fruit	Cs-137	30	-1.85E-02	1.01E-01	1.01E-01	92098
Onion	Cs-137	-2	4.24E-03	6.29E-02	6.29E-02	92111
Onion	Cs-137	18	1.06E-01	1.21E-01	1.21E-01	90407
* Onion	Cs-137	30	1.51E-01	8.08E-02	8.22E-02	92100
Onion	Cs-137	42	-3.81E-03	6.52E-02	6.52E-02	92094
* Pumpkin	Cs-137	19	2.50E-02	2.12E-02	2.14E-02	90251
* Pumpkin	Cs-137	27	1.21E-02	5.83E-03	5.96E-03	90249
* Reed Canary	Cs-137	28.2	8.03E-02	2.49E-02	2.61E-02	91002
Rose	Cs-137	18	2.05E-03	1.38E-02	1.38E-02	90401
Squawberry	Cs-137	29	-6.64E-03	1.83E-02	1.83E-02	90412
Tomato	Cs-137	19	-2.43E-03	9.85E-03	9.85E-02	90252
Tomato	Cs-137	27	1.70E-02	2.91E-02	2.91E-02	90250
* Willow	Cs-137	-2	1.94E-02	1.29E-02	1.31E-02	92112
Willow	Cs-137	-2	3.03E-03	1.65E-02	1.65E-02	92124
* Willow	Cs-137	6.5	4.88E-02	1.14E-02	1.24E-02	90326
* Willow	Cs-137	9	2.05E-02	1.54E-02	1.56E-02	90313
Willow	Cs-137	27	-6.58E-04	1.62E-02	1.62E-02	90417
* Willow	Cs-137	41	2.08E-02	1.22E-02	1.24E-02	90267
Willow	Cs-137	41	7.36E-03	1.07E-02	1.07E-02	90276
Willow	Cs-137	42	-3.67E-04	1.19E-02	1.19E-02	90270
Willow	Cs-137	42	1.77E-02	2.42E-02	2.43E-02	92093
Yarrow	Cs-137	-2	9.23E-03	2.46E-02	2.46E-02	92107
* Yarrow	Cs-137	4	6.37E-02	1.82E-02	1.93E-02	90298
Yarrow	Cs-137	6	1.42E-02	1.91E-02	1.91E-02	90318
* Yarrow	Cs-137	9	3.26E-02	1.87E-02	1.90E-02	92103
* Yarrow	Cs-137	9	6.02E-02	1.99E-02	2.08E-02	90315
Yarrow	Cs-137	10.5	-7.34E-03	4.10E-02	4.10E-02	90305
Yarrow	Cs-137	18	-4.16E-03	2.47E-02	2.47E-02	90402
* Yarrow	Cs-137	27	3.52E-02	1.72E-02	1.76E-02	90419
Yarrow	Cs-137	27	3.57E-03	2.11E-02	2.11E-02	92120
Yarrow	Cs-137	30	-2.99E-04	2.02E-02	2.02E-02	92096
Yarrow	Cs-137	42	-2.40E-02	2.65E-02	2.66E-02	92091
Willow	Cs-137	4	9.83E-03	2.66E-02	2.66E-02	90301
Squawberry	Eu-153	29	-3.26E-02	6.98E-02	6.98E-02	90412
Asparagus	Eu-154	-2	0.00E+00	1.00E-05	1.00E-05	92113
Asparagus	Eu-154	-2	1.40E-02	3.70E-02	3.71E-02	92130
Asparagus	Eu-154	10.5	-1.10E-02	1.08E-01	1.08E-01	90303
Asparagus	Eu-154	27	-3.43E-03	5.61E-02	5.61E-02	90335
Asparagus	Eu-154	30	4.69E-02	6.09E-02	6.10E-02	92102
Chicory	Eu-154	4	4.06E-02	8.63E-02	8.64E-02	90297
Chicory	Eu-154	6	-3.42E-02	6.33E-02	6.34E-02	90320
Chicory	Eu-154	9	1.21E-02	4.08E-02	4.08E-02	90258
Chicory	Eu-154	9	6.84E-03	8.85E-02	8.85E-02	90312
Chicory	Eu-154	10.5	-5.49E-02	1.02E-01	1.03E-01	90304
Chicory	Eu-154	26.25	-1.36E-02	9.72E-02	9.72E-02	90413

Species	Radionuclide	Rivermile	pCi/g dry weight	Counting Error (2 Sigma)	Propagated Error (2 Sigma)	Sample Number
Chicory	Eu-154	27	5.69E-02	6.68E-02	6.70E-02	90416
Chicory	Eu-154	29	-5.04E-03	7.77E-02	7.77E-02	90410
Chicory	Eu-154	30	1.25E-02	6.50E-02	6.50E-02	92101
Chokecherry	Eu-154	16	1.60E-02	5.86E-02	5.86E-02	90408
Chokecherry	Eu-154	29	-1.12E-02	2.73E-02	2.74E-02	90337
Chokecherry	Eu-154	43	1.59E-02	3.50E-02	3.51E-02	90265
Dogbane	Eu-154	-2	-2.49E-02	6.44E-02	6.46E-02	92108
Dogbane	Eu-154	4	-4.13E-02	7.87E-02	7.88E-02	90299
Dogbane	Eu-154	6	2.14E-03	7.30E-02	7.30E-02	90319
Dogbane	Eu-154	6.5	-3.09E-02	7.76E-02	7.77E-02	90325
Dogbane	Eu-154	9	-3.84E-02	4.00E-02	4.02E-02	90289
Dogbane	Eu-154	9	2.46E-02	4.67E-02	4.68E-02	90333
Dogbane	Eu-154	9	-4.50E-02	7.50E-02	7.51E-02	90314
Dogbane	Eu-154	16	3.46E-02	6.25E-02	6.26E-02	90426
Milkweed	Eu-154	-2	-4.72E-02	6.65E-02	6.67E-02	92102
* Milkweed	Eu-154	9	1.32E-01	6.73E-02	6.85E-02	92104
Milkweed	Eu-154	27	4.54E-02	1.21E-01	1.21E-01	92116
Milkweed	Eu-154	30	-2.12E-02	9.48E-02	9.49E-02	92099
Milkweed	Eu-154	42	6.00E-02	8.19E-02	8.21E-02	92092
Mulberry	Eu-154	-2	-3.21E-02	5.72E-02	5.72E-02	92109
Mulberry	Eu-154	-2	-3.17E-02	5.64E-02	5.65E-02	92128
Mulberry	Eu-154	4	3.41E-03	9.36E-02	9.36E-02	90300
Mulberry	Eu-154	6	-5.26E-02	7.17E-02	7.19E-02	90321
* Mulberry	Eu-154	6	1.01E-01	6.38E-02	6.38E-02	90322
* Mulberry	Eu-154	6.5	7.60E-02	6.68E-02	6.72E-02	90327
Mulberry	Eu-154	9	-2.42E-02	4.72E-02	4.73E-02	90267
Mulberry	Eu-154	9	2.65E-02	5.42E-02	5.42E-02	90329
Mulberry	Eu-154	9	2.18E-01	7.54E-01	7.54E-01	90330
Mulberry	Eu-154	9	-5.90E-01	9.14E-01	9.16E-01	90331
Mulberry	Eu-154	9	-1.26E-01	1.12E-01	1.13E-01	90332
Mulberry	Eu-154	9	-2.18E-02	1.02E-01	1.02E-01	92105
Mulberry	Eu-154	9	9.26E-03	8.74E-02	8.74E-02	90316
Mulberry	Eu-154	10.5	-5.71E-02	6.71E-02	6.74E-02	90306
* Mulberry	Eu-154	10.5	6.54E-02	5.89E-02	5.93E-02	90307
Mulberry	Eu-154	16	1.73E-02	5.42E-02	5.42E-02	90403
Mulberry	Eu-154	16	-7.59E-03	5.95E-02	5.95E-02	90405
Mulberry	Eu-154	18	1.04E-01	1.24E-01	1.25E-01	90310
Mulberry	Eu-154	26.25	-7.28E-02	6.76E-02	6.76E-02	90359
Mulberry	Eu-154	26.25	-6.50E-02	6.10E-02	6.13E-02	90360
Mulberry	Eu-154	27	1.86E-02	1.33E-01	1.33E-01	90334
Mulberry	Eu-154	27	-3.68E-02	1.01E-01	1.01E-01	92118
Mulberry	Eu-154	30	-2.62E-02	6.50E-02	6.51E-02	92097
Mulberry	Eu-154	34.75	-7.12E-02	8.92E-02	8.94E-02	90361
Mulberry	Eu-154	41	-1.35E-02	5.56E-02	5.56E-02	90268
Mulberry	Eu-154	41	1.24E-02	4.35E-02	4.35E-02	90275
Mulberry	Eu-154	42	1.98E-02	5.20E-02	5.20E-02	90271
Mulberry	Eu-154	42	3.22E-02	4.47E-02	4.48E-02	92095
Mulberry	Eu-154	43	-4.25E-02	5.12E-02	5.14E-02	90261
Mulberry	Eu-154	43	1.17E-02	3.29E-02	3.29E-02	90265
Mulberry	Eu-154	43	-1.80E-02	3.68E-02	3.68E-02	90273
Mulberry Fruit	Eu-154	9	2.71E-03	2.57E-02	2.57E-02	91010
Mulberry Fruit	Eu-154	27	-9.96E-03	1.61E-01	1.61E-01	92122
Mulberry Fruit	Eu-154	30	1.38E-01	3.59E-01	3.59E-01	92098
Mulberry Fruit	Eu-154	27	1.14E-02	1.62E-02	1.63E-02	91011
Mulberry Fruit	Eu-154	27	-6.39E-03	2.02E-02	2.02E-02	91012
Onion	Eu-154	-2	-9.31E-02	1.92E-01	1.92E-01	92111
Onion	Eu-154	16	6.76E-02	3.31E-01	3.31E-01	90407
Onion	Eu-154	30	3.59E-03	1.56E-01	1.56E-01	92100
Onion	Eu-154	42	-1.85E-01	2.19E-01	2.20E-01	92094
Pumpkin	Eu-154	19	1.90E-02	8.30E-02	8.30E-02	90251
Pumpkin	Eu-154	27	4.01E-03	2.17E-02	2.17E-02	90249
Reed Canary	Eu-154	28.2	-4.68E-02	6.91E-02	6.92E-02	91002
Rose	Eu-154	16	4.26E-02	4.57E-02	4.59E-02	90401
Tomato	Eu-154	19	2.31E-02	3.14E-02	3.15E-02	90252

Species	Radionuclide	Rivermile	pCi/g dry weight	Counting Error (2 Sigma)	Propagated Error (2 Sigma)	Sample Number
Tomato	Eu-154	27	5.93E-02	7.50E-02	7.53E-02	90250
Willow	Eu-154	-2	6.41E-02	4.55E-02	4.59E-02	92112
Willow	Eu-154	-2	1.95E-02	5.82E-02	5.83E-02	92124
Willow	Eu-154	4	-1.15E-02	1.01E-01	1.01E-01	90301
Willow	Eu-154	6.5	-6.88E-04	4.96E-02	4.96E-02	90326
Willow	Eu-154	9	3.68E-02	4.61E-02	4.63E-02	90313
Willow	Eu-154	27	-3.81E-02	5.62E-02	5.64E-02	90417
Willow	Eu-154	41	2.52E-02	3.74E-02	3.75E-02	90267
Willow	Eu-154	41	5.37E-03	4.27E-02	4.27E-02	90276
Willow	Eu-154	42	2.58E-02	3.95E-02	3.95E-02	90270
Willow	Eu-154	42	-6.91E-02	8.48E-02	8.51E-02	92093
Yarrow	Eu-154	-2	-9.30E-03	8.94E-02	8.94E-02	92107
Yarrow	Eu-154	4	1.64E-02	7.34E-02	7.34E-02	90298
Yarrow	Eu-154	6	-4.23E-02	8.25E-02	8.26E-02	90318
Yarrow	Eu-154	9	-2.35E-02	8.82E-02	8.83E-02	92103
Yarrow	Eu-154	9	6.41E-02	8.04E-02	8.07E-02	90315
Yarrow	Eu-154	10.5	-3.43E-02	1.18E-01	1.18E-01	90305
Yarrow	Eu-154	15	-1.27E-01	8.86E-02	8.95E-02	90402
Yarrow	Eu-154	27	-1.71E-02	7.25E-02	7.25E-02	90419
Yarrow	Eu-154	27	-5.01E-02	8.16E-02	8.18E-02	92120
Yarrow	Eu-154	30	-4.88E-03	8.25E-02	8.25E-02	92096
Yarrow	Eu-154	42	6.07E-02	1.16E-01	1.16E-01	92091
Asparagus	Eu-155	-2	1.22E-02	2.74E-02	2.74E-02	92113
Asparagus	Eu-155	-2	1.25E-02	2.06E-02	2.06E-02	92130
Asparagus	Eu-155	10.5	3.41E-02	7.12E-02	7.13E-02	90303
Asparagus	Eu-155	26.25	3.82E-04	4.46E-02	4.46E-02	90336
Asparagus	Eu-155	27	-8.89E-03	3.92E-02	3.92E-02	90335
Asparagus	Eu-155	30	-1.17E-02	4.00E-02	4.00E-02	92102
Chicory	Eu-155	4	-5.87E-03	5.87E-02	5.87E-02	90297
Chicory	Eu-155	6	-1.98E-02	4.00E-02	4.01E-02	90320
Chicory	Eu-155	9	2.47E-02	2.48E-02	2.49E-02	90258
Chicory	Eu-155	9	0.00E+00	7.93E-02	7.93E-02	90312
Chicory	Eu-155	10.5	-3.49E-02	6.54E-02	6.55E-02	90304
Chicory	Eu-155	26.25	7.90E-02	9.33E-02	9.36E-02	90413
Chicory	Eu-155	27	-1.70E-02	4.95E-02	4.95E-02	90418
Chicory	Eu-155	29	2.68E-02	5.27E-02	5.28E-02	90410
Chicory	Eu-155	30	3.03E-02	5.91E-02	5.92E-02	92101
Chokecherry	Eu-155	18	3.32E-02	5.14E-02	5.15E-02	90408
Chokecherry	Eu-155	29	-3.10E-03	2.42E-02	2.42E-02	90337
Chokecherry	Eu-155	43	4.30E-04	3.29E-02	3.29E-02	90263
Dogbane	Eu-155	-2	-1.70E-02	4.19E-02	4.20E-02	92108
Dogbane	Eu-155	-2	1.67E-03	3.64E-02	3.64E-02	92126
Dogbane	Eu-155	4	2.29E-02	5.70E-02	5.71E-02	90299
Dogbane	Eu-155	6	-1.83E-02	4.75E-02	4.76E-02	90319
Dogbane	Eu-155	6.5	1.53E-02	5.26E-02	5.26E-02	90325
Dogbane	Eu-155	9	1.98E-02	2.95E-02	2.96E-02	90259
Dogbane	Eu-155	9	-9.43E-03	3.92E-02	3.92E-02	90333
Dogbane	Eu-155	9	5.16E-03	5.33E-02	5.33E-02	90314
Dogbane	Eu-155	15	9.82E-03	4.16E-02	4.17E-02	90425
Milkweed	Eu-155	-2	-1.37E-02	4.72E-02	4.72E-02	92132
Milkweed	Eu-155	9	-7.48E-03	4.67E-02	4.67E-02	92104
Milkweed	Eu-155	27	-4.90E-02	8.18E-02	8.20E-02	92116
Milkweed	Eu-155	30	2.98E-02	5.56E-02	5.57E-02	92099
Milkweed	Eu-155	42	-3.69E-03	5.68E-02	5.68E-02	92092
Mulberry	Eu-155	-2	3.41E-03	3.70E-02	3.70E-02	92109
Mulberry	Eu-155	-2	1.22E-02	3.60E-02	3.61E-02	92128
Mulberry	Eu-155	4	-2.31E-02	8.78E-02	8.79E-02	90300
Mulberry	Eu-155	6	-2.18E-02	4.69E-02	4.70E-02	90321
Mulberry	Eu-155	6	-2.57E-02	4.58E-02	.59E-02	90322
Mulberry	Eu-155	6.5	-3.98E-03	5.07E-02	5.07E-02	90327
Mulberry	Eu-155	9	-3.12E-01	4.82E-02	4.83E-02	90257
Mulberry	Eu-155	9	1.58E-02	3.78E-02	3.78E-02	90329
Mulberry	Eu-155	9	-2.30E-01	6.00E-01	6.00E-01	90330
Mulberry	Eu-155	9	-6.12E-01	1.12E+00	1.12E+00	90331

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Species	Radionuclide	Rivermile	pCi/g dry weight	Counting Error (2 Sigma)	Propagated Error (2 Sigma)	Sample Number
Mulberry	Eu-155	9	4.47E-02	1.79E-01	1.79E-01	90332
Mulberry	Eu-155	9	-4.22E-03	6.53E-02	6.53E-02	92105
Mulberry	Eu-155	9	9.91E-04	5.86E-02	5.86E-02	90316
Mulberry	Eu-155	10.5	1.67E-03	3.82E-02	3.82E-02	90306
Mulberry	Eu-155	10.5	-2.77E-02	3.69E-02	3.70E-02	90307
Mulberry	Eu-155	15	1.55E-02	4.05E-02	4.05E-02	90403
Mulberry	Eu-155	15	-1.39E-02	3.58E-02	3.58E-02	90405
Mulberry	Eu-155	18	-2.10E-02	1.22E-01	1.22E-01	90310
Mulberry	Eu-155	26.25	1.89E-02	4.30E-02	4.30E-02	90359
Mulberry	Eu-155	26.25	6.37E-03	4.64E-02	4.64E-02	90360
Mulberry	Eu-155	27	1.29E-02	8.74E-02	8.74E-02	90334
Mulberry	Eu-155	27	-2.30E-02	8.00E-02	8.00E-02	92118
Mulberry	Eu-155	30	-2.98E-02	4.06E-02	4.07E-02	92097
Mulberry	Eu-155	34.75	2.69E-03	8.67E-02	8.67E-02	90361
Mulberry	Eu-155	41	-1.14E-02	4.09E-02	4.09E-02	90268
Mulberry	Eu-155	41	1.88E-02	3.66E-02	3.66E-02	90275
* Mulberry	Eu-155	42	3.37E-02	3.15E-02	3.17E-02	90271
Mulberry	Eu-155	42	1.32E-02	3.07E-02	3.07E-02	92095
Mulberry	Eu-155	43	-1.38E-03	2.97E-02	2.97E-02	90261
Mulberry	Eu-155	43	7.13E-03	1.96E-02	1.96E-02	90265
Mulberry	Eu-155	43	-1.51E-04	2.24E-02	2.24E-02	90273
Mulberry Fruit	Eu-155	9	-8.91E-03	1.69E-02	1.69E-02	91010
Mulberry Fruit	Eu-155	27	-7.21E-02	1.03E-01	1.03E-01	92122
Mulberry Fruit	Eu-155	30	-1.89E-01	2.23E-01	2.23E-01	92098
Mulberry Fruit	Eu-155	27	4.13E-03	1.41E-02	1.41E-02	91011
Mulberry Fruit	Eu-155	27	-6.10E-03	1.81E-02	1.81E-02	91012
Onion	Eu-155	-2	-4.64E-02	1.63E-01	1.63E-01	92111
Onion	Eu-155	15	-1.88E-01	3.31E-01	3.32E-01	90407
* Onion	Eu-155	30	1.15E-01	1.01E-01	1.02E-01	92100
Onion	Eu-155	42	2.88E-02	1.52E-01	1.52E-01	92094
Pumpkin	Eu-155	19	-2.73E-02	6.64E-02	6.64E-02	90251
Pumpkin	Eu-155	27	5.96E-03	2.58E-02	2.58E-02	90249
Reed Canary	Eu-155	28.2	5.23E-02	8.60E-02	8.62E-02	91002
Rose	Eu-155	15	4.91E-03	3.30E-02	3.30E-02	90401
Squawberry	Eu-155	29	-1.82E-02	6.68E-02	6.68E-02	90412
Tomato	Eu-155	19	5.55E-03	2.19E-02	2.19E-02	90252
Tomato	Eu-155	27	-5.29E-02	9.11E-02	9.12E-02	90250
Willow	Eu-155	-2	-1.46E-02	3.31E-02	3.32E-02	92112
Willow	Eu-155	-2	-3.07E-02	4.37E-02	4.38E-02	92124
Willow	Eu-155	6.5	1.38E-03	3.81E-02	3.81E-02	90326
Willow	Eu-155	9	1.57E-03	3.47E-02	3.47E-02	90313
Willow	Eu-155	27	5.90E-03	3.81E-02	3.81E-02	90417
Willow	Eu-155	41	7.59E-03	2.63E-02	2.63E-02	90267
Willow	Eu-155	41	-1.95E-03	3.09E-02	3.09E-02	90276
Willow	Eu-155	42	-2.53E-02	4.00E-02	4.01E-02	90270
Willow	Eu-155	42	-1.89E-03	6.33E-02	6.33E-02	92093
Yarrow	Eu-155	-2	8.91E-04	5.84E-02	5.84E-02	92107
Yarrow	Eu-155	4	-4.75E-02	5.20E-02	5.23E-02	90298
Yarrow	Eu-155	6	-1.24E-02	5.61E-01	5.61E-02	90318
Yarrow	Eu-155	9	1.14E-03	6.42E-02	6.42E-02	92103
* Yarrow	Eu-155	9	7.31E-02	5.77E-02	5.81E-02	90315
Yarrow	Eu-155	10.5	7.25E-02	1.21E-01	1.21E-01	90305
Yarrow	Eu-155	15	1.75E-03	8.98E-02	8.98E-02	90402
Yarrow	Eu-155	27	-1.56E-02	5.01E-02	5.02E-02	90419
Yarrow	Eu-155	27	2.88E-02	5.38E-02	5.39E-02	92120
Yarrow	Eu-155	30	-6.42E-03	4.84E-02	4.84E-02	92096
Yarrow	Eu-155	42	-1.43E-02	7.43E-02	7.43E-02	92091
Willow	Eu-155	4	4.53E-02	7.65E-02	7.66E-02	90301
Asparagus	H-3	-2	1.86E+02	1.02E+02	2.09E+02	92131
Asparagus	H-3	-2	1.54E+02	1.03E+02	2.10E+02	92155
* Asparagus	H-3	30	1.45E+04	3.12E+02	1.20E+03	92144
* Chicory	H-3	30	3.28E+03	1.72E+02	4.04E+02	92143
Chokecherry	H-3	18	1.43E+02	1.09E+02	2.03E+02	90409
* Chokecherry	H-3	29	2.77E+03	1.79E+02	3.66E+02	90411

	Species	Radionuclide	Rivermile	pCi/g dry weight	Counting Error (2 Sigma)	Propagated Error (2 Sigma)	Sample Number
	Chokecherry	H-3	43	8.27E+01	1.11E+02	2.16E+02	90264
	Dogbane	H-3	-2	3.19E+02	2.22E+02	4.55E+02	92127
	Dogbane	H-3	-2	1.97E+02	1.35E+02	2.77E+02	92150
	Milkweed	H-3	-2	1.89E+02	1.25E+02	2.56E+02	92133
*	Milkweed	H-3	30	1.27E+03	1.55E+02	3.21E+02	92117
	Milkweed	H-3	42	1.85E+02	1.03E+02	2.11E+02	92135
	Mulberry	H-3	-2	3.59E+02	1.81E+02	3.70E+02	92129
	Mulberry	H-3	-2	6.00E+01	9.93E+01	2.04E+02	92151
	Mulberry	H-3	4	1.46E+02	1.13E+02	2.19E+02	90302
*	Mulberry	H-3	6	2.92E+02	1.14E+02	2.11E+02	90323
*	Mulberry	H-3	6	7.77E+02	1.30E+02	2.39E+02	90324
	Mulberry	H-3	6.5	1.67E+02	1.09E+02	2.04E+02	90328
*	Mulberry	H-3	9	1.07E+03	1.53E+02	3.15E+02	92147
	Mulberry	H-3	9	8.28E+01	1.11E+02	2.16E+02	90317
*	Mulberry	H-3	9	4.68E+03	2.15E+02	5.10E+02	90260
*	Mulberry	H-3	9	1.99E+04	4.12E+02	1.59E+03	90421
*	Mulberry	H-3	9	5.92E+03	2.38E+02	5.85E+02	90422
*	Mulberry	H-3	9	8.83E+02	1.33E+02	2.45E+02	90423
*	Mulberry	H-3	9	1.37E+04	3.42E+02	1.15E+03	90424
	Mulberry	H-3	10.5	1.70E+02	1.13E+02	2.20E+02	90309
*	Mulberry	H-3	10.5	1.19E+03	1.43E+02	2.78E+02	90308
*	Mulberry	H-3	15	5.97E+02	1.24E+02	2.28E+02	90404
*	Mulberry	H-3	15	2.36E+02	1.12E+02	2.08E+02	90406
	Mulberry	H-3	18	7.09E+01	1.13E+02	2.17E+02	90311
*	Mulberry	H-3	26.25	6.14E+04	6.95E+02	4.61E+03	90414
*	Mulberry	H-3	26.25	9.70E+04	8.68E+02	7.20E+03	90415
*	Mulberry	H-3	27	1.58E+03	1.52E+02	2.89E+02	90420
*	Mulberry	H-3	27	3.08E+02	1.32E+02	2.71E+02	92119
*	Mulberry	H-3	30	1.74E+04	4.30E+02	1.53E+03	92140
*	Mulberry	H-3	34.75	2.27E+02	1.11E+02	2.07E+02	90416
	Mulberry	H-3	41	4.29E+01	1.09E+02	2.13E+02	90269
*	Mulberry	H-3	41	2.73E+03	1.78E+02	3.77E+02	90277
*	Mulberry	H-3	42	2.26E+02	1.15E+02	2.23E+02	90272
	Mulberry	H-3	42	1.23E+02	1.32E+02	2.71E+02	92138
	Mulberry	H-3	43	7.48E+01	1.11E+02	2.16E+02	90262
	Mulberry	H-3	43	2.10E+02	1.15E+02	2.22E+02	90266
	Mulberry	H-3	43	9.97E+01	1.12E+02	2.17E+02	90274
*	Mulberry Fruit	H-3	9	5.18E+02	1.15E+02	2.09E+02	91010
	Mulberry Fruit	H-3	30	7.86E+02	5.32E+02	1.09E+03	92141
*	Mulberry Fruit	H-3	27	6.56E+04	7.00E+02	4.90E+03	91011
*	Mulberry Fruit	H-3	27	2.33E+02	1.05E+02	1.93E+02	91012
	Onion	H-3	-2	1.72E+02	1.97E+02	4.04E+02	92153
*	Onion	H-3	30	1.00E+03	2.02E+02	4.11E+02	92142
	Onion	H-3	42	2.18E+02	2.24E+02	4.61E+02	92137
	Pumpkin	H-3	19	-7.38E+01	1.00E+02	1.95E+02	90251
*	Pumpkin	H-3	27	3.13E+02	1.13E+02	2.16E+02	90249
*	Reed Canary	H-3	28.2	2.20E+04	3.90E+02	1.74E+03	91001
	Tomato	H-3	19	-1.57E+01	1.03E+02	1.98E+02	90252
*	Tomato	H-3	27	5.05E+02	1.19E+02	2.26E+02	90250
	Willow	H-3	-2	3.65E+01	1.23E+02	2.55E+02	92125
	Willow	H-3	-2	-1.22E+00	1.27E+02	2.62E+02	92154
	Willow	H-3	42	5.78E+02	5.53E+02	1.14E+03	92136
	Yarrow	H-3	9	8.44E+01	1.00E+02	2.06E+02	92145
	Yarrow	H-3	9	1.77E+02	1.47E+02	3.01E+02	92149
*	Yarrow	H-3	27	6.18E+03	2.16E+02	6.05E+02	92121
	Yarrow	H-3	30	1.88E+01	9.81E+01	2.02E+02	92139
*	Yarrow	H-3	42	6.81E+02	1.30E+02	2.65E+02	92134
*	Asparagus	K-40	-2	1.42E+01	6.85E-01	1.58E+00	92113
*	Asparagus	K-40	-2	1.00E+01	4.56E-01	1.10E+00	92130
*	Asparagus	K-40	10.5	1.82E+01	1.33E+00	2.25E+00	90303
*	Asparagus	K-40	26.25	2.30E+01	8.33E-01	2.45E+00	90336
*	Asparagus	K-40	27	1.91E+01	7.12E-01	2.04E+00	90335
*	Asparagus	K-40	30	1.64E+01	7.14E-01	1.79E+00	92102
*	Chicory	K-40	4	3.13E+01	1.05E+00	3.30E+00	90297

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Species	Radionuclide	Rivermile	pCi/g dry weight	Counting Error (2 Sigma)	Propagated Error (2 Sigma)	Sample Number
* Chicory	K-40	6	1.59E+01	7.53E-01	1.76E+00	90320
* Chicory	K-40	9	1.34E+01	4.99E-01	1.43E+00	90258
* Chicory	K-40	9	1.96E+01	1.02E+00	2.21E+00	90312
* Chicory	K-40	10.5	2.87E+01	1.17E+00	3.09E+00	90304
* Chicory	K-40	26.25	2.33E+01	1.08E+00	2.56E+00	90413
* Chicory	K-40	27	2.18E+01	7.72E-01	2.31E+00	90418
* Chicory	K-40	29	1.75E+01	8.23E-01	1.93E+00	90410
* Chicory	K-40	30	1.83E+01	9.73E-01	2.08E+00	92101
* Chokecherry	K-40	18	6.44E+00	6.35E-01	9.05E-01	90408
* Chokecherry	K-40	29	3.79E+00	2.62E-01	4.72E-01	90337
* Chokecherry	K-40	43	4.73E+00	3.34E-01	5.79E-01	90283
* Dogbane	K-40	-2	9.66E+00	6.16E-01	1.15E+00	92108
* Dogbane	K-40	-2	2.15E+01	8.87E-01	2.32E+00	92126
* Dogbane	K-40	4	2.31E+01	9.25E-01	2.49E+00	90299
* Dogbane	K-40	6	2.07E+01	8.12E-01	2.22E+00	90319
* Dogbane	K-40	6.5	1.41E+01	7.50E-01	1.59E+00	90325
* Dogbane	K-40	9	1.29E+01	4.69E-01	1.37E+00	90259
* Dogbane	K-40	9	8.82E+00	5.27E-01	1.03E+00	90333
* Dogbane	K-40	9	1.81E+01	8.28E-01	1.99E+00	90314
* Dogbane	K-40	15	1.86E+01	7.14E-01	1.99E+00	90425
* Milkweed	K-40	-2	2.79E+01	1.28E+00	3.07E+00	92132
* Milkweed	K-40	9	1.98E+01	1.07E+00	2.24E+00	92104
* Milkweed	K-40	27	2.42E+01	1.32E+00	2.75E+00	92116
* Milkweed	K-40	30	2.92E+01	1.38E+00	3.23E+00	92099
* Milkweed	K-40	42	2.47E+01	1.20E+00	2.74E+00	92092
* Mulberry	K-40	-2	1.41E+01	6.38E-01	1.55E+00	92109
* Mulberry	K-40	-2	8.52E+00	7.88E-01	1.16E+00	92128
* Mulberry	K-40	4	2.27E+01	1.06E+00	2.51E+00	90300
* Mulberry	K-40	6	1.45E+01	6.91E-01	1.61E+00	90321
* Mulberry	K-40	6	1.47E+01	7.01E-01	1.63E+00	90322
* Mulberry	K-40	6.5	1.73E+01	7.73E-01	1.89E+00	90327
* Mulberry	K-40	9	1.48E+01	5.84E-01	1.59E+00	90257
* Mulberry	K-40	9	1.35E+01	5.96E-01	1.48E+00	90329
* Mulberry	K-40	9	1.38E+01	5.02E+00	5.21E+00	90330
* Mulberry	K-40	9	1.75E+01	6.72E+00	6.95E+00	90331
* Mulberry	K-40	9	1.24E+01	1.04E+00	1.62E+00	90332
* Mulberry	K-40	9	1.35E+01	1.17E+00	1.79E+00	92105
* Mulberry	K-40	9	1.29E+01	8.58E-01	1.55E+00	90316
* Mulberry	K-40	10.5	2.49E+01	8.44E-01	2.63E+00	90306
* Mulberry	K-40	10.5	1.90E+01	7.75E-01	2.05E+00	90307
* Mulberry	K-40	15	1.56E+01	6.82E-01	1.70E+00	90403
* Mulberry	K-40	15	1.75E+01	7.30E-01	1.89E+00	90405
* Mulberry	K-40	18	1.63E+01	1.43E+00	2.16E+00	90310
* Mulberry	K-40	26.25	1.77E+01	7.22E-01	1.91E+00	90359
* Mulberry	K-40	26.25	1.33E+01	6.68E-01	1.48E+00	90360
* Mulberry	K-40	27	1.62E+01	1.38E+00	2.13E+00	90334
* Mulberry	K-40	27	1.47E+01	1.06E+00	1.82E+00	92118
* Mulberry	K-40	30	1.72E+01	7.47E-01	1.88E+00	92097
* Mulberry	K-40	34.75	1.57E+01	9.12E-01	1.81E+00	90361
* Mulberry	K-40	41	1.75E+01	6.57E-01	1.87E+00	90268
* Mulberry	K-40	41	1.35E+01	5.00E-01	1.43E+00	90275
* Mulberry	K-40	42	2.09E+01	7.24E-01	2.21E+00	90271
* Mulberry	K-40	42	1.67E+01	7.10E-01	1.82E+00	92095
* Mulberry	K-40	43	2.04E+01	6.09E-01	2.13E+00	90261
* Mulberry	K-40	43	1.46E+01	4.38E-01	1.52E+00	90265
* Mulberry	K-40	43	1.67E+01	4.20E-01	1.72E+00	90273
* Mulberry Fruit	K-40	9	2.34E+00	2.77E-01	3.62E-01	91010
* Mulberry Fruit	K-40	27	1.04E+01	1.70E+00	2.00E+00	92122
* Mulberry Fruit	K-40	30	7.67E+00	3.39E+00	3.47E+00	92098
* Mulberry Fruit	K-40	27	1.80E+00	1.82E-01	2.56E-01	91011
* Mulberry Fruit	K-40	27	2.01E+00	2.22E-01	2.99E-01	91012
* Onion	K-40	-2	1.10E+01	1.47E+00	1.83E+00	92111
* Onion	K-40	15	1.94E+01	2.88E+00	3.47E+00	90407
* Onion	K-40	30	1.06E+01	1.81E+00	2.10E+00	92100

	Species	Radionuclide	Rivermile	pCi/g dry weight	Counting Error (2 Sigma)	Propagated Error (2 Sigma)	Sample Number
*	Onion	K-40	42	1.34E+01	1.96E+00	2.37E+00	92094
*	Pumpkin	K-40	27	1.58E+00	3.00E-01	3.39E-01	90249
*	Reed Canary	K-40	28.2	1.74E+01	8.83E-01	1.95E+00	91002
*	Rose	K-40	15	7.58E+00	5.14E-01	9.15E-01	90401
*	Squawberry	K-40	29	1.71E+01	7.86E-01	1.88E+00	90412
*	Tomato	K-40	19	3.87E+00	3.22E-01	5.03E-01	90252
*	Tomato	K-40	27	3.83E+00	7.72E-01	8.61E-01	90250
*	Willow	K-40	-2	9.62E+00	6.39E-01	1.16E+00	92112
*	Willow	K-40	-2	1.05E+01	6.43E-01	1.23E+00	92124
*	Willow	K-40	6.5	1.14E+01	5.16E-01	1.25E+00	90326
*	Willow	K-40	9	9.86E+00	5.61E-01	1.13E+00	90313
*	Willow	K-40	27	1.16E+01	6.12E-01	1.31E+00	90417
*	Willow	K-40	41	1.01E+01	4.98E-01	1.13E+00	90267
*	Willow	K-40	41	1.33E+01	4.66E-01	1.41E+00	90276
*	Willow	K-40	42	7.35E+00	4.77E-01	8.76E-01	90270
*	Willow	K-40	42	1.37E+01	1.17E+00	1.80E+00	92093
*	Yarrow	K-40	-2	1.69E+01	1.23E+00	2.09E+00	92107
*	Yarrow	K-40	4	1.95E+01	8.22E-01	2.12E+00	90298
	Yarrow	K-40	6	2.35E-01	9.55E-01	2.35E+00	90318
*	Yarrow	K-40	9	1.53E+01	9.69E-01	1.81E+00	92103
*	Yarrow	K-40	9	2.32E+01	9.24E-01	2.50E+00	90315
*	Yarrow	K-40	10.5	1.78E+01	1.60E+00	2.39E+00	90305
*	Yarrow	K-40	15	1.74E+01	9.30E-01	1.97E+00	90402
*	Yarrow	K-40	27	2.74E+01	8.47E-01	2.87E+00	90419
*	Yarrow	K-40	27	1.69E+01	9.97E-01	1.97E+00	92120
*	Yarrow	K-40	30	1.77E+01	9.74E-01	2.02E+00	92096
*	Yarrow	K-40	42	1.57E+01	1.07E+00	1.90E+00	92091
*	Pumpkin	K-40	19	5.30E+00	6.95E-01	8.74E-01	90251
*	Willow	K-40	4	1.00E+01	1.12E+00	1.50E+00	90301
*	Chicory	Pb-212	4	4.06E-02	2.80E-02	2.83E-02	90297
*	Chicory	Pb-212	6	3.11E-02	2.96E-02	2.98E-02	90320
*	Chokecherry	Pb-212	29	2.44E-02	1.44E-02	1.46E-02	90337
*	Dogbane	Pb-212	4	2.96E-02	2.71E-02	2.72E-02	90299
*	Mulberry	Pb-212	6	2.62E-02	1.80E-02	1.82E-02	90321
*	Mulberry	Pb-212	6.5	4.79E-02	2.07E-02	2.12E-02	90327
*	Mulberry	Pb-212	34.75	3.79E-02	3.42E-02	3.44E-02	90361
*	Onion	Pb-212	15	3.01E-01	1.67E-01	1.90E-01	90407
*	Willow	Pb-212	4	1.38E-01	6.01E-02	6.17E-02	90301
*	Willow	Pb-212	6.5	4.67E-02	2.58E-02	2.62E-02	90326
	Willow	Pb-212	9	8.93E-03	2.34E-02	2.34E-02	90313
*	Yarrow	Pb-212	4	6.85E-02	2.92E-02	3.00E-02	90298
*	Yarrow	Pb-212	6	6.70E-02	2.66E-02	2.75E-02	90318
*	Yarrow	Pb-212	9	3.91E-02	3.05E-02	3.07E-02	90315
*	Chicory	Pb-214	6	5.40E-02	3.49E-02	3.53E-02	90320
*	Chokecherry	Pb-214	29	2.01E-02	1.77E-02	1.78E-02	90337
*	Dogbane	Pb-214	4	6.06E-02	4.52E-02	4.56E-02	90299
*	Mulberry	Pb-214	10.5	8.21E-02	3.10E-02	3.21E-02	90306
*	Mulberry	Pb-214	15	7.23E-02	3.43E-02	3.51E-02	90403
*	Yarrow	Pb-214	4	1.02E-01	3.63E-02	3.77E-02	90298
*	Yarrow	Pb-214	9	5.94E-02	4.34E-02	4.38E-02	90315
	Asparagus	Pu-238	-2	1.70E-05	5.40E-05	5.50E-05	92113
	Asparagus	Pu-238	-2	4.00E-06	5.30E-05	5.40E-05	92130
	Asparagus	Pu-238	10.5	4.96E-05	1.20E-04	1.21E-04	90303
	Asparagus	Pu-238	30	7.30E-05	1.51E-04	1.51E-04	92102
	Chicory	Pu-238	4	-1.04E-05	1.78E-04	1.78E-04	90297
	Chicory	Pu-238	6	-1.05E-05	5.68E-05	6.13E-05	90320
*	Chicory	Pu-238	9	1.37E-04	1.21E-04	1.23E-04	90258
	Chicory	Pu-238	9	-2.50E-05	2.06E-05	2.36E-05	90312
*	Chicory	Pu-238	10.5	1.21E-04	1.18E-04	1.19E-04	90304
	Chicory	Pu-238	26.25	5.19E-05	7.20E-05	7.31E-05	90413
	Chicory	Pu-238	27	3.73E-05	6.70E-05	7.37E-05	90418
*	Chicory	Pu-238	27	1.81E-04	1.35E-04	1.37E-04	90418
	Chicory	Pu-238	29	5.52E-05	9.80E-05	9.88E-05	90410
	Chicory	Pu-238	30	-2.30E-05	2.40E-05	2.70E-05	92101

Species	Radionuclide	Rivermile	pCi/g dry weight	Counting Error (2 Sigma)	Propagated Error (2 Sigma)	Sample Number
Chokecherry	Pu-238	18	1.67E-05	1.21E-04	1.22E-04	90408
Chokecherry	Pu-238	43	4.07E-05	8.11E-05	8.20E-05	90263
Dogbane	Pu-238	-2	-1.00E-05	0.00E+00	1.76E-04	92108
Dogbane	Pu-238	-2	6.50E-05	1.51E-04	1.52E-04	92126
Dogbane	Pu-238	4	2.79E-05	7.66E-05	7.77E-05	90299
Dogbane	Pu-238	6	-1.04E-05	0.00E+00	6.48E-05	90319
Dogbane	Pu-238	6.5	-1.05E-05	0.00E+00	6.89E-05	90325
* Dogbane	Pu-238	9	3.20E-04	2.09E-04	2.12E-04	90259
* Dogbane	Pu-238	9	5.44E-03	2.21E-03	2.38E-03	90314
* Dogbane	Pu-238	15	4.95E-04	2.00E-04	2.07E-04	90425
Milkweed	Pu-238	-2	-1.10E-05	0.00E+00	1.70E-04	92132
Milkweed	Pu-238	9	-1.00E-05	0.00E+00	8.40E-05	92104
Milkweed	Pu-238	27	6.20E-05	1.46E-04	1.47E-04	92116
Milkweed	Pu-238	30	-1.40E-05	0.00E+00	1.79E-04	92099
Milkweed	Pu-230	42	1.60E-05	6.10E-05	6.30E-05	92092
Mulberry	Pu-238	-2	-2.20E-05	2.70E-05	2.90E-05	92109
Mulberry	Pu-238	-2	1.35E-04	1.99E-04	2.00E-04	92128
Mulberry	Pu-238	4	-1.04E-05	0.00E+00	1.53E-04	90300
Mulberry	Pu-238	6	6.44E-05	6.65E-05	6.75E-05	90321
Mulberry	Pu-238	6	9.13E-06	3.89E-05	4.05E-05	90322
Mulberry	Pu-238	6.5	4.24E-05	6.73E-05	6.85E-05	90327
Mulberry	Pu-238	9	-1.04E-05	0.00E+00	1.03E-04	90257
Mulberry	Pu-238	9	2.51E-04	2.56E-04	2.59E-04	92105
Mulberry	Pu-238	9	-3.65E-05	3.69E-05	3.87E-05	90316
Mulberry	Pu-238	10.5	-1.86E-05	1.66E-05	2.01E-05	90306
Mulberry	Pu-238	10.5	5.78E-06	6.89E-05	6.98E-05	90307
Mulberry	Pu-238	15	7.46E-05	8.52E-05	8.63E-05	90403
Mulberry	Pu-238	15	-1.04E-05	0.00E+00	6.70E-05	90405
Mulberry	Pu-238	18	-1.89E-05	1.69E-05	2.04E-05	90310
Mulberry	Pu-238	27	8.70E-05	9.70E-05	9.90E-05	92118
Mulberry	Pu-238	30	9.00E-06	6.90E-05	7.00E-05	92097
Mulberry	Pu-238	41	1.03E-04	1.14E-04	1.15E-04	90268
Mulberry	Pu-238	41	-1.04E-05	0.00E+00	1.03E-04	90275
Mulberry	Pu-238	42	9.04E-06	5.35E-05	5.47E-05	90271
Mulberry	Pu-238	42	2.10E-05	1.12E-04	1.13E-04	92095
Mulberry	Pu-238	43	1.32E-05	6.50E-05	6.60E-05	90261
Mulberry	Pu-238	43	4.20E-05	8.60E-05	8.69E-05	90265
Mulberry	Pu-238	43	4.15E-06	6.19E-05	6.19E-05	90273
Mulberry Fruit	Pu-238	27	-1.15E-04	1.16E-04	1.31E-04	92122
Onion	Pu-238	-2	2.83E-04	3.38E-04	3.41E-04	92111
Onion	Pu-238	15	1.33E-04	1.82E-04	1.84E-04	90407
Onion	Pu-238	30	-3.40E-05	0.00E+00	3.40E-04	92100
Onion	Pu-238	42	-7.50E-05	0.00E+00	4.33E-04	92094
Rose	Pu-238	15	-1.05E-05	0.00E+00	5.40E-05	90401
Squawberry	Pu-238	29	-1.51E-05	9.22E-06	1.47E-05	90412
Willow	Pu-238	-2	8.00E-06	6.80E-05	6.90E-05	92112
Willow	Pu-238	-2	-2.60E-05	3.20E-05	3.40E-05	92124
Willow	Pu-238	4	1.57E-05	9.04E-05	9.12E-05	90301
Willow	Pu-238	6.5	7.24E-05	1.66E-04	1.66E-04	90326
Willow	Pu-238	9	1.68E-05	7.48E-05	7.57E-05	90313
* Willow	Pu-238	27	3.09E-04	1.75E-04	1.78E-04	90417
Willow	Pu-238	41	7.27E-05	1.14E-04	1.15E-04	90267
Willow	Pu-238	41	5.03E-05	7.01E-05	7.13E-05	90276
Willow	Pu-238	42	4.35E-05	7.62E-05	7.72E-05	90270
Willow	Pu-238	42	2.10E-05	7.20E-05	7.40E-05	92093
Yarrow	Pu-238	-2	-7.00E-05	1.12E-04	1.13E-04	92107
Yarrow	Pu-238	4	3.23E-05	6.99E-05	7.09E-05	90298
Yarrow	Pu-238	6	5.07E-05	7.06E-05	7.17E-05	90318
Yarrow	Pu-238	9	-1.30E-05	0.00E+00	1.69E-04	92103
Yarrow	Pu-238	9	4.41E-05	9.01E-05	9.11E-05	90315
Yarrow	Pu-238	10.5	-1.04E-05	0.00E+00	9.38E-05	90305
Yarrow	Pu-238	15	2.88E-05	5.55E-05	5.68E-05	90402
Yarrow	Pu-238	27	3.00E-05	6.66E-05	6.77E-05	90419
Yarrow	Pu-238	27	5.90E-05	1.31E-04	1.32E-04	92120

Species	Radionuclide	Rivermile	pCi/g dry weight	Counting Error (2 Sigma)	Propagated Error (2 Sigma)	Sample Number
Yarrow	Pu-238	42	4.30E-05	1.08E-04	1.10E-04	92091
* Asparagus	Pu-239,240	-2	2.87E-04	1.79E-04	1.84E-04	92113
Asparagus	Pu-239,240	-2	3.90E-05	6.90E-05	7.60E-05	92130
Asparagus	Pu-239,240	10.5	9.40E-05	1.71E-04	1.74E-04	90303
* Asparagus	Pu-239,240	30	6.05E-04	3.55E-04	3.63E-04	92102
* Chicory	Pu-239,240	4	2.11E-04	1.98E-04	2.01E-04	90297
* Chicory	Pu-239,240	6	1.09E-04	9.74E-05	1.03E-04	90320
* Chicory	Pu-239,240	9	1.76E-03	4.01E-04	4.38E-04	90258
* Chicory	Pu-239,240	9	2.21E-04	1.64E-04	1.68E-04	90312
* Chicory	Pu-239,240	10.5	2.25E-04	1.57E-04	1.62E-04	90304
* Chicory	Pu-239,240	26.25	4.79E-04	2.02E-04	2.10E-04	90413
* Chicory	Pu-239,240	29	1.20E-04	1.06E-04	1.11E-04	90410
Chicory	Pu-239,240	30	7.70E-05	1.02E-04	1.08E-04	92101
Chokecherry	Pu-239,240	15	1.67E-05	1.61E-04	1.64E-04	90408
* Chokecherry	Pu-239,240	43	1.70E-04	1.28E-04	1.33E-04	90263
Dogbane	Pu-239,240	-2	1.06E-04	1.65E-04	1.69E-04	92108
Dogbane	Pu-239,240	-2	1.41E-04	2.14E-04	2.17E-04	92126
* Dogbane	Pu-239,240	4	1.80E-04	1.71E-04	1.74E-04	90299
Dogbane	Pu-239,240	6	5.30E-05	9.42E-05	9.92E-05	90319
Dogbane	Pu-239,240	6.5	4.58E-05	7.94E-05	8.53E-05	90325
* Dogbane	Pu-239,240	9	5.28E-03	8.34E-04	1.00E-03	90259
* Dogbane	Pu-239,240	9	8.36E-04	7.67E-04	7.70E-04	90314
Dogbane	Pu-239,240	15	3.39E-05	6.94E-05	7.57E-05	90425
* Milkweed	Pu-239,240	-2	2.71E-04	2.53E-04	2.57E-04	92132
Milkweed	Pu-239,240	9	1.27E-04	1.23E-04	1.28E-04	92104
Milkweed	Pu-239,240	27	8.00E-06	1.59E-04	1.62E-04	92116
Milkweed	Pu-239,240	30	4.50E-05	1.18E-04	1.26E-04	92099
* Milkweed	Pu-239,240	42	1.99E-04	1.77E-04	1.82E-04	92092
Mulberry	Pu-239,240	-2	1.26E-04	1.35E-04	1.38E-04	92109
Mulberry	Pu-239,240	-2	2.30E-05	1.20E-04	1.24E-04	92128
Mulberry	Pu-239,240	4	-6.07E-05	1.01E-04	1.06E-04	90300
Mulberry	Pu-239,240	6	8.86E-05	9.89E-05	1.04E-04	90321
Mulberry	Pu-239,240	6	6.70E-05	9.44E-05	9.95E-05	90322
Mulberry	Pu-239,240	6.5	-1.98E-05	1.35E-05	3.36E-05	90327
Mulberry	Pu-239,240	9	2.37E-05	6.08E-05	7.48E-05	90257
Mulberry	Pu-239,240	9	7.28E-05	8.30E-05	8.88E-05	90316
Mulberry	Pu-239,240	9	1.18E-04	2.04E-04	2.07E-04	92105
Mulberry	Pu-239,240	10.5	6.39E-06	7.01E-05	7.65E-05	90306
Mulberry	Pu-239,240	10.5	2.20E-05	6.45E-05	7.16E-05	90307
* Mulberry	Pu-239,240	15	3.27E-04	1.79E-04	1.84E-04	90403
Mulberry	Pu-239,240	15	1.17E-05	4.36E-05	5.33E-05	90405
* Mulberry	Pu-239,240	18	4.60E-04	2.52E-04	2.58E-04	90310
* Mulberry	Pu-239,240	27	1.41E-04	1.30E-04	1.35E-04	92118
Mulberry	Pu-239,240	30	1.36E-04	1.45E-04	1.49E-04	92097
* Mulberry	Pu-239,240	41	1.58E-04	1.33E-04	1.37E-04	90268
* Mulberry	Pu-239,240	41	2.20E-04	1.81E-04	1.85E-04	90275
Mulberry	Pu-239,240	42	1.06E-04	1.17E-04	1.21E-04	90271
Mulberry	Pu-239,240	42	7.30E-05	1.53E-04	1.56E-04	92095
Mulberry	Pu-239,240	43	1.39E-04	1.41E-04	1.45E-04	90261
* Mulberry	Pu-239,240	43	4.66E-04	2.38E-04	2.45E-04	90265
* Mulberry	Pu-239,240	43	2.36E-04	1.75E-04	1.80E-04	90273
Mulberry Fruit	Pu-239,240	27	3.00E-05	3.10E-04	3.54E-04	92122
Onion	Pu-239,240	-2	2.68E-04	2.93E-04	3.04E-04	92111
* Onion	Pu-239,240	15	8.08E-04	4.41E-04	4.54E-04	90407
Onion	Pu-239,240	30	1.91E-04	3.18E-04	3.35E-04	92100
Onion	Pu-239,240	42	6.80E-05	2.83E-04	3.60E-04	92094
Rose	Pu-239,240	15	7.69E-05	9.22E-05	9.76E-05	90401
Squawberry	Pu-239,240	29	2.17E-05	5.25E-05	6.09E-05	90412
Willow	Pu-239,240	-2	-4.00E-06	7.20E-05	7.80E-05	92112
* Willow	Pu-239,240	-2	2.67E-04	2.09E-04	2.14E-04	92124
* Willow	Pu-239,240	4	2.49E-04	1.80E-04	1.84E-04	90301
Willow	Pu-239,240	6.5	3.07E-05	4.10E-05	5.13E-05	90326
Willow	Pu-239,240	9	-1.02E-05	0.00E+00	1.12E-04	90313
Willow	Pu-239,240	27	8.13E-05	9.23E-05	9.84E-05	90417

Species	Radionuclide	Rivermile	pCi/g dry weight	Counting Error (2 Sigma)	Propagated Error (2 Sigma)	Sample Number
* Willow	Pu-239,240	41	2.48E-04	1.76E-04	1.80E-04	90267
* Willow	Pu-239,240	41	5.94E-04	2.20E-04	2.30E-04	90276
* Willow	Pu-239,240	42	1.44E-04	1.32E-04	1.36E-04	90270
Willow	Pu-239,240	42	9.40E-05	1.25E-04	1.33E-04	92093
Yarrow	Pu-239,240	-2	7.00E-05	3.01E-04	3.04E-04	92107
* Yarrow	Pu-239,240	4	3.52E-04	1.87E-04	1.93E-04	90298
* Yarrow	Pu-239,240	6	4.94E-04	2.02E-04	2.10E-04	90318
* Yarrow	Pu-239,240	9	3.17E-04	2.06E-04	2.13E-04	90315
Yarrow	Pu-239,240	9	6.00E-06	1.40E-04	1.45E-04	92103
* Yarrow	Pu-239,240	10.5	2.98E-04	1.95E-04	2.00E-04	90305
Yarrow	Pu-239,240	15	6.76E-05	1.23E-04	1.27E-04	90402
Yarrow	Pu-239,240	27	5.66E-05	7.95E-05	8.56E-05	90419
Yarrow	Pu-239,240	27	2.01E-04	2.27E-04	2.31E-04	92120
* Yarrow	Pu-239,240	42	3.59E-04	2.47E-04	2.54E-04	92091
* Yarrow	Ra-224	4	6.90E-02	3.79E-02	3.90E-02	90298
* Chokecherry	Ra-226	29	2.72E-02	1.77E-02	1.79E-02	90337
* Yarrow	Ra-226	9	1.02E-01	4.16E-02	4.28E-02	90315
Asparagus	Ru-106	-2	6.40E-02	1.16E-01	1.18E-01	92113
Asparagus	Ru-106	-2	-6.05E-02	6.16E-02	6.20E-02	92130
Asparagus	Ru-106	10.5	-6.58E-02	3.22E-01	3.22E-01	90303
Asparagus	Ru-106	30	-4.68E-02	1.42E-01	1.42E-01	92102
Asparagus	Ru-106	26.25	3.74E-02	2.30E-01	2.30E-01	90336
Asparagus	Ru-106	27	-4.98E-02	1.98E-01	1.98E-01	90335
Chicory	Ru-106	4	1.29E-01	2.59E-01	2.59E-01	90297
Chicory	Ru-106	6	-6.70E-02	2.90E-01	2.90E-01	90320
Chicory	Ru-106	9	1.08E-01	1.46E-01	1.47E-01	90288
Chicory	Ru-106	9	8.94E-02	3.11E-01	3.11E-01	90312
Chicory	Ru-106	10.5	-6.98E-02	3.13E-01	3.13E-01	90304
Chicory	Ru-106	26.25	1.60E-01	4.37E-01	4.37E-01	90413
Chicory	Ru-106	27	7.69E-02	2.92E-01	2.92E-01	90418
Chicory	Ru-106	29	2.03E-01	2.75E-01	2.76E-01	90410
Chicory	Ru-106	30	-2.08E-02	2.01E-01	2.01E-01	92101
Chokecherry	Ru-106	15	-9.19E-02	2.97E-01	2.97E-01	90408
* Chokecherry	Ru-106	29	1.40E-01	1.18E-01	1.19E-01	90337
Chokecherry	Ru-106	43	-1.32E-01	1.35E-01	1.35E-01	90263
Dogbane	Ru-106	-2	-4.23E-02	1.62E-01	1.62E-01	92108
Dogbane	Ru-106	-2	2.66E-02	1.26E-01	1.26E-01	92126
Dogbane	Ru-106	4	-6.16E-02	2.65E-01	2.65E-01	90299
Dogbane	Ru-106	6	-1.36E-01	2.71E-01	2.71E-01	90319
Dogbane	Ru-106	6.5	-3.68E-02	2.97E-01	2.97E-01	90325
Dogbane	Ru-106	9	-3.74E-02	1.24E-01	1.24E-01	90259
Dogbane	Ru-106	9	-2.19E-01	2.11E-01	2.12E-01	90333
Dogbane	Ru-106	9	-1.74E-02	2.30E-01	2.30E-01	90314
Dogbane	Ru-106	15	-1.11E-02	1.44E-01	1.44E-01	90425
Milkweed	Ru-106	-2	-4.00E-01	2.07E-01	2.11E-01	92132
Milkweed	Ru-106	9	-1.66E-01	1.65E-01	1.66E-01	92104
Milkweed	Ru-106	27	-2.87E-01	2.68E-01	2.69E-01	92116
Milkweed	Ru-106	30	-6.55E-02	2.22E-01	2.22E-01	92099
Milkweed	Ru-106	42	-9.95E-02	2.11E-01	2.11E-01	92092
Mulberry	Ru-106	-2	5.09E-02	1.32E-01	1.32E-01	92109
Mulberry	Ru-106	-2	-1.80E-02	1.52E-01	1.52E-01	92128
Mulberry	Ru-106	4	-1.83E-02	3.31E-01	3.31E-01	90300
Mulberry	Ru-106	6	-1.48E-01	2.65E-01	2.66E-01	90321
Mulberry	Ru-106	6	-6.73E-02	2.71E-01	2.71E-01	90322
Mulberry	Ru-106	6.5	-6.62E-02	2.79E-01	2.79E-01	90327
Mulberry	Ru-106	9	1.26E-01	1.65E-01	1.66E-01	90257
Mulberry	Ru-106	9	-1.15E-01	1.66E-01	1.68E-01	90329
Mulberry	Ru-106	9	1.53E+00	3.29E+00	3.29E+00	90330
Mulberry	Ru-106	9	2.11E+00	3.30E+00	3.30E+00	90331
Mulberry	Ru-106	9	4.21E-01	5.11E-01	5.13E-01	90332
Mulberry	Ru-106	9	-1.39E-01	2.75E-01	2.76E-01	92105
Mulberry	Ru-106	9	7.81E-03	3.59E-01	3.59E-01	90316
Mulberry	Ru-106	10.5	-1.30E-01	2.26E-01	2.27E-01	90306
Mulberry	Ru-106	10.5	4.50E-02	2.24E-01	2.24E-01	90307

Species	Radionuclide	Rivermile	pCi/g dry weight	Counting Error (2 Sigma)	Propagated Error (2 Sigma)	Sample Number
Mulberry	Ru-106	15	-4.68E-03	2.34E-02	2.34E-02	90403
Mulberry	Ru-106	15	-2.17E-01	2.79E-01	2.79E-01	90405
Mulberry	Ru-106	16	-2.62E-01	5.50E-01	5.51E-01	90310
Mulberry	Ru-106	26.25	0.00E+00	2.15E-01	2.15E-01	90359
Mulberry	Ru-106	26.25	-2.06E-01	2.35E-01	2.36E-01	90360
Mulberry	Ru-106	27	-3.75E-01	6.10E-01	6.11E-01	90334
Mulberry	Ru-106	27	-6.57E-02	2.83E-01	2.83E-01	92116
Mulberry	Ru-106	30	2.50E-02	1.34E-01	1.34E-01	92097
Mulberry	Ru-106	34.75	1.16E-01	3.62E-01	3.62E-01	90361
Mulberry	Ru-106	41	4.22E-02	1.63E-01	1.63E-01	90268
Mulberry	Ru-106	41	8.66E-03	1.41E-01	1.41E-01	90275
Mulberry	Ru-106	42	-1.25E-01	1.73E-01	1.74E-01	90271
* Mulberry	Ru-106	42	1.47E-01	1.13E-01	1.14E-01	92096
Mulberry	Ru-106	43	5.45E-02	1.37E-01	1.38E-01	90261
Mulberry	Ru-106	43	1.04E-02	1.14E-01	1.14E-01	90265
Mulberry	Ru-106	43	2.16E-02	9.98E-02	9.99E-02	90273
Mulberry Fruit	Ru-106	9	-8.25E-03	7.08E-02	7.08E-02	91010
Mulberry Fruit	Ru-106	27	2.28E-02	4.53E-02	4.54E-02	91011
Mulberry Fruit	Ru-106	27	1.16E-02	5.68E-02	5.68E-02	91012
Mulberry Fruit	Ru-106	27	-5.41E-02	4.83E-01	4.83E-01	92122
Mulberry Fruit	Ru-106	30	-8.62E-01	1.09E+00	1.10E+00	92098
Onion	Ru-106	-2	-6.24E-02	5.69E-01	5.69E-01	92111
Onion	Ru-106	15	1.16E+00	1.90E+00	1.90E+00	90407
Onion	Ru-106	30	1.65E-01	5.31E-01	5.31E-01	92100
Onion	Ru-106	42	-1.44E-02	6.63E-01	6.63E-01	92094
Pumpkin	Ru-106	19	6.39E-02	2.16E-01	2.16E-01	90251
Pumpkin	Ru-106	27	-8.12E-03	8.71E-02	8.71E-02	90249
Reed Canary	Ru-106	28.2	3.30E-02	3.96E-01	3.96E-01	91002
* Rose	Ru-106	15	2.89E-01	2.25E-01	2.27E-02	90401
Squawberry	Ru-106	29	1.69E-01	3.30E-01	3.31E-01	90412
Tomato	Ru-106	19	-1.01E-02	1.21E-01	1.21E-01	90252
Tomato	Ru-106	27	1.23E-01	3.48E-01	3.48E-01	90250
Willow	Ru-106	-2	6.25E-02	1.25E-01	1.25E-01	92112
Willow	Ru-106	-2	-6.25E-02	1.52E-01	1.52E-01	92124
Willow	Ru-106	4	-1.99E-01	3.71E-01	3.71E-01	90301
Willow	Ru-106	6.5	5.50E-02	2.03E-01	2.03E-01	90326
Willow	Ru-106	9	1.62E-01	1.96E-01	1.96E-01	90313
Willow	Ru-106	27	-5.48E-02	2.78E-01	2.78E-01	90417
Willow	Ru-106	41	2.61E-02	1.54E-01	1.54E-01	90267
Willow	Ru-106	41	1.47E-03	1.34E-01	1.34E-01	90276
Willow	Ru-106	42	0.00E+00	1.52E-01	1.52E-01	90270
Willow	Ru-106	42	1.12E-01	2.55E-01	2.55E-01	92093
Yarrow	Ru-106	-2	-5.30E-02	2.30E-01	2.30E-01	92107
Yarrow	Ru-106	4	-7.52E-03	2.08E-01	2.08E-01	90298
Yarrow	Ru-106	6	-1.15E-01	3.24E-01	3.24E-01	90318
Yarrow	Ru-106	9	-2.45E-02	2.21E-01	2.21E-01	92103
Yarrow	Ru-106	9	-1.16E-03	2.52E-01	2.52E-01	90315
Yarrow	Ru-106	10.5	-4.90E-01	5.06E-01	5.06E-01	90305
Yarrow	Ru-106	15	-3.56E-03	3.98E-01	3.98E-01	90402
Yarrow	Ru-106	27	-4.21E-02	2.80E-01	2.80E-01	90419
* Yarrow	Ru-106	27	1.97E-01	1.95E-01	1.96E-01	92120
Yarrow	Ru-106	30	-9.18E-02	1.95E-01	1.95E-01	92096
Yarrow	Ru-106	42	2.81E-03	2.66E-01	2.66E-01	92091
Asparagus	Sb-125	-2	1.38E-02	2.93E-02	2.93E-02	92113
Asparagus	Sb-125	-2	3.20E-03	2.18E-02	2.18E-02	92130
Asparagus	Sb-125	10.5	3.74E-02	6.71E-02	6.72E-02	90303
Asparagus	Sb-125	26.25	-1.63E-02	4.18E-02	4.18E-02	90336
Asparagus	Sb-125	27	6.50E-03	3.80E-02	3.80E-02	90335
Asparagus	Sb-125	30	1.47E-04	3.68E-02	3.68E-02	92102
Chicory	Sb-125	4	3.54E-02	5.37E-02	5.38E-02	90297
Chicory	Sb-125	6	2.98E-02	4.50E-02	4.51E-02	90320
Chicory	Sb-125	9	-5.15E-02	2.92E-02	2.96E-02	90258
Chicory	Sb-125	9	-6.08E-02	6.70E-02	6.73E-02	90312
Chicory	Sb-125	10.5	2.95E-02	6.52E-02	6.53E-02	90304

Species	Radionuclide	Rivermile	pCi/g dry weight	Counting Error (2 Sigma)	Propagated Error (2 Sigma)	Sample Number
Chicory	Sb-125	26.25	2.74E-02	7.76E-02	7.77E-02	90413
Chicory	Sb-125	27	3.24E-02	4.89E-02	4.90E-02	90416
Chicory	Sb-125	29	-9.87E-03	5.25E-02	5.25E-02	90410
Chicory	Sb-125	30	-1.99E-02	5.85E-02	5.86E-02	92101
Chokecherry	Sb-125	18	-5.63E-02	5.30E-02	5.33E-02	90406
Chokecherry	Sb-125	29	-2.06E-02	2.41E-02	2.41E-02	90337
Chokecherry	Sb-125	43	-3.09E-02	2.61E-02	2.63E-02	90263
Dogbane	Sb-125	-2	9.60E-03	4.07E-02	4.07E-02	92108
* Dogbane	Sb-125	-2	3.75E-02	3.60E-02	3.62E-02	92126
Dogbane	Sb-125	4	-3.08E-02	4.98E-02	4.99E-02	90299
Dogbane	Sb-125	6	1.17E-02	4.56E-02	4.56E-02	90319
Dogbane	Sb-125	6.5	1.34E-02	5.27E-02	5.27E-02	90325
Dogbane	Sb-125	9	-4.63E-03	2.75E-02	2.75E-02	90259
Dogbane	Sb-125	9	-1.17E-02	3.49E-02	3.49E-02	90333
Dogbane	Sb-125	9	-2.48E-02	5.01E-02	5.01E-02	90314
Dogbane	Sb-125	18	2.22E-02	3.68E-02	3.69E-02	90426
Milkweed	Sb-125	-2	7.24E-03	5.06E-02	5.06E-02	92132
Milkweed	Sb-125	9	-1.42E-02	4.75E-02	4.76E-02	92104
Milkweed	Sb-125	27	-3.53E-02	6.73E-02	6.73E-02	92116
Milkweed	Sb-125	30	1.95E-02	5.37E-02	5.37E-02	92099
Milkweed	Sb-125	42	-3.79E-02	5.15E-02	5.17E-02	92092
Mulberry	Sb-125	-2	9.23E-03	3.89E-02	3.89E-02	92109
Mulberry	Sb-125	-2	1.29E-02	3.91E-02	3.92E-02	92128
Mulberry	Sb-125	4	-4.27E-02	6.99E-02	7.00E-02	90300
Mulberry	Sb-125	6	-1.48E-02	4.54E-02	4.54E-02	90321
Mulberry	Sb-125	6	-3.12E-02	4.63E-02	4.64E-02	90322
Mulberry	Sb-125	6.5	1.76E-02	5.13E-02	5.13E-02	90327
Mulberry	Sb-125	9	1.86E-02	3.54E-02	3.54E-02	90257
Mulberry	Sb-125	9	-2.20E-02	3.79E-02	3.79E-02	90329
Mulberry	Sb-125	9	2.79E-01	5.55E-01	5.56E-01	90330
* Mulberry	Sb-125	9	6.57E-01	5.80E-01	5.84E-01	90331
Mulberry	Sb-125	9	4.19E-02	9.98E-02	9.99E-02	90332
Mulberry	Sb-125	9	-6.47E-03	7.74E-02	7.74E-02	92105
Mulberry	Sb-125	9	4.58E-02	7.00E-02	7.02E-02	90316
Mulberry	Sb-125	10.5	3.38E-02	3.98E-02	4.00E-02	90306
Mulberry	Sb-125	10.5	2.86E-02	4.05E-02	4.06E-02	90307
Mulberry	Sb-125	15	-2.36E-02	4.00E-02	4.00E-02	90403
Mulberry	Sb-125	15	1.10E-03	4.12E-02	4.12E-02	90405
Mulberry	Sb-125	18	-1.60E-01	1.35E-01	1.36E-01	90310
Mulberry	Sb-125	26.25	-2.76E-02	4.22E-02	4.23E-02	90359
Mulberry	Sb-125	26.25	1.58E-02	4.46E-02	4.46E-02	90360
Mulberry	Sb-125	27	4.50E-02	1.19E-01	1.19E-01	90334
Mulberry	Sb-125	27	-3.20E-02	7.81E-02	7.81E-02	92118
Mulberry	Sb-125	30	-1.11E-02	3.76E-02	3.76E-02	92097
Mulberry	Sb-125	34.75	-3.38E-03	7.12E-02	7.12E-02	90361
Mulberry	Sb-125	41	-1.68E-02	3.71E-02	3.72E-02	90266
Mulberry	Sb-125	41	2.21E-02	2.83E-02	2.84E-02	90275
Mulberry	Sb-125	42	-4.31E-04	3.47E-02	3.47E-02	90271
* Mulberry	Sb-125	42	3.80E-02	3.14E-02	3.16E-02	92095
Mulberry	Sb-125	43	1.54E-03	2.61E-02	2.61E-02	90261
Mulberry	Sb-125	43	-1.73E-02	2.19E-02	2.20E-02	90265
Mulberry	Sb-125	43	-1.09E-02	2.10E-02	2.10E-02	90273
Mulberry Fruit	Sb-125	9	5.04E-03	1.76E-02	1.77E-02	91010
Mulberry Fruit	Sb-125	27	3.99E-02	1.20E-01	1.20E-01	92122
Mulberry Fruit	Sb-125	30	-1.49E-01	2.65E-01	2.66E-01	92096
Mulberry Fruit	Sb-125	27	-7.51E-03	1.14E-02	1.15E-02	91011
Mulberry Fruit	Sb-125	27	-5.00E-03	1.67E-02	1.67E-02	91012
Onion	Sb-125	-2	-6.91E-02	1.58E-01	1.59E-01	92111
Onion	Sb-125	15	-2.12E-01	3.57E-01	3.57E-01	90407
* Onion	Sb-125	30	1.41E-01	1.25E-01	1.26E-01	92100
Onion	Sb-125	42	4.01E-02	1.73E-01	1.73E-01	92094
Pumpkin	Sb-125	19	-1.86E-03	6.58E-02	6.58E-02	90251
* Pumpkin	Sb-125	27	2.64E-02	2.20E-02	2.22E-02	90249
Reed Canary	Sb-125	26.2	3.97E-02	7.29E-02	7.30E-02	91002

Species	Radionuclide	Rivermile	pCi/g dry weight	Counting Error (2 Sigma)	Propagated Error (2 Sigma)	Sample Number
Rose	Sb-125	16	1.70E-02	4.01E-02	4.02E-02	90401
Squawberry	Sb-125	29	1.01E-02	5.27E-02	5.27E-02	90412
Tomato	Sb-125	19	1.98E-02	2.43E-02	2.43E-02	90262
Tomato	Sb-125	27	-2.71E-02	6.99E-02	6.99E-02	90260
Willow	Sb-125	-2	2.73E-02	3.40E-02	3.41E-02	92112
Willow	Sb-125	-2	1.10E-02	4.29E-02	4.29E-02	92124
Willow	Sb-125	4	4.23E-02	7.48E-02	7.49E-02	90301
Willow	Sb-125	6.5	-3.11E-02	4.02E-02	4.03E-02	90326
Willow	Sb-125	9	2.96E-02	3.68E-02	3.70E-02	90313
Willow	Sb-125	27	-1.69E-02	4.60E-02	4.60E-02	90417
Willow	Sb-125	41	-2.04E-02	3.09E-02	3.09E-02	90267
Willow	Sb-125	41	1.64E-02	3.00E-02	3.00E-02	90276
Willow	Sb-125	42	-5.60E-04	3.46E-02	3.46E-02	90270
Willow	Sb-125	42	-1.22E-02	6.59E-02	6.59E-02	92093
Yarrow	Sb-125	-2	-6.13E-02	6.14E-02	6.16E-02	92107
Yarrow	Sb-125	4	-2.92E-02	4.55E-02	4.56E-02	90298
Yarrow	Sb-125	6	-3.42E-02	5.62E-02	5.63E-02	90318
Yarrow	Sb-125	9	-1.60E-02	5.99E-02	5.99E-02	92103
Yarrow	Sb-125	9	2.55E-03	5.37E-02	5.37E-02	90315
Yarrow	Sb-125	10.5	-3.86E-02	9.73E-02	9.74E-02	90305
Yarrow	Sb-125	16	6.95E-02	7.00E-02	7.04E-02	90402
Yarrow	Sb-125	27	-3.20E-02	5.31E-02	5.32E-02	90419
Yarrow	Sb-125	27	-2.20E-02	5.21E-02	5.21E-02	92120
Yarrow	Sb-125	30	1.95E-02	5.21E-02	5.21E-02	92096
Yarrow	Sb-125	42	-4.66E-02	6.55E-02	6.57E-02	92091
* Asparagus	Sr-90	-2	2.53E-02	4.79E-03	6.69E-03	92113
* Asparagus	Sr-90	-2	4.03E-02	4.34E-03	9.67E-03	92130
* Asparagus	Sr-90	10.5	8.15E-02	1.04E-02	1.76E-02	90303
* Asparagus	Sr-90	26.25	2.86E-01	1.98E-02	5.56E-02	90336
* Asparagus	Sr-90	27	5.73E-01	2.58E-02	1.09E-01	90335
* Asparagus	Sr-90	30	1.83E-02	4.05E-03	5.52E-03	92102
* Chicory	Sr-90	4	9.07E-02	7.32E-03	1.82E-02	90297
* Chicory	Sr-90	6	1.65E-02	4.81E-03	5.87E-03	90320
* Chicory	Sr-90	9	2.76E-01	1.24E-02	5.35E-02	90312
* Chicory	Sr-90	9	1.96E-01	1.13E-02	3.60E-02	90256
* Chicory	Sr-90	10.5	1.30E+00	3.61E-02	2.40E-01	90304
* Chicory	Sr-90	26.25	5.06E-02	7.53E-03	1.16E-02	90413
* Chicory	Sr-90	27	8.72E-02	6.09E-03	2.15E-02	90418
* Chicory	Sr-90	29	3.26E-02	5.99E-03	9.71E-03	90410
* Chicory	Sr-90	30	1.86E-02	4.76E-03	6.11E-03	92101
Chokecherry	Sr-90	16	-8.15E-04	1.90E-03	1.99E-03	90408
* Chokecherry	Sr-90	29	2.50E-01	1.36E-02	4.62E-02	90337
* Chokecherry	Sr-90	43	1.10E-01	1.19E-02	2.28E-02	90263
* Dogbane	Sr-90	-2	3.46E-02	5.57E-03	8.63E-03	92108
* Dogbane	Sr-90	-2	5.43E-02	6.44E-03	1.22E-02	92126
* Dogbane	Sr-90	4	7.45E-02	7.50E-03	1.52E-02	90299
Dogbane	Sr-90	6	7.78E-04	2.82E-03	2.92E-03	90319
* Dogbane	Sr-90	6.5	9.46E-02	1.15E-02	2.12E-02	90325
* Dogbane	Sr-90	9	5.17E-01	2.21E-02	9.71E-02	90314
* Dogbane	Sr-90	9	2.96E-01	1.35E-02	5.74E-02	90259
* Dogbane	Sr-90	9	2.61E+00	1.68E-01	4.97E-01	90333
* Dogbane	Sr-90	16	2.62E-02	5.39E-03	7.83E-03	90425
* Milkweed	Sr-90	-2	5.57E-02	6.75E-03	1.35E-02	92132
* Milkweed	Sr-90	9	1.50E-01	1.09E-02	2.87E-02	92104
* Milkweed	Sr-90	27	4.65E-02	6.04E-03	1.10E-02	92116
* Milkweed	Sr-90	30	4.97E-02	7.37E-03	1.19E-02	92099
* Milkweed	Sr-90	42	6.63E-02	7.98E-03	1.53E-02	92092
* Mulberry	Sr-90	-2	1.57E-01	8.11E-03	3.50E-02	92109
* Mulberry	Sr-90	-2	1.72E-01	9.80E-03	3.90E-02	92128
* Mulberry	Sr-90	4	1.12E-01	6.80E-03	2.16E-02	90300
* Mulberry	Sr-90	6	9.29E-03	4.28E-03	4.73E-03	90321
Mulberry	Sr-90	6	2.20E-03	3.18E-03	3.29E-03	90322
* Mulberry	Sr-90	9	5.01E-01	1.78E-02	9.47E-02	90257
* Mulberry	Sr-90	9	5.99E+01	2.80E+00	1.08E+01	90329

Species	Radionuclide	Rivermile	pCi/g dry weight	Counting Error (2 Sigma)	Propagated Error (2 Sigma)	Sample Number
* Mulberry	Sr-90	9	5.12E+00	2.38E-01	9.59E-01	90330
* Mulberry	Sr-90	9	4.37E+02	2.48E+01	8.45E+01	90331
* Mulberry	Sr-90	9	2.73E+01	6.89E-01	5.11E+00	90332
* Mulberry	Sr-90	9	1.71E-01	1.16E-02	3.21E-02	92105
* Mulberry	Sr-90	10.5	8.80E-02	7.87E-03	1.78E-02	90306
* Mulberry	Sr-90	10.5	1.09E+00	2.47E-02	2.05E-01	90307
* Mulberry	Sr-90	15	1.64E-01	9.99E-03	4.13E-02	90403
* Mulberry	Sr-90	15	1.17E-01	1.16E-02	2.41E-02	90405
* Mulberry	Sr-90	18	5.72E-01	2.65E-02	1.05E-01	90310
* Mulberry	Sr-90	26.25	4.06E-01	1.91E-02	7.30E-02	90359
* Mulberry	Sr-90	26.25	1.68E-01	1.26E-02	3.26E-02	90360
* Mulberry	Sr-90	27	2.50E-01	1.44E-02	4.94E-02	90334
* Mulberry	Sr-90	27	4.67E-02	5.61E-03	1.28E-02	92118
* Mulberry	Sr-90	30	1.07E-02	3.58E-03	4.20E-03	92097
* Mulberry	Sr-90	34.75	4.68E-01	2.01E-02	8.50E-02	90361
* Mulberry	Sr-90	41	1.70E-01	1.25E-02	3.50E-02	90268
* Mulberry	Sr-90	41	1.42E-01	1.28E-02	2.89E-02	90275
* Mulberry	Sr-90	42	7.17E-02	6.71E-03	1.53E-02	90271
* Mulberry	Sr-90	42	3.67E-02	5.73E-03	9.05E-03	92095
* Mulberry	Sr-90	43	3.10E-02	6.12E-03	8.33E-03	90261
* Mulberry	Sr-90	43	6.91E-02	6.61E-03	1.47E-02	90265
* Mulberry	Sr-90	43	1.17E-02	3.66E-03	4.43E-03	90273
* Mulberry Fruit	Sr-90	9	1.38E-01	1.16E-02	2.80E-02	91010
Mulberry Fruit	Sr-90	27	4.30E-04	3.54E-03	3.67E-03	91011
Mulberry Fruit	Sr-90	27	3.23E-04	2.67E-03	2.86E-03	91012
Mulberry Fruit	Sr-90	27	9.70E-03	1.61E-02	1.70E-02	92122
Mulberry Fruit	Sr-90	30	0.00E+00	0.00E+00	0.00E+00	92096
* Onion	Sr-90	-2	2.85E-02	9.04E-03	1.09E-02	92111
* Onion	Sr-90	15	5.48E-02	1.08E-02	1.74E-02	90407
* Onion	Sr-90	30	2.76E-02	9.08E-03	1.15E-02	92100
* Onion	Sr-90	42	2.97E-02	1.94E-02	2.12E-02	92094
Pumpkin	Sr-90	19	7.37E-02	8.52E-03	1.61E-01	90251
Pumpkin	Sr-90	27	3.11E-03	3.26E-03	3.48E-03	90249
* Reed Canary	Sr-90	25.2	2.86E-02	5.76E-03	8.00E-03	91002
* Rose	Sr-90	15	3.47E-02	6.81E-03	9.27E-03	90401
* Squawberry	Sr-90	29	7.09E-02	8.56E-03	1.52E-02	90412
Tomato	Sr-90	19	3.46E-04	2.43E-03	2.62E-03	90252
Tomato	Sr-90	27	-3.65E-04	4.38E-03	4.48E-03	90250
* Willow	Sr-90	-2	8.70E-02	8.00E-03	1.98E-02	92124
* Willow	Sr-90	4	7.74E-02	8.83E-03	1.69E-02	90301
* Willow	Sr-90	6.5	1.09E-01	1.22E-02	4.31E-02	90326
* Willow	Sr-90	9	8.52E-01	3.03E-02	1.58E-01	90313
* Willow	Sr-90	27	6.55E-02	7.62E-03	1.40E-02	90417
* Willow	Sr-90	27	5.73E-02	4.82E-03	1.34E-02	92112
* Willow	Sr-90	41	8.13E-02	7.80E-03	1.67E-02	90267
* Willow	Sr-90	41	8.09E-02	9.33E-03	1.93E-02	90276
* Willow	Sr-90	42	8.97E-02	7.39E-03	1.86E-02	90270
* Willow	Sr-90	42	1.99E-02	5.50E-03	6.92E-03	92093
* Yarrow	Sr-90	-2	1.83E-02	5.12E-03	6.33E-03	92107
* Yarrow	Sr-90	4	6.35E-02	7.27E-03	1.34E-02	90298
* Yarrow	Sr-90	6	6.27E-03	2.92E-03	3.32E-03	90318
* Yarrow	Sr-90	9	9.10E-02	7.80E-03	1.87E-02	90315
* Yarrow	Sr-90	9	2.59E+00	4.06E-02	4.62E-01	90315
* Yarrow	Sr-90	9	2.70E-02	5.85E-03	7.77E-03	92103
* Yarrow	Sr-90	10.5	2.99E-01	1.49E-02	5.77E-02	90305
* Yarrow	Sr-90	15	6.62E-02	6.79E-03	1.43E-03	90402
* Yarrow	Sr-90	27	6.96E-02	7.97E-03	1.50E-02	90419
* Yarrow	Sr-90	27	1.45E-02	4.03E-03	5.42E-03	92120
* Yarrow	Sr-90	30	2.07E-02	4.98E-03	6.42E-03	92098
* Yarrow	Sr-90	42	3.34E-02	6.54E-03	9.30E-03	92091
* Asparagus	Tc-99	-2	1.39E+00	2.19E-01	6.86E-01	92130
Asparagus	Tc-99	-2	-1.24E-01	1.77E-01	5.53E-01	92113
Asparagus	Tc-99	30	1.26E-01	1.88E-01	5.83E-01	92102
* Chicory	Tc-99	30	8.45E-01	2.02E-01	6.32E-01	92101

	Species	Radionuclide	Rivermile	pCi/g dry weight	Counting Error (2 Sigma)	Propagated Error (2 Sigma)	Sample Number
	Dogbane	Tc-99	-2	-2.64E-01	1.76E-01	5.49E-01	92126
	Dogbane	Tc-99	-2	-1.95E-01	1.79E-01	5.57E-01	92108
	Milkweed	Tc-99	-2	-2.32E-03	1.76E-01	5.52E-01	92132
	Milkweed	Tc-99	27	2.90E-02	1.85E-01	5.79E-01	92116
	Milkweed	Tc-99	30	5.12E-02	1.88E-01	5.86E-01	92099
	Mulberry	Tc-99	-2	-1.07E-01	1.72E-01	5.37E-01	92128
	Mulberry	Tc-99	-2	-6.80E-02	1.76E-01	5.46E-01	92109
	Mulberry	Tc-99	27	-9.33E-03	1.79E-01	5.57E-01	92118
*	Mulberry	Tc-99	30	1.67E+01	4.49E-01	2.29E+00	92097
	Mulberry Fruit	Tc-99	27	-3.70E-02	1.76E-01	5.49E-01	92122
	Mulberry Fruit	Tc-99	30	5.89E-01	2.01E-01	6.29E-01	92098
	Onion	Tc-99	-2	6.80E-02	1.71E-01	5.30E-01	92111
	Onion	Tc-99	30	2.16E-01	1.79E-01	5.57E-01	92100
	Willow	Tc-99	-2	-1.86E-01	1.77E-01	5.52E-01	92124
	Yarrow	Tc-99	-2	-3.56E-03	1.84E-01	5.68E-01	92107
	Yarrow	Tc-99	27	-1.68E-01	1.79E-01	5.57E-01	92120
	Yarrow	Tc-99	27	-4.24E-02	1.70E-01	5.30E-01	92112
	Yarrow	Tc-99	30	5.08E-01	1.87E-01	5.80E-01	92096
*	Chicory	Th-232	9	1.27E-01	8.48E-02	8.57E-02	90312
*	Mulberry	Th-232	15	7.29E-02	5.39E-02	5.40E-02	90405
*	Yarrow	Th-232	4	1.26E-01	6.88E-02	7.00E-02	90298
*	Asparagus	U-234	-2	2.00E-02	4.66E-03	5.39E-03	92113
*	Asparagus	U-234	-2	6.80E-03	3.22E-03	3.75E-03	92130
*	Asparagus	U-234	10.5	1.98E-01	2.39E-02	3.33E-02	90303
	Asparagus	U-234	30	-4.25E-04	1.58E-03	2.33E-03	92102
*	Chicory	U-234	4	7.19E-02	1.78E-02	2.02E-02	90297
*	Chicory	U-234	6	1.55E-02	1.29E-03	1.87E-03	90320
*	Chicory	U-234	9	1.18E-01	9.38E-03	1.46E-02	90256
*	Chicory	U-234	9	8.21E-02	1.27E-02	1.55E-02	90312
*	Chicory	U-234	10.5	5.04E-02	1.31E-02	1.46E-02	90304
*	Chicory	U-234	26.25	1.47E-01	3.67E-03	1.31E-02	90413
*	Chicory	U-234	27	8.69E-02	4.03E-03	8.62E-03	90418
*	Chicory	U-234	29	1.56E-02	1.35E-03	1.92E-03	90410
	Chicory	U-234	30	-5.39E-04	1.42E-03	2.22E-03	92101
*	Chokecherry	U-234	18	6.50E-04	2.94E-04	3.47E-04	90408
*	Chokecherry	U-234	43	3.33E-02	5.30E-03	6.44E-03	90263
*	Dogbane	U-234	-2	3.44E-03	2.28E-03	2.89E-03	92108
*	Dogbane	U-234	-2	4.25E-03	2.82E-03	3.38E-03	92126
*	Dogbane	U-234	4	2.01E-02	8.67E-03	9.23E-03	90299
*	Dogbane	U-234	6	1.38E-03	4.02E-04	4.57E-04	90319
*	Dogbane	U-234	6.5	2.90E-02	1.97E-03	3.20E-03	90325
*	Dogbane	U-234	9	1.68E-01	1.13E-02	1.94E-02	90259
*	Dogbane	U-234	9	1.32E-02	5.88E-03	6.34E-03	90314
*	Dogbane	U-234	15	1.95E-03	4.60E-04	5.22E-04	90425
*	Milkweed	U-234	-2	9.72E-03	3.02E-03	3.64E-03	92132
*	Milkweed	U-234	9	3.64E-03	2.38E-03	2.98E-03	92104
*	Milkweed	U-234	27	8.34E-03	2.85E-03	3.46E-03	92116
	Milkweed	U-234	30	1.96E-03	1.96E-03	2.64E-03	92099
*	Milkweed	U-234	42	2.16E-02	5.08E-03	5.82E-03	92092
*	Mulberry	U-234	-2	9.68E-03	4.07E-03	4.56E-03	92128
*	Mulberry	U-234	4	3.42E-02	1.33E-02	1.43E-02	90300
*	Mulberry	U-234	6	2.06E-02	1.48E-03	2.32E-03	90321
*	Mulberry	U-234	6	6.53E-04	8.67E-05	2.02E-04	90322
*	Mulberry	U-234	6.5	1.99E-02	2.01E-03	2.68E-03	90327
*	Mulberry	U-234	9	4.36E-02	5.79E-03	7.35E-03	90257
*	Mulberry	U-234	9	9.91E-03	3.57E-03	4.12E-03	92105
	Mulberry	U-234	9	-2.25E-03	0.00E+00	4.98E-03	90316
*	Mulberry	U-234	10.5	5.97E-03	4.16E-03	4.53E-03	90306
*	Mulberry	U-234	10.5	1.33E-02	6.23E-03	6.67E-03	90307
*	Mulberry	U-234	15	1.32E-02	1.68E-03	2.06E-03	90403
*	Mulberry	U-234	15	1.01E-02	1.06E-03	1.39E-03	90405
*	Mulberry	U-234	18	6.59E-02	1.26E-02	1.48E-02	90310
*	Mulberry	U-234	27	4.52E-03	3.44E-03	3.90E-03	92118
	Mulberry	U-234	30	-8.84E-04	1.76E-03	2.45E-03	92097

Species	Radionuclide	Rivermile	pCi/g dry weight	Counting Error (2 Sigma)	Propagated Error (2 Sigma)	Sample Number
* Mulberry	U-234	41	1.33E-01	1.04E-02	1.63E-02	90268
* Mulberry	U-234	41	6.05E-02	7.13E-03	9.34E-03	90278
* Mulberry	U-234	42	6.66E-02	6.84E-03	9.54E-03	90271
* Mulberry	U-234	42	9.96E-03	6.56E-03	6.93E-03	92096
* Mulberry	U-234	43	4.16E-02	5.76E-03	7.22E-03	90261
* Mulberry	U-234	43	6.07E-02	7.09E-03	9.32E-03	90266
* Mulberry	U-234	43	6.49E-02	6.97E-03	9.44E-03	90273
Mulberry Fruit	U-234	27	2.69E-03	3.42E-03	3.65E-03	92122
Mulberry Fruit	U-234	30	1.32E-03	2.65E-03	3.17E-03	92098
* Onion	U-234	-2	1.16E-01	1.03E-02	1.52E-02	92111
* Onion	U-234	15	1.60E-01	8.55E-03	1.40E-02	90407
* Onion	U-234	30	1.08E-01	1.04E-02	1.48E-02	92100
* Onion	U-234	42	3.61E-01	1.75E-02	3.80E-02	92094
* Rose	U-234	15	7.30E-03	9.21E-04	1.14E-03	90401
* Squawberry	U-234	29	6.17E-03	7.92E-04	9.76E-04	90412
* Willow	U-234	-2	1.46E-02	7.64E-03	8.06E-03	92112
Willow	U-234	-2	2.11E-03	2.34E-03	2.92E-03	92124
* Willow	U-234	6.5	2.37E-02	1.94E-03	2.55E-03	90326
* Willow	U-234	9	6.65E-03	5.44E-03	5.84E-03	90313
* Willow	U-234	27	5.79E-02	2.27E-03	3.96E-03	90417
* Willow	U-234	41	6.89E-02	7.91E-03	1.05E-02	90267
* Willow	U-234	41	7.70E-02	7.47E-03	1.05E-02	90276
* Willow	U-234	42	3.76E-02	5.66E-03	7.15E-03	90270
Willow	U-234	42	5.15E-04	1.49E-03	2.28E-03	92093
Yarrow	U-234	-2	-2.99E-04	2.40E-03	2.96E-03	92107
* Yarrow	U-234	4	1.21E-01	2.14E-02	2.63E-02	90296
* Yarrow	U-234	6	5.78E-03	7.21E-04	8.99E-04	90318
* Yarrow	U-234	9	4.64E-02	5.45E-03	9.65E-03	90315
* Yarrow	U-234	10.5	1.95E-02	9.81E-03	1.03E-02	90305
* Yarrow	U-234	15	2.16E-02	1.44E-03	2.37E-03	90402
* Yarrow	U-234	27	5.61E-02	2.80E-03	5.74E-03	90419
Yarrow	U-234	27	2.22E-03	1.90E-03	2.58E-03	92120
* Yarrow	U-234	30	3.76E-03	2.35E-03	2.96E-03	92096
* Yarrow	U-234	42	1.20E-02	3.82E-03	4.40E-03	92091
* Willow	U-234	4	4.65E-02	1.31E-02	1.45E-02	90301
Yarrow	U-234	9	-1.80E-03	1.11E-03	2.03E-03	92103
Asparagus	U-235	-2	-8.61E-04	5.45E-04	1.36E-03	92113
Asparagus	U-235	-2	-2.26E-04	9.32E-04	1.56E-03	92130
* Asparagus	U-235	10.5	6.64E-03	4.64E-03	4.97E-03	90303
Asparagus	U-235	30	-6.83E-04	6.88E-04	1.53E-03	92102
Chicory	U-235	4	1.52E-04	3.67E-03	3.68E-03	90297
* Chicory	U-235	6	4.33E-04	2.38E-04	2.72E-04	90320
* Chicory	U-235	9	4.56E-03	2.00E-03	2.40E-03	90258
Chicory	U-235	9	2.86E-03	2.67E-03	2.97E-03	90312
Chicory	U-235	10.5	1.39E-03	2.74E-03	3.06E-03	90304
* Chicory	U-235	26.25	4.66E-03	6.58E-04	7.81E-04	90413
* Chicory	U-235	27	3.06E-03	7.68E-04	8.25E-04	90418
* Chicory	U-235	29	6.71E-04	2.99E-04	3.30E-04	90410
Chicory	U-235	30	-8.62E-04	5.02E-04	1.34E-03	92101
Chokecherry	U-235	18	-1.28E-05	9.73E-05	1.57E-04	90406
Chokecherry	U-235	43	6.36E-04	1.30E-03	1.80E-03	90263
Dogbane	U-235	-2	-8.66E-04	4.91E-04	1.34E-03	92105
Dogbane	U-235	-2	-1.19E-03	7.66E-04	1.46E-03	92126
Dogbane	U-235	4	-9.09E-04	0.00E+00	2.79E-03	90299
Dogbane	U-235	6	7.66E-05	1.31E-04	1.81E-04	90319
* Dogbane	U-235	6.5	8.40E-04	3.52E-04	3.81E-04	90325
* Dogbane	U-235	9	5.73E-03	2.21E-03	2.61E-03	90259
Dogbane	U-235	9	-3.38E-04	1.11E-03	1.65E-03	90314
Dogbane	U-235	15	1.48E-04	1.53E-04	1.95E-04	90425
Milkweed	U-235	-2	-4.98E-04	7.37E-04	1.45E-03	92132
Milkweed	U-235	9	-3.61E-04	7.48E-04	1.46E-03	92104
Milkweed	U-235	27	-6.54E-04	6.86E-04	1.42E-03	92116
Milkweed	U-235	30	-6.93E-04	6.37E-04	1.50E-03	92099
Milkweed	U-235	42	7.10E-04	1.41E-03	1.89E-03	92092

Species	Radionuclide	Rivermile	pCi/g dry weight	Counting Error (2 Sigma)	Propagated Error (2 Sigma)	Sample Number
Mulberry	U-235	-2	1.12E-04	1.17E-03	1.71E-03	92128
Mulberry	U-235	4	2.38E-04	2.29E-03	2.61E-03	90300
* Mulberry	U-235	6	5.34E-04	2.58E-04	2.92E-04	90321
Mulberry	U-235	6	-5.56E-05	1.75E-05	1.24E-04	90322
* Mulberry	U-235	6.5	4.99E-04	3.49E-04	3.74E-04	90327
Mulberry	U-235	9	1.58E-03	1.44E-03	1.91E-03	90257
Mulberry	U-235	9	-3.66E-04	8.95E-04	1.53E-03	92105
Mulberry	U-235	9	-8.60E-04	0.00E+00	4.86E-03	90316
Mulberry	U-235	10.5	3.45E-04	1.84E-03	2.17E-03	90306
Mulberry	U-235	10.5	3.72E-04	1.76E-03	2.13E-03	90307
* Mulberry	U-235	15	3.83E-04	3.15E-04	3.41E-04	90403
* Mulberry	U-235	18	3.82E-03	3.29E-03	3.52E-03	90310
Mulberry	U-235	27	-7.70E-05	1.18E-03	1.71E-03	92118
Mulberry	U-235	30	-5.81E-04	8.89E-04	1.53E-03	92097
* Mulberry	U-235	41	4.07E-03	1.99E-03	2.39E-03	90268
Mulberry	U-235	41	5.85E-04	1.17E-03	1.70E-03	90275
Mulberry	U-235	42	1.22E-03	1.18E-03	1.73E-03	90271
Mulberry	U-235	42	-9.08E-04	0.00E+00	2.74E-03	92095
Mulberry	U-235	43	5.84E-04	1.04E-03	1.61E-03	90261
Mulberry	U-235	43	2.85E-04	9.71E-04	1.58E-03	90265
* Mulberry	U-235	43	2.78E-03	1.67E-03	2.10E-03	90273
Mulberry Fruit	U-235	27	-1.18E-03	1.18E-03	1.71E-03	92122
Mulberry Fruit	U-235	30	-6.88E-04	7.97E-04	1.48E-03	92098
Onion	U-235	-2	1.90E-03	1.62E-03	2.06E-03	92111
* Onion	U-235	15	4.24E-03	9.54E-04	1.07E-03	90407
* Onion	U-235	30	2.87E-03	1.95E-03	2.34E-03	92100
* Onion	U-235	42	1.51E-02	3.67E-03	4.14E-03	92094
* Rose	U-235	15	2.34E-04	1.95E-04	2.33E-04	90401
Squawberry	U-235	29	1.78E-04	1.62E-04	2.05E-04	90412
Willow	U-235	-2	-4.57E-04	1.61E-03	2.04E-03	92112
Willow	U-235	-2	3.10E-04	1.20E-03	1.72E-03	92124
* Willow	U-235	6.5	7.25E-04	3.61E-04	3.88E-04	90326
Willow	U-235	9	-9.05E-04	0.00E+00	2.34E-03	90313
* Willow	U-235	27	9.89E-04	3.88E-04	4.21E-04	90417
* Willow	U-235	41	2.47E-03	1.78E-03	2.19E-03	90267
* Willow	U-235	41	1.96E-03	1.46E-03	1.93E-03	90276
Willow	U-235	42	4.36E-05	1.00E-03	1.59E-03	90270
Willow	U-235	42	-7.91E-04	4.15E-04	1.31E-03	92093
Yarrow	U-235	-2	-1.19E-03	5.55E-04	1.37E-03	92107
* Yarrow	U-235	4	6.48E-03	5.83E-03	6.03E-03	90298
Yarrow	U-235	6	1.09E-04	1.38E-04	1.86E-04	90318
Yarrow	U-235	9	1.74E-03	1.98E-03	2.33E-03	90315
Yarrow	U-235	10.5	1.28E-03	4.39E-03	4.57E-03	90305
* Yarrow	U-235	15	6.21E-04	2.64E-04	2.98E-04	90402
* Yarrow	U-235	27	1.61E-03	4.80E-04	5.17E-04	90419
Yarrow	U-235		-4.34E-04	6.41E-04	1.39E-03	92120
Yarrow	U-235	30	-4.90E-04	9.15E-04	1.54E-03	92096
Yarrow	U-235	42	-3.63E-04	9.03E-04	1.54E-03	92091
Mulberry	U-235	15	2.12E-04	1.89E-04	2.27E-04	90405
Willow	U-235	4	8.08E-04	2.39E-03	2.69E-03	90301
Yarrow	U-235	9	-3.73E-04	7.28E-04	1.44E-03	92103
* Asparagus	U-238	-2	1.99E-02	4.56E-03	5.06E-03	92113
* Asparagus	U-238	-2	5.15E-03	2.67E-03	2.88E-03	92130
* Asparagus	U-238	10.5	4.25E-02	1.11E-02	1.22E-02	90303
Asparagus	U-238	30	7.92E-04	1.61E-03	1.84E-03	92102
* Chicory	U-238	4	4.29E-02	1.38E-02	1.49E-02	90297
* Chicory	U-238	6	5.63E-03	7.86E-04	9.32E-04	90320
* Chicory	U-238	9	2.35E-02	4.28E-03	4.93E-03	90258
* Chicory	U-238	9	1.81E-02	6.12E-03	6.51E-03	90312
* Chicory	U-238	10.5	2.27E-02	9.08E-03	9.55E-03	90304
* Chicory	U-238	26.25	3.20E-02	1.71E-03	3.22E-03	90413
* Chicory	U-238	27	3.16E-02	2.44E-03	3.69E-03	90418
* Chicory	U-238	29	8.96E-03	1.02E-03	1.29E-03	90410
Chicory	U-238	30	-1.32E-04	1.16E-03	1.45E-03	92101

SHORELINE VEGETATION 1990-1992

	Species	Radionuclide	Rivermile	pCi/g dry weight	Counting Error (2 Sigma)	Propagated Error (2 Sigma)	Sample Number
*	Chokecherry	U-238	18	4.00E-04	2.33E-04	2.53E-04	90408
*	Chokecherry	U-238	43	7.84E-03	2.96E-03	3.20E-03	90263
	Dogbane	U-238	-2	1.97E-03	1.90E-03	2.12E-03	92108
*	Dogbane	U-238	-2	3.08E-03	2.55E-03	2.73E-03	92126
*	Dogbane	U-238	4	6.68E-03	5.28E-03	5.44E-03	90299
*	Dogbane	U-238	6	8.66E-04	3.20E-04	3.43E-04	90319
*	Dogbane	U-238	6.5	1.17E-02	1.26E-03	1.62E-03	90325
*	Dogbane	U-238	9	3.06E-02	4.90E-03	5.78E-03	90259
	Dogbane	U-238	9	2.81E-03	3.14E-03	3.29E-03	90314
*	Dogbane	U-238	15	5.99E-04	2.73E-04	2.93E-04	90425
*	Milkweed	U-238	-2	7.81E-03	2.60E-03	2.87E-03	92132
*	Milkweed	U-238	9	2.88E-03	2.10E-03	2.31E-03	92104
*	Milkweed	U-238	27	5.74E-03	2.41E-03	2.65E-03	92116
	Milkweed	U-238	30	1.26E-03	1.77E-03	1.99E-03	92099
*	Milkweed	U-238	42	1.84E-02	4.62E-03	5.07E-03	92092
*	Mulberry	U-238	-2	6.40E-03	3.41E-03	3.61E-03	92128
*	Mulberry	U-238	4	7.49E-03	6.47E-03	6.63E-03	90300
*	Mulberry	U-238	6	5.65E-03	7.85E-04	9.32E-04	90321
*	Mulberry	U-238	6	1.77E-04	5.42E-05	1.04E-04	90322
*	Mulberry	U-238	6.5	6.94E-03	1.20E-03	1.35E-03	90327
*	Mulberry	U-238	9	8.19E-03	2.69E-03	2.97E-03	90257
*	Mulberry	U-238	9	6.15E-03	2.84E-03	3.06E-03	92105
	Mulberry	U-238	9	-1.18E-03	3.43E-03	3.52E-03	90316
	Mulberry	U-238	10.5	2.08E-04	2.74E-03	2.86E-03	90306
	Mulberry	U-238	10.5	1.51E-03	2.79E-03	2.93E-03	90307
*	Mulberry	U-238	15	3.52E-03	8.88E-04	9.49E-04	90403
*	Mulberry	U-238	15	2.67E-03	5.59E-04	6.14E-04	90405
*	Mulberry	U-238	18	1.36E-02	5.93E-03	6.22E-03	90310
	Mulberry	U-238	27	1.99E-03	2.69E-03	2.85E-03	92118
	Mulberry	U-238	30	7.61E-04	1.66E-03	1.88E-03	92097
*	Mulberry	U-238	41	5.88E-02	6.96E-03	8.96E-03	90268
*	Mulberry	U-238	41	1.35E-02	3.52E-03	3.88E-03	90275
*	Mulberry	U-238	42	1.39E-02	3.22E-03	3.62E-03	90271
*	Mulberry	U-238	42	1.05E-02	6.29E-03	6.51E-03	92095
*	Mulberry	U-238	43	9.28E-03	2.91E-03	3.19E-03	90261
*	Mulberry	U-238	43	1.74E-02	3.88E-03	4.35E-03	90265
*	Mulberry	U-238	43	1.77E-02	3.74E-03	4.22E-03	90273
	Mulberry Fruit	U-238	27	2.02E-03	3.02E-03	3.17E-03	92122
	Mulberry Fruit	U-238	30	4.77E-04	2.02E-03	2.21E-03	92098
*	Onion	U-238	-2	9.34E-02	9.24E-03	1.29E-02	92111
*	Onion	U-238	15	1.09E-01	4.71E-03	1.04E-02	90407
*	Onion	U-238	30	8.46E-02	9.15E-03	1.23E-02	92100
*	Onion	U-238	42	3.41E-01	1.70E-02	3.61E-02	92094
*	Rose	U-238	15	2.48E-03	5.54E-04	6.05E-04	90401
*	Squawberry	U-238	29	1.71E-03	4.28E-04	4.65E-04	90412
*	Willow	U-238	-2	8.53E-03	6.17E-03	6.34E-03	92112
	Willow	U-238	-2	1.98E-03	2.07E-03	2.27E-03	92124
*	Willow	U-238	6.5	1.14E-02	1.35E-03	1.68E-03	90326
*	Willow	U-238	9	5.60E-03	4.76E-03	4.90E-03	90313
*	Willow	U-238	27	8.07E-03	1.05E-03	1.27E-03	90417
*	Willow	U-238	41	1.77E-02	4.19E-03	4.64E-03	90267
*	Willow	U-238	41	1.94E-02	3.85E-03	4.39E-03	90276
*	Willow	U-238	42	1.13E-02	3.55E-03	3.66E-03	90270
	Willow	U-238	42	-4.68E-04	1.04E-03	1.36E-03	92093
	Yarrow	U-238	-2	-1.40E-04	2.53E-03	2.68E-03	92107
*	Yarrow	U-238	4	7.31E-02	1.66E-02	1.90E-02	90298
*	Yarrow	U-238	6	2.35E-03	4.67E-04	5.20E-04	90318
*	Yarrow	U-238	9	3.65E-02	7.54E-03	8.50E-03	90315
*	Yarrow	U-238	10.5	2.36E-02	1.05E-02	1.10E-02	90305
*	Yarrow	U-238	15	6.01E-03	7.65E-04	9.31E-04	90402
*	Yarrow	U-238	27	1.61E-02	1.48E-03	2.04E-03	90419
	Yarrow	U-238	27	1.77E-03	1.57E-03	1.82E-03	92120
*	Yarrow	U-238	30	3.52E-03	2.15E-03	2.36E-03	92096
*	Yarrow	U-238	42	1.62E-02	4.21E-03	4.61E-03	92091

Species	Radionuclide	Rivermile	pCi/g dry weight	Counting Error (2 Sigma)	Propagated Error (2 Sigma)	Sample Number
* Willow	U-238	4	2.63E-02	1.00E-02	1.06E-02	90301
Yarrow	U-238	9	-7.59E-04	1.06E-03	1.36E-03	92103
Asparagus	Zn-65	-2	-7.86E-03	4.34E-02	4.34E-02	92113
Asparagus	Zn-65	-2	7.46E-03	3.04E-02	3.04E-02	92130
Asparagus	Zn-65	10.5	-6.76E-02	1.45E-01	1.45E-01	90303
Asparagus	Zn-65	26.25	-6.40E-02	1.17E-01	1.17E-01	90336
Asparagus	Zn-65	27	-2.03E-02	1.01E-01	1.01E-01	90335
Asparagus	Zn-65	30	-9.38E-02	5.85E-02	5.93E-02	92102
Chicory	Zn-65	4	5.41E-02	1.23E-01	1.23E-01	90297
Chicory	Zn-65	6	-6.73E-02	1.19E-01	1.19E-01	90320
Chicory	Zn-65	9	-4.19E-02	5.44E-02	5.46E-02	90258
Chicory	Zn-65	9	-1.09E-01	1.16E-01	1.17E-01	90312
Chicory	Zn-65	10.5	5.21E-02	1.28E-01	1.28E-01	90304
Chicory	Zn-65	26.25	1.24E-01	1.94E-01	1.95E-01	90413
Chicory	Zn-65	27	-8.47E-02	1.43E-01	1.44E-01	90418
Chicory	Zn-65	29	-8.22E-02	1.56E-01	1.56E-01	90410
Chicory	Zn-65	30	-1.25E-01	8.29E-02	8.39E-02	92101
Chokecherry	Zn-65	18	-1.08E-01	1.39E-01	1.39E-01	90408
Chokecherry	Zn-65	29	-1.21E-02	5.50E-02	5.50E-02	90337
Chokecherry	Zn-65	43	-4.15E-02	4.08E-02	4.10E-02	90263
Dogbane	Zn-65	-2	-1.26E-02	5.50E-02	5.50E-02	92108
Dogbane	Zn-65	-2	7.77E-03	4.69E-02	4.69E-02	92126
Dogbane	Zn-65	4	-2.14E-02	1.12E-01	1.12E-01	90299
Dogbane	Zn-65	6	-2.01E-02	1.34E-01	1.34E-01	90319
* Dogbane	Zn-65	6.5	1.63E-01	1.30E-01	1.31E-01	90325
Dogbane	Zn-65	9	-5.83E-02	5.17E-02	5.21E-02	90259
Dogbane	Zn-65	9	-5.71E-02	9.02E-02	9.04E-02	90333
Dogbane	Zn-65	9	-1.13E-02	9.31E-02	9.31E-02	90314
Dogbane	Zn-65	15	-4.20E-02	5.09E-02	5.11E-02	90425
Milkweed	Zn-65	-2	4.17E-02	7.20E-02	7.21E-02	92132
Milkweed	Zn-65	9	-2.46E-02	6.55E-02	6.55E-02	92104
Milkweed	Zn-65	27	-1.23E-02	1.00E-01	1.00E-01	92116
Milkweed	Zn-65	30	1.26E-03	8.74E-02	8.74E-02	92099
Milkweed	Zn-65	42	-1.41E-01	8.17E-02	8.29E-02	92092
Mulberry	Zn-65	-2	-8.10E-02	5.38E-02	5.44E-02	92109
Mulberry	Zn-65	-2	1.31E-02	4.55E-02	4.55E-02	92128
Mulberry	Zn-65	4	-9.09E-03	1.41E-01	1.41E-01	90300
Mulberry	Zn-65	6	-6.19E-02	1.34E-01	1.34E-01	90321
Mulberry	Zn-65	6	3.06E-02	1.25E-01	1.25E-01	90322
Mulberry	Zn-65	6.5	-1.59E-01	1.50E-01	1.51E-01	90327
Mulberry	Zn-65	9	-1.82E-02	6.66E-02	6.66E-02	90257
Mulberry	Zn-65	9	-9.02E-03	9.24E-02	9.24E-02	90329
Mulberry	Zn-65	9	-7.43E-01	1.50E+00	1.50E+00	90330
Mulberry	Zn-65	9	6.27E-01	1.04E+00	1.05E+00	90331
Mulberry	Zn-65	9	-3.44E-02	1.85E-01	1.85E-01	90332
Mulberry	Zn-65	9	1.92E-02	7.65E-02	7.65E-02	92105
Mulberry	Zn-65	9	3.37E-02	1.07E-01	1.08E-01	90316
Mulberry	Zn-65	10.5	7.70E-03	9.36E-02	9.36E-02	90306
Mulberry	Zn-65	10.5	-1.13E-01	9.03E-02	9.10E-02	90307
Mulberry	Zn-65	15	-1.95E-01	1.27E-01	1.28E-01	90403
Mulberry	Zn-65	15	5.31E-03	1.33E-01	1.33E-01	90405
Mulberry	Zn-65	18	-5.94E-02	1.78E-01	1.78E-01	90310
Mulberry	Zn-65	26.25	-5.72E-03	9.64E-02	9.64E-02	90359
Mulberry	Zn-65	26.25	-4.62E-02	1.05E-01	1.05E-01	90360
Mulberry	Zn-65	27	-4.00E-02	2.45E-01	2.45E-01	90334
Mulberry	Zn-65	27	-5.05E-02	8.75E-02	8.76E-02	92118
Mulberry	Zn-65	30	-4.50E-02	4.83E-02	4.85E-02	92097
Mulberry	Zn-65	34.75	2.20E-03	1.56E-01	1.56E-01	90361
Mulberry	Zn-65	41	-3.75E-02	7.60E-02	7.61E-02	90268
Mulberry	Zn-65	41	-3.34E-02	5.88E-02	5.89E-02	90275
Mulberry	Zn-65	42	-2.69E-02	7.26E-02	7.26E-02	90271
Mulberry	Zn-65	42	3.05E-02	4.11E-02	4.13E-02	92095
Mulberry	Zn-65	43	-1.42E-03	6.58E-02	6.58E-02	90261
Mulberry	Zn-65	43	-2.71E-02	4.37E-02	4.38E-02	90265

Species	Radionuclide	Rivermile	pCi/g dry weight	Counting Error (2 Sigma)	Propagated Error (2 Sigma)	Sample Number
Mulberry	Zn-65	43	-1.40E-02	4.43E-02	4.43E-02	90273
Mulberry Fruit	Zn-65	9	-3.67E-03	2.46E-02	2.46E-02	91010
* Mulberry Fruit	Zn-65	27	1.64E-01	1.24E-01	1.25E-01	92122
Mulberry Fruit	Zn-65	30	-6.63E-03	2.84E-01	2.84E-01	92098
Mulberry Fruit	Zn-65	27	4.74E-03	1.47E-02	1.47E-02	91011
Mulberry Fruit	Zn-65	27	1.08E-02	1.61E-02	1.62E-02	91012
Onion	Zn-65	-2	1.66E-01	1.70E-01	1.70E-01	92111
Onion	Zn-65	15	-7.10E-01	7.51E-01	7.55E-01	90407
Onion	Zn-65	30	4.59E-02	1.45E-01	1.45E-01	92100
Onion	Zn-65	42	-6.39E-02	1.90E-01	1.91E-01	92094
Pumpkin	Zn-65	19	-1.14E-01	8.84E-02	8.92E-02	90251
Pumpkin	Zn-65	27	4.57E-03	3.30E-02	3.30E-02	90249
Reed Canary	Zn-65	28.2	-6.31E-02	1.74E-01	1.74E-01	91002
Rose	Zn-65	15	-5.59E-02	1.03E-01	1.03E-01	90401
Squawberry	Zn-65	29	-1.24E-01	1.56E-01	1.57E-01	90412
Tomato	Zn-65	19	-2.52E-02	3.41E-02	3.04E-01	90252
Tomato	Zn-65	27	-7.69E-02	1.21E-01	1.21E-01	90250
Willow	Zn-65	-2	-5.21E-03	4.41E-02	4.41E-02	92112
Willow	Zn-65	-2	5.21E-03	4.79E-02	4.79E-02	92124
Willow	Zn-65	4	-1.70E-01	1.49E-01	1.50E-01	90301
Willow	Zn-65	6.5	-8.21E-02	9.76E-02	9.79E-02	90326
Willow	Zn-65	9	-1.88E-02	7.36E-02	7.36E-02	90313
Willow	Zn-65	27	-6.53E-02	1.09E-01	1.09E-01	90417
Willow	Zn-65	41	3.80E-02	5.13E-02	5.15E-02	90267
Willow	Zn-65	41	-1.67E-02	5.56E-02	5.56E-02	90276
Willow	Zn-65	42	-6.21E-02	5.82E-02	5.82E-02	90270
Willow	Zn-65	42	3.01E-02	7.72E-02	7.73E-02	92093
Yarrow	Zn-65	-2	-2.28E-02	8.11E-02	8.11E-02	92107
Yarrow	Zn-65	4	-6.23E-02	9.63E-02	9.65E-02	90298
Yarrow	Zn-65	6	-2.94E-02	1.71E-01	1.71E-01	90318
Yarrow	Zn-65	9	1.92E-02	7.96E-02	7.96E-02	92103
Yarrow	Zn-65	9	-3.14E-02	1.09E-01	1.09E-01	90315
Yarrow	Zn-65	10.5	3.68E-02	1.74E-01	1.74E-01	90305
Yarrow	Zn-65	15	-1.65E-01	1.83E-01	1.84E-01	90402
Yarrow	Zn-65	27	-1.69E-01	1.44E-01	1.45E-01	90419
Yarrow	Zn-65	27	2.15E-02	5.97E-02	5.97E-02	92120
Yarrow	Zn-65	30	-2.42E-02	6.14E-02	6.14E-02	92096
Yarrow	Zn-65	42	-6.41E-02	8.31E-02	8.34E-02	92091
Asparagus	Zr/Nb-95	-2	-3.27E-02	5.82E-02	5.83E-02	92113
Asparagus	Zr/Nb-95	-2	-9.48E-03	2.23E-02	2.23E-02	92130
Asparagus	Zr/Nb-95	30	-4.56E-02	7.37E-02	7.39E-02	92102
Chicory	Zr/Nb-95	30	1.72E-02	9.78E-02	9.78E-02	92101
Dogbane	Zr/Nb-95	-2	7.81E-03	7.31E-02	7.31E-02	92108
Dogbane	Zr/Nb-95	-2	1.44E-02	3.88E-02	3.88E-02	92126
Milkweed	Zr/Nb-95	-2	-3.19E-02	9.31E-02	9.32E-02	92132
Milkweed	Zr/Nb-95	9	4.60E-04	8.62E-02	8.62E-02	92104
Milkweed	Zr/Nb-95	27	3.99E-03	1.36E-01	1.36E-01	92116
Milkweed	Zr/Nb-95	30	-8.77E-02	1.08E-01	1.08E-01	92099
Milkweed	Zr/Nb-95	42	1.46E-02	9.61E-02	9.62E-02	92092
Mulberry	Zr/Nb-95	-2	1.30E-02	5.82E-02	5.82E-02	92109
Mulberry	Zr/Nb-95	-2	-2.76E-03	4.06E-02	4.06E-02	92128
Mulberry	Zr/Nb-95	9	-7.02E-02	1.35E-01	1.35E-01	92105
Mulberry	Zr/Nb-95	27	8.51E-02	1.13E-01	1.14E-01	92118
Mulberry	Zr/Nb-95	30	1.06E-02	6.97E-02	6.97E-02	92097
Mulberry	Zr/Nb-95	42	-5.49E-02	6.05E-02	6.08E-02	92095
Mulberry Fruit	Zr/Nb-95	27	-2.15E-02	2.06E-01	2.06E-01	92122
Mulberry Fruit	Zr/Nb-95	30	-4.42E-01	4.80E-01	4.82E-01	92098
Onion	Zr/Nb-95	-2	-3.04E-01	2.55E-01	2.57E-01	92111
Onion	Zr/Nb-95	30	-5.64E-01	2.57E-01	2.63E-01	92100
Onion	Zr/Nb-95	42	-3.44E-03	2.65E-01	2.65E-01	92094
Willow	Zr/Nb-95	-2	-3.44E-02	6.34E-02	6.35E-02	92112
* Willow	Zr/Nb-95	-2	4.43E-02	3.88E-02	3.91E-02	92124
* Willow	Zr/Nb-95	42	1.80E-01	1.06E-01	1.07E-01	92093
Yarrow	Zr/Nb-95	-2	-4.05E-02	1.09E-01	1.09E-01	92107

Species	Radionuclide	Rivermile	pCi/g dry weight	Counting Error (2 Sigma)	Propagated Error (2 Sigma)	Sample Number
Yarrow	Zr/Nb-95	9	6.38E-02	9.52E-02	9.54E-02	92103
Yarrow	Zr/Nb-95	27	-1.04E-01	9.70E-02	9.75E-02	92120
Yarrow	Zr/Nb-95	30	-5.04E-02	9.15E-02	9.16E-02	92096
Yarrow	Zr/Nb-95	42	-1.33E-02	1.16E-01	1.16E-01	92091
Asparagus	ZrNb-95	10.5	-5.17E-01	6.62E-01	6.64E-01	90303
Asparagus	ZrNb-95	26.25	2.53E-01	1.04E+00	1.04E+00	90336
Asparagus	ZrNb-95	27	-2.55E-01	9.63E-01	9.64E-01	90335
Chicory	ZrNb-95	4	-1.61E-01	6.87E-01	6.87E-01	90297
Chicory	ZrNb-95	6	1.09E+00	2.09E+00	2.09E+00	90320
Chicory	ZrNb-95	9	-2.05E-02	2.80E-01	2.80E-01	90258
Chicory	ZrNb-95	9	-6.28E-01	7.63E-01	7.66E-01	90312
Chicory	ZrNb-95	10.5	4.04E-01	8.15E-01	8.16E-01	90304
Chicory	ZrNb-95	26.25	-5.43E-01	3.06E+00	3.06E+00	90413
Chicory	ZrNb-95	27	3.91E-01	2.30E+00	2.30E+00	90418
Chicory	ZrNb-95	29	2.12E+00	2.32E+00	2.33E+00	90410
Chokecherry	ZrNb-95	18	3.13E-01	2.04E+00	2.04E+00	90408
Chokecherry	ZrNb-95	29	3.44E-01	5.20E-01	5.21E-01	90337
Chokecherry	ZrNb-95	43	-9.39E-02	2.25E-01	2.25E-01	90263
Dogbane	ZrNb-95	4	-3.00E-02	6.51E-01	6.51E-01	90299
* Dogbane	ZrNb-95	6	2.43E+00	2.09E+00	2.10E+00	90319
Dogbane	ZrNb-95	6.5	-8.76E-01	2.74E+00	2.74E+00	90325
Dogbane	ZrNb-95	9	-1.08E-01	2.68E-01	2.68E-01	90259
Dogbane	ZrNb-95	9	7.86E-02	8.19E-01	8.19E-01	90333
* Dogbane	ZrNb-95	9	5.62E-01	5.49E-01	5.52E-01	90314
Dogbane	ZrNb-95	15	-1.01E-02	4.05E-02	4.05E-02	90425
Mulberry	ZrNb-95	4	3.10E-01	8.32E-01	8.33E-01	90300
* Mulberry	ZrNb-95	6	2.66E+00	2.05E+00	2.07E+00	90321
Mulberry	ZrNb-95	6	-1.84E+00	2.20E+00	2.21E+00	90322
Mulberry	ZrNb-95	6.5	1.61E+00	2.35E+00	2.35E+00	90327
Mulberry	ZrNb-95	9	1.37E-01	3.32E-01	3.32E-01	90257
Mulberry	ZrNb-95	9	-8.42E-02	9.01E-01	9.01E-01	90329
Mulberry	ZrNb-95	9	-1.27E+01	1.81E+01	1.82E+01	90330
Mulberry	ZrNb-95	9	-1.35E+01	1.81E+01	1.82E+01	90331
Mulberry	ZrNb-95	9	3.56E-01	2.14E+00	2.14E+00	90332
Mulberry	ZrNb-95	9	-1.71E-01	7.70E-01	7.70E-01	90316
Mulberry	ZrNb-95	10.5	-1.23E-01	5.20E-01	5.21E-01	90306
Mulberry	ZrNb-95	10.5	8.10E-02	5.48E-01	5.48E-01	90307
Mulberry	ZrNb-95	15	2.34E-01	2.07E+00	2.07E+00	90403
Mulberry	ZrNb-95	15	-1.33E+00	2.18E+00	2.18E+00	90405
Mulberry	ZrNb-95	18	7.48E-01	1.39E+00	1.39E+00	90310
Mulberry	ZrNb-95	26.25	-6.49E-01	1.00E+00	1.00E+00	90359
Mulberry	ZrNb-95	26.25	-5.00E-01	9.81E-01	9.83E-01	90360
Mulberry	ZrNb-95	27	-2.34E-01	2.83E+00	2.83E+00	90334
Mulberry	ZrNb-95	34.75	-4.60E-02	1.62E+00	1.62E+00	90361
Mulberry	ZrNb-95	41	1.43E-01	3.46E-01	3.46E-01	90268
* Mulberry	ZrNb-95	41	3.10E-01	2.66E-01	2.68E-01	90275
Mulberry	ZrNb-95	42	-6.25E-02	3.41E-01	3.41E-01	90271
Mulberry	ZrNb-95	43	-5.72E-02	2.40E-01	2.40E-01	90261
Mulberry	ZrNb-95	43	4.73E-02	2.12E-01	2.12E-01	90265
* Mulberry	ZrNb-95	43	1.99E-01	1.92E-01	1.93E-01	90273
Mulberry Fruit	ZrNb-95	9	2.29E-02	2.75E-02	2.76E-02	91010
Mulberry Fruit	ZrNb-95	27	2.17E-03	1.75E-02	1.75E-02	91011
Mulberry Fruit	ZrNb-95	27	2.07E-02	2.31E-02	2.32E-02	91012
Onion	ZrNb-95	15	3.91E-01	1.49E+01	1.49E+01	90407
Pumpkin	ZrNb-95	19	-4.97E-03	2.28E-01	2.28E-01	90251
Pumpkin	ZrNb-95	27	3.42E-02	1.04E-01	1.04E-01	90249
Reed Canary	ZrNb-95	28.2	-5.90E-01	2.84E+00	2.84E+00	91002
Rose	ZrNb-95	15	-6.29E-01	1.74E+00	1.74E+00	90401
Squawberry	ZrNb-95	29	-2.26E-02	2.43E+00	2.43E+00	90412
Tomato	ZrNb-95	19	5.24E-02	1.03E-01	1.03E-01	90252
Tomato	ZrNb-95	27	2.36E-01	4.89E-01	4.90E-01	90250
Willow	ZrNb-95	4	-4.58E-01	7.55E-01	7.57E-01	90301
Willow	ZrNb-95	6.5	-1.26E+00	1.77E-01	1.78E+00	90326
Willow	ZrNb-95	9	-1.58E-02	4.18E-01	4.18E-01	90313

Species	Radionuclide	Rivermile	pCi/g dry weight	Counting Error (2 Sigma)	Propagated Error (2 Sigma)	Sample Number
Willow	ZrNb-95	27	1.08E+00	2.00E+00	2.00E+00	90417
Willow	ZrNb-95	41	-2.62E-01	2.69E-01	2.71E-01	90267
Willow	ZrNb-95	41	-1.51E-02	2.65E-01	2.65E-01	90276
Willow	ZrNb-95	42	3.15E-02	2.85E-01	2.85E-01	90270
Yarrow	ZrNb-95	4	2.82E-01	5.25E-01	5.26E-01	90298
Yarrow	ZrNb-95	6	-7.21E-01	2.55E+00	2.56E+00	90318
Yarrow	ZrNb-95	9	1.25E-01	6.72E-01	6.73E-01	90315
Yarrow	ZrNb-95	10.5	-3.53E-01	9.97E-01	9.98E-01	90305
Yarrow	ZrNb-95	15	2.81E+00	3.08E+00	3.09E+00	90402
Yarrow	ZrNb-95	27	1.78E+00	2.15E+00	2.16E+00	90419

(a) The asterisk (*) located to the left of the species name indicates that the concentration in the sample exceeds the propagated error of the analysis. The propagated error consists of all sources of analytical and counting error.

Appendix C

Radionuclide Concentrations in Vegetation Samples Analyzed by Pacific Northwest Laboratory

Table C.1. Radionuclide Concentrations in Vegetation Samples Analyzed by Pacific Northwest Laboratory

Sample	Sample Type	Isotope	Activity Conc. (pCi/g)[a]	Overall Uncertainty	Sampling Location
90181	Mulberry	^{7}Be	6.8 E - 01	6.6 E - 02	HRM 10
90181	Mulberry	^{40}K	5.3 E+00	1.5 E+00	HRM 10
90181	Mulberry	^{60}Co	2.3 E - 02	5.3 E - 03	HRM 10
90181	Mulberry	^{90}Sr	7.8 E - 01	7.8 E+00	HRM 10
90181	Mulberry	^{137}Cs	2.2 E - 02	1.1 E - 02	HRM 10
90182	Mulberries	^{7}Be	2.3 E - 01	NR[b]	HRM 10
90182	Mulberries	^{40}K	2.7 E+00	NR	HRM 10
90182	Mulberries	^{60}Co	4.6 E - 02	NR	HRM 10
90182	Mulberries	^{137}Cs	2.5 E - 02	NR	HRM 10
90183	Mulberries	^{7}Be	1.3 E - 01	3.6 E - 02	HRM 10
90183	Mulberries	^{40}K	3.0 E+00	NR	HRM 10
90183	Mulberries	^{60}Co	1.0 E - 01	5.9 E - 03	HRM 10
90183	Mulberries	^{137}Cs	8.1 E - 03	NR	HRM 10
90184	Mulberries	^{7}Be	1.2 E - 01	1.0 E - 02	HRM 10
90184	Mulberries	^{40}K	2.5 E+00	NR	HRM 10
90184	Mulberries	^{60}Co	2.3 E - 02	3.6 E - 03	HRM 10
90184	Mulberries	^{90}Sr	1.9 E+01	1.9 E+00	HRM 10
90184	Mulberries	^{137}Cs	1.4 E - 01	6.9 E - 03	HRM 10
90185	Mulberry	^{7}Be	6.5 E - 01	5.3 E - 02	HRM 10
90185	Mulberry	^{40}K	3.8 E+00	NR	HRM 10
90185	Mulberry	^{60}Co	1.2 E+00	4.4 E - 03	HRM 10
90185	Mulberry	^{137}Cs	3.3 E - 02	1.2 E - 02	HRM 10
90186	Curley Dock	^{7}Be	9.5 E - 02	3.3 E - 02	HRM 10
90186	Curley Dock	^{40}K	1.8 E+00	NR	HRM 10
90186	Curley Dock	^{60}Co	3.3 E - 02	5.9 E - 03	HRM 10
90186	Curley Dock	^{90}Sr	8.2 E+00	8.2 E - 01	HRM 10
90186	Curley Dock	^{137}Cs	1.4 E - 02	NR	HRM 10

(a) Activity concentration based on wet weights.
(b) NR = Not reported.

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