

**HANFORD SITE NEAR-FACILITY ENVIRONMENTAL  
MONITORING DATA REPORT FOR CALENDAR YEAR 2004**

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## LIST OF TERMS

CERCLA	<i>Comprehensive Environmental Response, Compensation, and Liability Act of 1980</i>
CFR	<i>Code of Federal Regulations</i>
CSB	Canister Storage Building
CVDF	Cold Vacuum Drying Facility
DCG	derived concentration guides
DCG-Public	Derived Concentration Guide for Public Exposure
DOE	U.S. Department of Energy
EDE	effective dose equivalent
EDP (code)	environmental data point (identification number indicating sample location)
EPA	U.S. Environmental Protection Agency
ERC	Environmental Restoration Contractor
ERDF	Environmental Restoration Disposal Facility
ESD	Environmental Sites Database
FH	Fluor Hanford, Inc.
GEA	gamma energy analysis
HEPA	high-efficiency particulate air
PFP	Plutonium Finishing Plant
PHMC	Project Hanford Management Contract
PNNL	Pacific Northwest National Laboratory
PUREX	Plutonium-Uranium Extraction
QA	quality assurance
QATF	Quality Assurance Task Force
RCRA	<i>Resource Conservation and Recovery Act of 1976</i>
RPP	River Protection Project
TEDF	Treated Effluent Disposal Facility
TLD	thermoluminescent dosimeters
TSN	taxonomic serial number
WAC	<i>Washington Administrative Code</i>
WDOH	Washington State Department of Health
WSCF	Waste Sampling and Characterization Facility

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## 1.0 NEAR-FACILITY ENVIRONMENTAL MONITORING AT HANFORD

Near-facility environmental monitoring is defined as monitoring near facilities that have the potential to discharge or have discharged, stored, or disposed of radioactive or hazardous materials. Monitoring locations are associated with nuclear facilities such as the Plutonium Finishing Plant (PFP), Canister Storage Building (CSB), and the K Basins; inactive nuclear facilities such as N Reactor and the Plutonium-Uranium Extraction (PUREX) Facility; and waste storage or disposal facilities such as burial grounds, cribs, ditches, ponds, tank farms, and trenches.

Much of the monitoring consists of collecting and analyzing environmental samples and methodically surveying areas near facilities. The program is also designed to evaluate acquired analytical data, determine the effectiveness of facility effluent monitoring and controls, assess the adequacy of containment at waste disposal units, and detect and monitor unusual conditions. The program implements applicable portions of U.S. Department of Energy (DOE) Orders 435.1, 450.1 (replaced DOE Order 5400.1 in January 2003), and 5400.5 (DOE 1993); DOE Manual 231.1-1A, *Environment, Safety, and Health Reporting Manual*; *Washington Administrative Code* (WAC) 246-247; Title 40, *Code of Federal Regulations* (CFR) Part 61 (40 CFR 61), Subpart H; and 10 CFR 835.

Several types of environmental media are sampled near facilities to monitor waste management and restoration activities, and to evaluate the effectiveness of effluent treatment and control practices. Routine sampling and monitoring includes ambient air, soil, vegetation, external radiation, and water. The parameters typically monitored are radionuclide concentrations and radiation fields. Sampling methods are discussed in detail in the Duratek Technical Services Manual DTS-OEM-001, *Operational Environmental Monitoring*.

Samples are collected from known or expected effluent pathways. These pathways are generally downwind of potential or actual airborne releases and down gradient of liquid discharges. Table 1-1 shows the type and location of routine near-facility monitoring samples collected in 2004.

Table 1-1. Near-Facility Routine Environmental Monitoring Samples and Locations, 2004.

Sample Type	Number of sample Locations	Operational Area								
		100-B/C	100-D/DR	100-K	100-F	100-H	100-N	ERDF <sup>a</sup>	200/600	300/400
Air	87	5	3	11	2	2	4	3	47 <sup>b</sup>	10
Soil	83	2	0	1	2	0	7	1	56	14
Vegetation	69	0	0	0	0	0	6	0	49	14
External Radiation	135	4	0	20	0	0	14	3	67	27
Water	8	0	0	0	0	0	8	0	0	0

<sup>a</sup>Environmental Restoration Disposal Facility in the 200-West area.

<sup>b</sup>Includes one station at the Wye Barricade, 23 in the 200-East area, and 23 in the 200-West area.

This Appendix contains brief discussions, specific sampling location information, and complete analytical data results for the various near-facility environmental monitoring efforts for 2004. Detailed discussions and summarized analytical results are provided in PNNL-15222, *Hanford Site Environmental Report for Calendar Year 2004*.

## **1.1 AIR MONITORING**

Near-facility air sampling monitors the effectiveness of waste management and environmental remediation controls, and effluent treatment systems in reducing effluents and emissions. These air samplers also monitor diffuse source emissions.

Ambient air monitoring is conducted to determine baseline concentrations of radionuclides in the operations areas, assess the impact of operations on the local environment, and monitor diffuse and fugitive emissions from sources located within the operations area. These measurements also provide an indication of the Project Hanford Management Contract (PHMC), River Protection Project (RPP), and Environmental Restoration Contractor (ERC) managed facilities' performance and are used to demonstrate compliance with environmental protection criteria.

In 2004, air radioactivity was sampled by a network of continuously operating samplers at 87 locations. Location-specific maps and monitoring results are provided in Section 2.0, "Ambient Air Monitoring."

## **1.2 SOIL AND VEGETATION SAMPLING**

Soil and vegetation samples were collected on or adjacent to waste disposal units, and from locations downwind and near or within the boundaries of the operating facilities. Samples were collected to detect potential migration and deposition of facility effluents. Migration of radionuclides can occur as the result of resuspension from radioactively contaminated surface areas, absorption by the roots of vegetation growing on or near underground and surface water disposal units, or intrusion by animals.

Radiological analyses of soil and vegetation samples included strontium-90, plutonium-239/240, isotopic uranium, and gamma-emitting radionuclides. Location-specific maps and the analytical results are presented in Section 3.0, "Soil and Vegetation Monitoring."

## **1.3 EXTERNAL RADIATION**

External radiation levels were monitored near facilities and waste handling, storage, and disposal sites to measure, assess, and control the impacts of operations. Thermoluminescent dosimeters (TLD) are used at numerous fixed locations to gather dose rate information over extended periods of time. TLD results can be used individually or averaged to determine dose rates in a given area for a particular sampling period.

Environmental dosimeters measure dose rates from all types of external radiation sources, including cosmic radiation, naturally occurring radioactivity in air and soil, and fallout from nuclear weapons testing, as well as any contribution from Hanford Site activities. During any year, changes in soil moisture and snow cover can cause external radiation levels to vary from 15% to 25% at any given location. The results are reported in units of millirems per year (mrem/yr). Individual TLD results and their locations are provided in Section 4.0, “External Radiation.”

## **1.4 RIVERBANK SPRINGS MONITORING**

The springs along the 100-N Area Columbia River shoreline (N-Springs) were sampled in 2004 to assess the effectiveness of effluent and contamination controls. Eight water samples were collected. The radiological analyses were performed onsite at the Waste Sampling and Characterization Facility (WSCF), and the analyses included tritium, strontium-90, and gamma-emitting radionuclides. A location-specific map and the analytical results of the sampling are presented in Section 5.0, “100-N Riverbank Springs Monitoring.”

## **1.5 RADIOLOGICAL SURVEYS**

Waste disposal sites and the surrounding terrain are surveyed to detect and characterize radioactive surface contamination. Routine radiological surveys are conducted across the surfaces of underground radioactive material areas and along the perimeters of contamination areas. Locations include cribs, trenches, retention basins, ponds, ditches, solid waste disposal sites, unplanned release sites, tank farms, stabilized waste disposal sites, roads, and firebreaks in and around the Site operational areas. A discussion and survey location maps are provided in Section 6.0, “Radiological Surveys.”

In 2004, the Hanford Site had approximately 3,628 ha (8,965 acres) of posted outdoor surface contamination, and 637 ha (1,574 acres) of posted underground radioactive material, not including the production facilities (e.g., PUREX, T-Plant, etc.). The total area of surface contamination was approximately six times larger than the area of underground radioactive material.

## **1.6 INVESTIGATIVE SAMPLING**

Investigative sampling was conducted in the operations areas to confirm the absence or presence of radioactive and/or hazardous contaminants. Investigative sampling took place near facilities, such as storage and disposal sites, for at least one of the following reasons:

- To follow up radiological surface surveys that had indicated radioactive contamination was present.
- To conduct preoperational surveys to characterize the radiological/hazardous conditions at a site prior to facility construction, operation, or ultimate remediation.

- To determine if biotic intrusion (e.g., animal burrows or deep-rooted vegetation) has created a potential for contaminants to spread.
- To determine the integrity of waste containment systems.

Generally, the predominant radionuclides detected during these efforts were activation and fission products in the 100 Areas, fission products in the 200 Areas, and uranium in the 300 Area. Hazardous chemicals generally have not been identified above background levels in preoperational environmental monitoring samples. Complete results and general discussion of special characterization samples collected in 2004, are provided in Section 7.0, "Investigative Sampling."



## 2.0 AMBIENT AIR MONITORING

Air samplers are located primarily at or near (within approximately 500 m [1,600 ft]) sites and/or facilities having the potential for, or history of, environmental releases, with emphasis on potential source terms as well as prevailing wind direction. Meteorological conditions are monitored continuously by the Pacific Northwest National Laboratory (PNNL) meteorology stations, which are strategically positioned in and around the Hanford Site.

A network of continuously operating samplers at 87 near-facility monitoring locations (Table 2-1) sampled radioactivity in air during 2004. Data from several PNNL ambient air monitoring stations were utilized in 2004 to provide additional air monitoring information for several ERC remediation projects. The ERC projects and the associated PNNL stations are listed in Table 2-2.

Near-facility air monitoring location maps are provided in Figures 2-1 through 2-12. Historical air sampling results for the 100-K, 100-N, 200 and 300 Areas are represented in graph form in Figures 2-13 through 2-24.

A summary of near-facility ambient air sampling results for selected radionuclides collected during 2004 is presented in Table 2-3. The 2004 composited, sampler-specific monitoring results are provided in Table 2-4. The 2004 air monitoring results from the PNNL ambient air monitoring locations used as supplemental data for ERC projects can be found in Table 2-5. Additional discussion of the 2004 air sampling results can be found in Section 8.2 of PNNL-15222.

Strontium-90 in air results for this report period show overall lower values compared to historical trends prior to 2003. This was primarily due to changes in laboratory background correction calculations that were implemented during 2003. Both historical and current values are within accepted statistical ranges as evidenced by laboratory QA and performance evaluation programs.

Near-facility environmental air samplers operate at a flow rate of 0.057 m<sup>3</sup>/min (2 ft<sup>3</sup>/min), drawing a sample through a 47 mm (2 in.), open-faced filter about 2 m (6 ft) aboveground. All sample filters are exchanged biweekly, held one week (to allow for decay of short-lived natural radioactivity), and then sent to the analytical laboratory for initial analysis of total alpha and total beta activity. These initial analyses serve as an indicator of potential environmental problems.

Depending on project/facility requirements, the filters were stored until the end of either a three- or six-month sample period, then segregated and composited by sample location for specific radionuclide analysis as shown in Table 2-1. Segregating and compositing air filters by site provides a larger sample size and, thus, a more sensitive and accurate measurement of the concentration of airborne radionuclides.

To help assess the impact of Site operations, monitoring results are compared to DOE derived concentration guides (DCG), to the results obtained from the distant communities of Yakima and Sunnyside as reported by PNNL Site Environmental Surveillance Program, and to data acquired from collocated sampling locations managed by Near-Facility Monitoring, PNNL and the Washington State Department of Health (WDOH). Collocated sampling results are used for comparability and precision of data.

Table 2-1. Near-Facility Air Sampling Locations and Analyses, 2004.

Site	Number of Samplers	EDP Code <sup>a</sup>	Analyses	
			Bi-weekly	Composite <sup>b</sup>
100-B/C Remedial Action project <sup>c</sup>	5	N464, N465, N466, N496, N497	Gross $\alpha$ , $\beta$	GEA, Sr-90, Pu-iso, U-iso
105-D Interim Safe Storage project	1	N523	Gross $\alpha$ , $\beta$	GEA, Sr-90, Pu-iso, U-iso
105-DR Interim Safe Storage project	2	N492, N515	Gross $\alpha$ , $\beta$	GEA, Sr-90, Pu-iso, U-iso
105-F Interim Safe Storage project	2	N494, N495	Gross $\alpha$ , $\beta$	GEA, Sr-90, Pu-iso, U-iso
105-H Interim Safe Storage project	2	N524, N525	Gross $\alpha$ , $\beta$	GEA, Sr-90, Pu-iso, U-iso
100-K Spent Nuclear Fuels	8	N401, N402, N403 <sup>d</sup> , N404, N476, N477, N478, N479	Gross $\alpha$ , $\beta$	GEA, Sr-90, Pu-iso, U-iso Pu-241, Am-241
100-KR-1 Remedial Action project <sup>c</sup>	6	N528, N529, N530, N403 <sup>e</sup> , N404 <sup>e</sup> , N477 <sup>e</sup>	Gross $\alpha$ , $\beta$	GEA, Sr-90, Pu-iso, U-iso
100-NR-1 Remedial Action project <sup>c</sup> and 100-N Surveillance, Maintenance/Transition project	4	N102, N103, N106, N526	Gross $\alpha$ , $\beta$	GEA, Sr-90, Pu-iso, U-iso
200 East Area	17	N019, N158, N498, N499, N957, N967, N968, N969, N970, N972, N973, N976, N977, N978, N984 <sup>d</sup> , N985, N999	Gross $\alpha$ , $\beta$	GEA, Sr-90, Pu-iso, U-iso
Canister Storage Building, 200 East Area	2	N480, N481	Gross $\alpha$ , $\beta$	GEA, Sr-90, Pu-iso, U-iso Pu-241, Am-241
224-B Demolition project (200 East Area)	3	N541, N542, N543	Gross $\alpha$ , $\beta$	GEA, Sr-90, Pu-iso, U-iso
Integrated Disposal Facility (200 East Area)	1	N532	Gross $\alpha$ , $\beta$	GEA, Sr-90, Pu-iso, U-iso
200 West Area	21	N155, N161, N165, N168, N200, N304, N433, N441, N442, N449, N456, N457, N956, N963, N964, N965, N966, N974, N975, N987, N994	Gross $\alpha$ , $\beta$	GEA, Sr-90, Pu-iso, U-iso
233-S Demolition project (200 West Area)	3	N441, N442, N963	Gross $\alpha$ , $\beta$	GEA, Sr-90, Pu-iso, U-iso
U-Ancillary Decontamination & Demolition project (200 West Area)	2	N550, N551	Gross $\alpha$ , $\beta$	GEA, Sr-90, Pu-iso, U-iso
300-FF-2 Remedial Action project <sup>c</sup> (300 Area)	10	N130, N527, N537, N538, N539, N540, N546, N547, N548, N549	Gross $\alpha$ , $\beta$	GEA, Sr-90, Pu-iso, U-iso
Environmental Restoration Disposal Facility <sup>c</sup>	3	N482 <sup>d</sup> , N517, N518,	Gross $\alpha$ , $\beta$	GEA, Sr-90, Pu-iso, U-iso
600 Area	1	N981 <sup>f</sup>	Gross $\alpha$ , $\beta$	GEA, Sr-90, Pu-iso, U-iso

<sup>a</sup>EDP Code = Sampler location code.

<sup>b</sup>GEA = Gamma energy analysis; Pu-iso = isotopic plutonium-238 and plutonium-239/240; U-iso = isotopic uranium-234, uranium-235, and uranium-238.

<sup>c</sup>PNNL air sampling station(s) provide supplemental air monitoring data. See Table 2-2 for a listing of locations.

<sup>d</sup>Collocated sampling location with Washington State Department of Health.

<sup>e</sup>Data from these three 100-K Spent Nuclear Fuel air samplers was used to provide additional air monitoring for the 100-KR-1 project.

<sup>f</sup>Collocated sampling location with Washington State Department of Health and PNNL.

Figure 2-1. 100-B/C Area Air Sampler Locations.

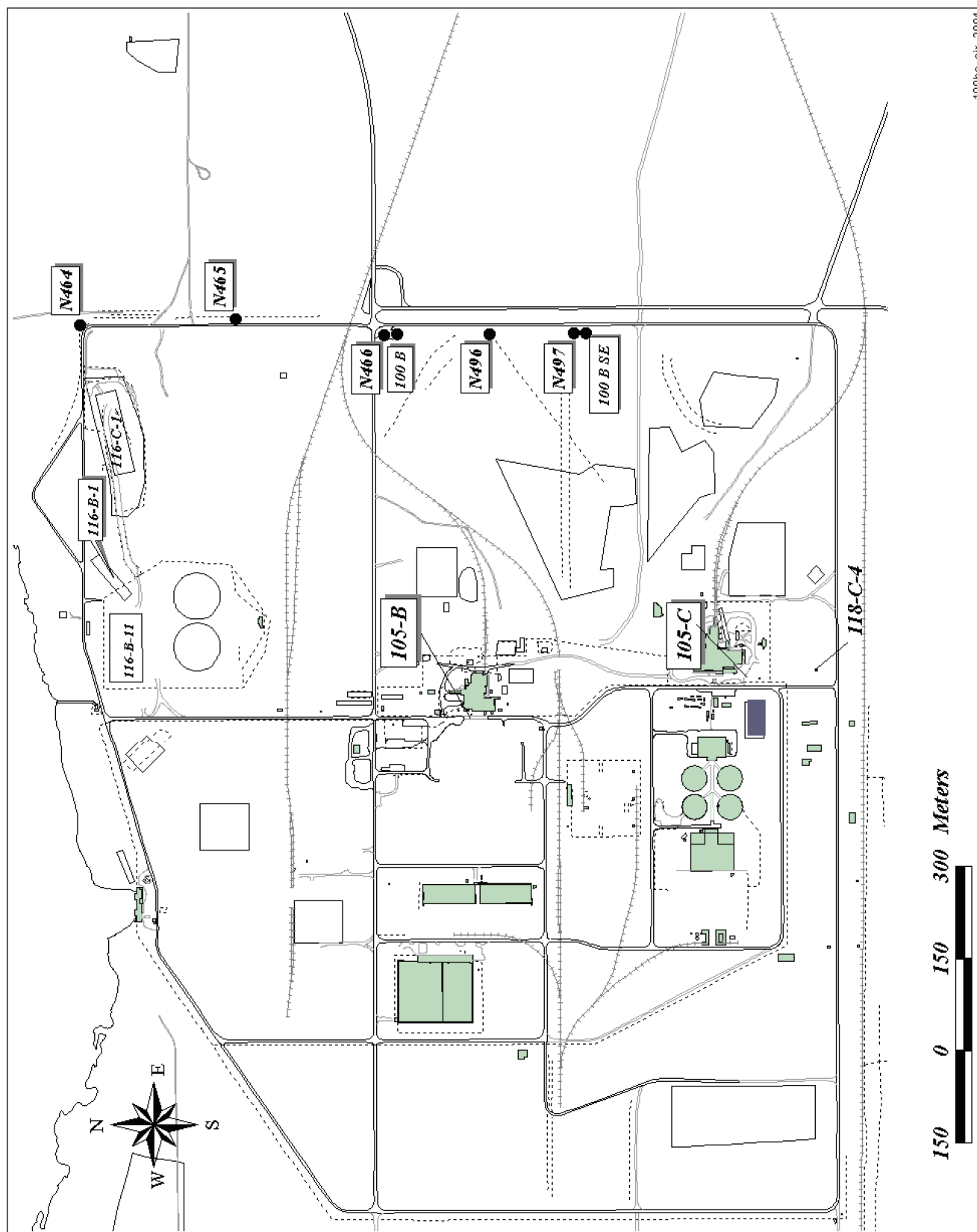


Figure 2-2. 100-D/DR Area Air Sampler Locations.

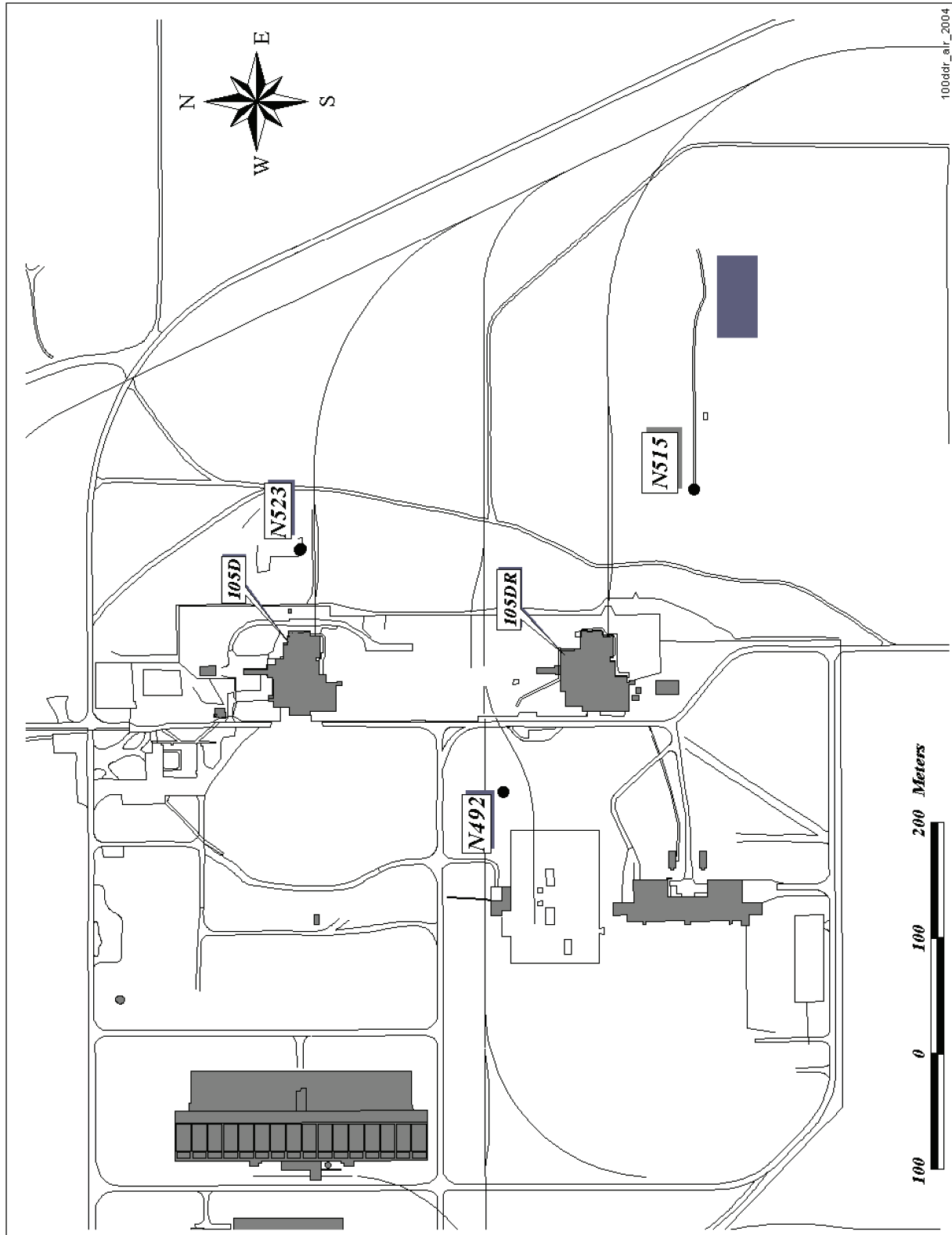


Figure 2-3. 100-F Area Air Sampler Locations.

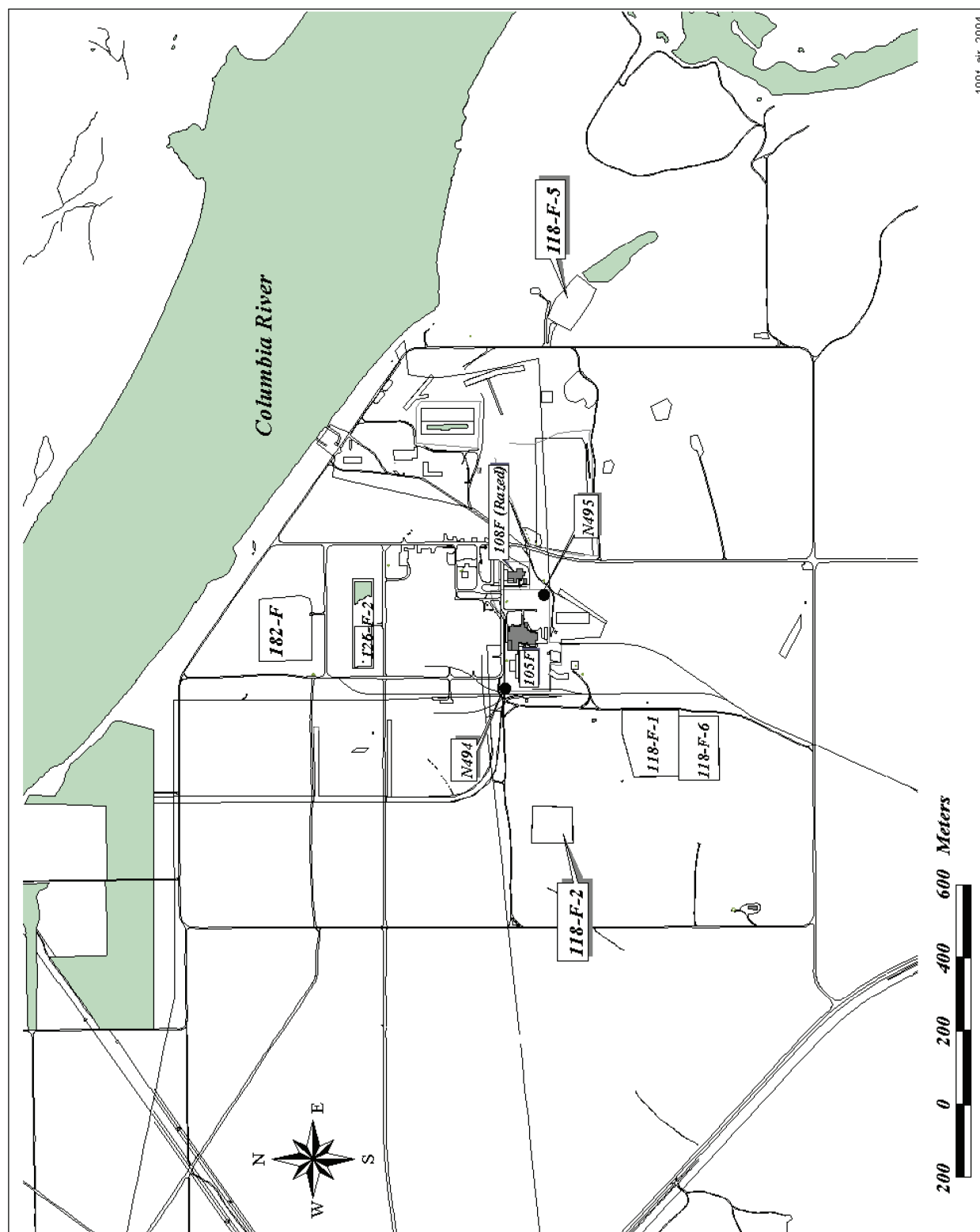
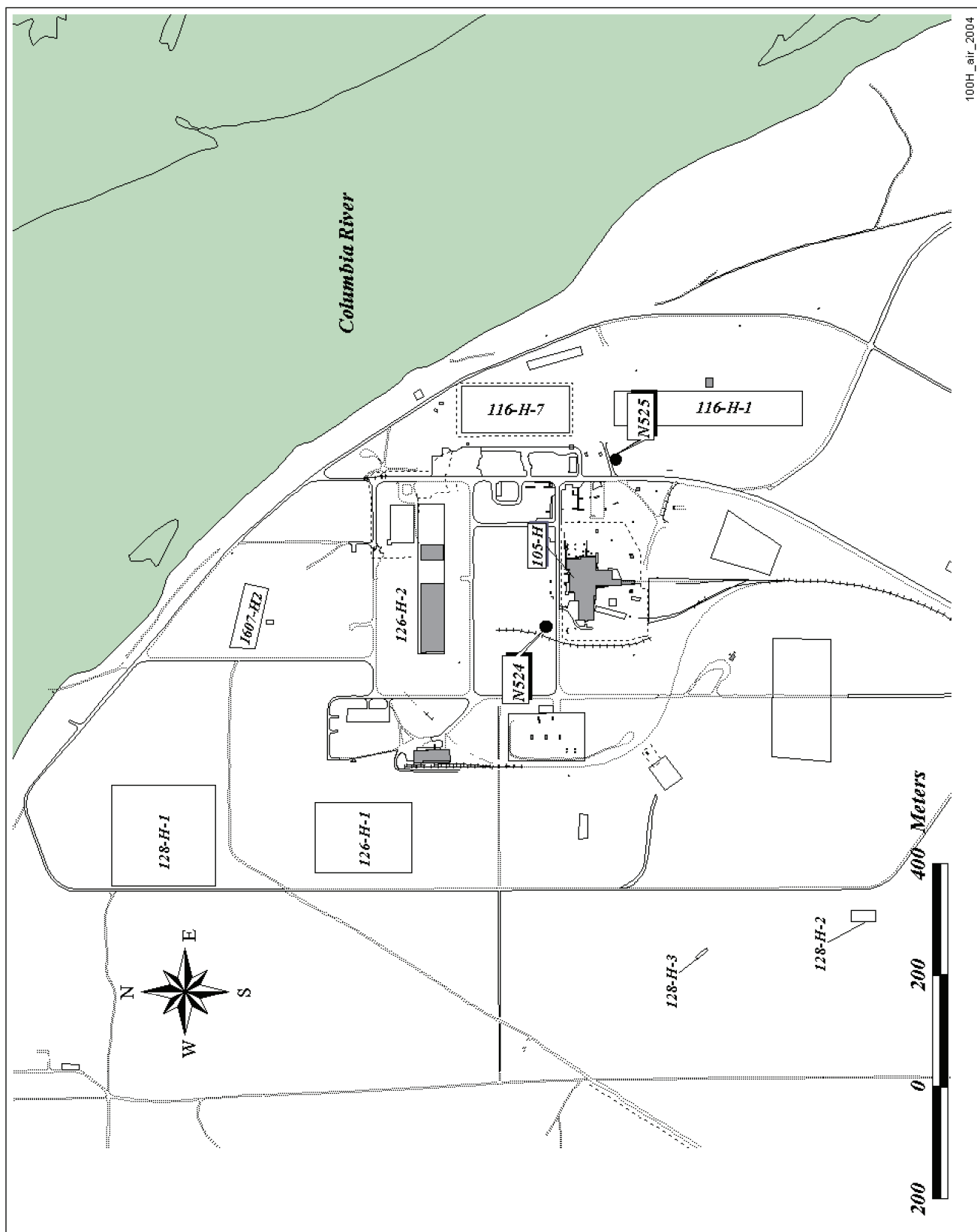


Figure 2-4. 100-H Area Air Sampler Locations.



100H\_air\_2004

Figure 2-5. 100-K Area Air Sampler Locations.

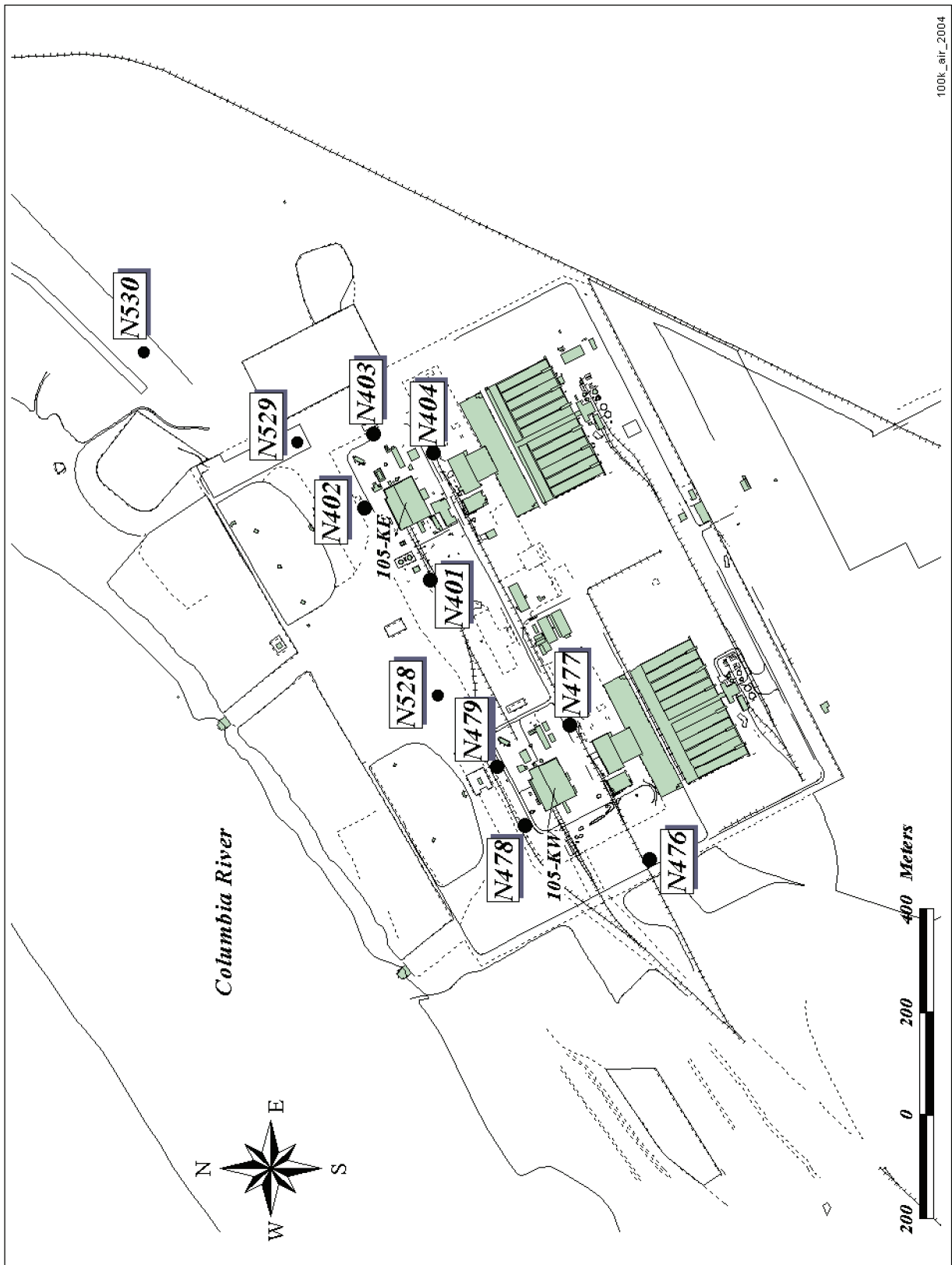


Figure 2-6. 100-N Area Air Sampler Locations.

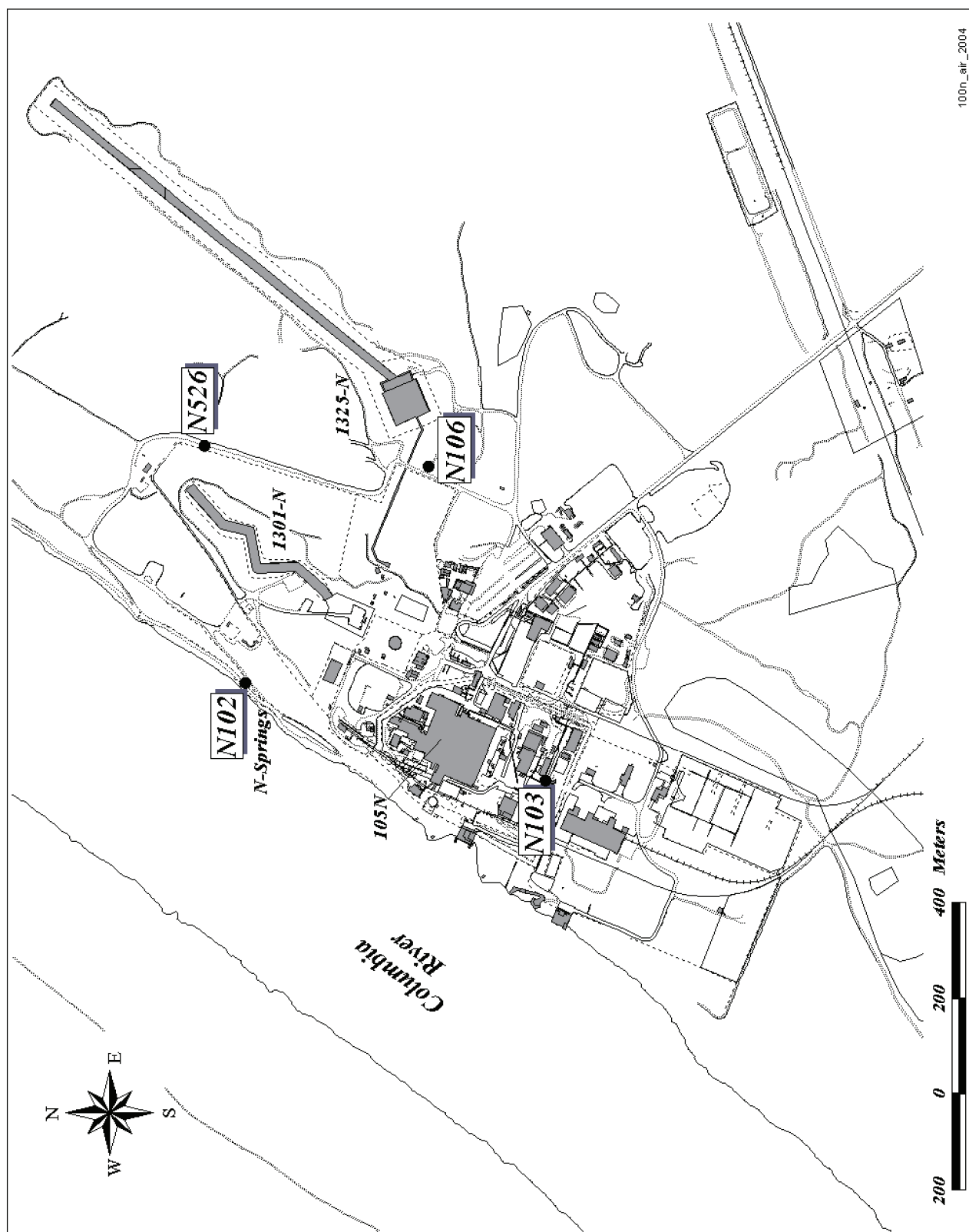
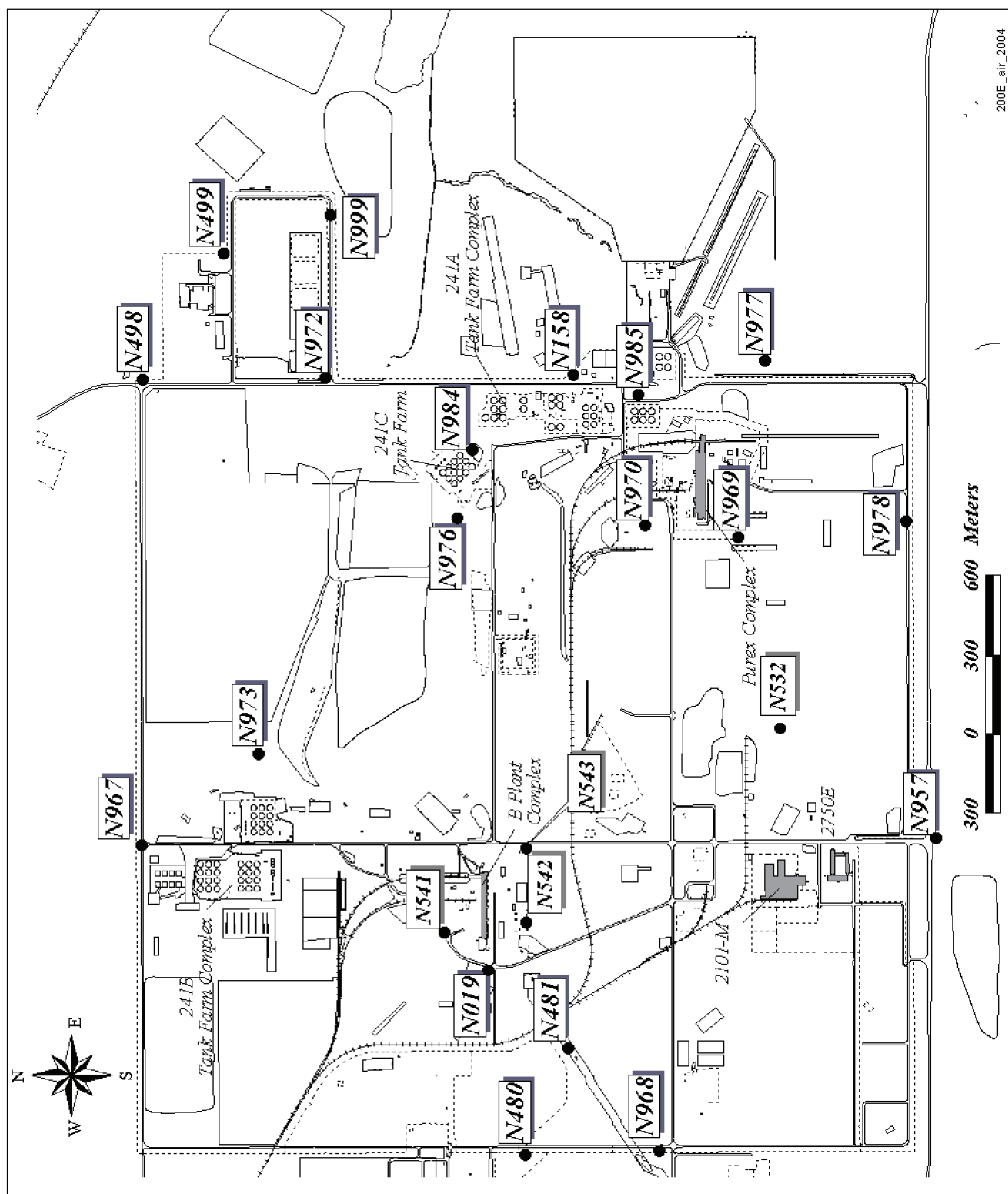




Figure 2-7. 200 East Area Air Sampler Locations.



2-10

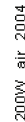


Figure 2-9. 300 Area Air Sampler Locations.

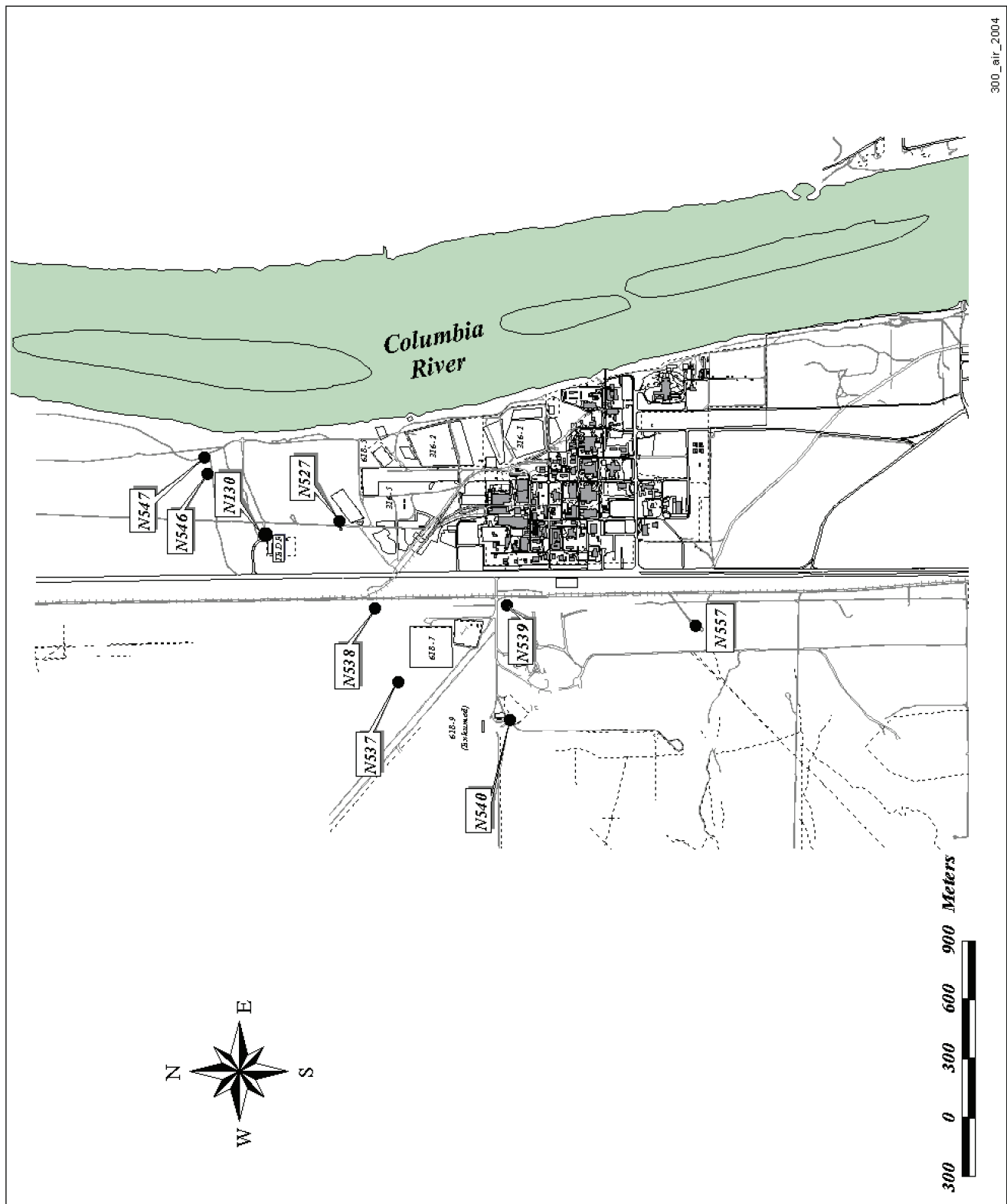


Figure 2-10. 300 Area (North) Air Sampler Locations.

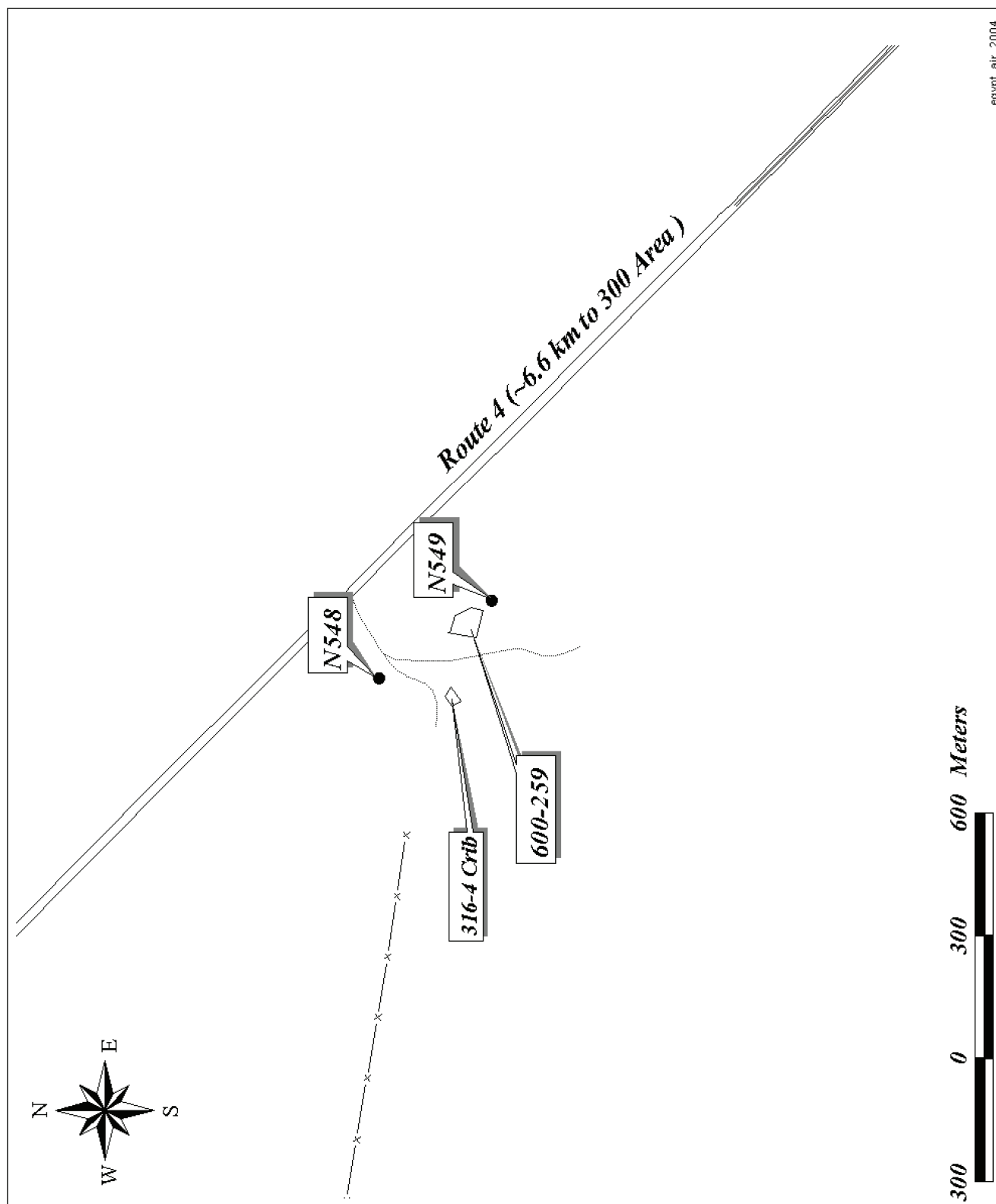


Figure 2-11. Environmental Restoration Disposal Facility Air Sampler Locations.

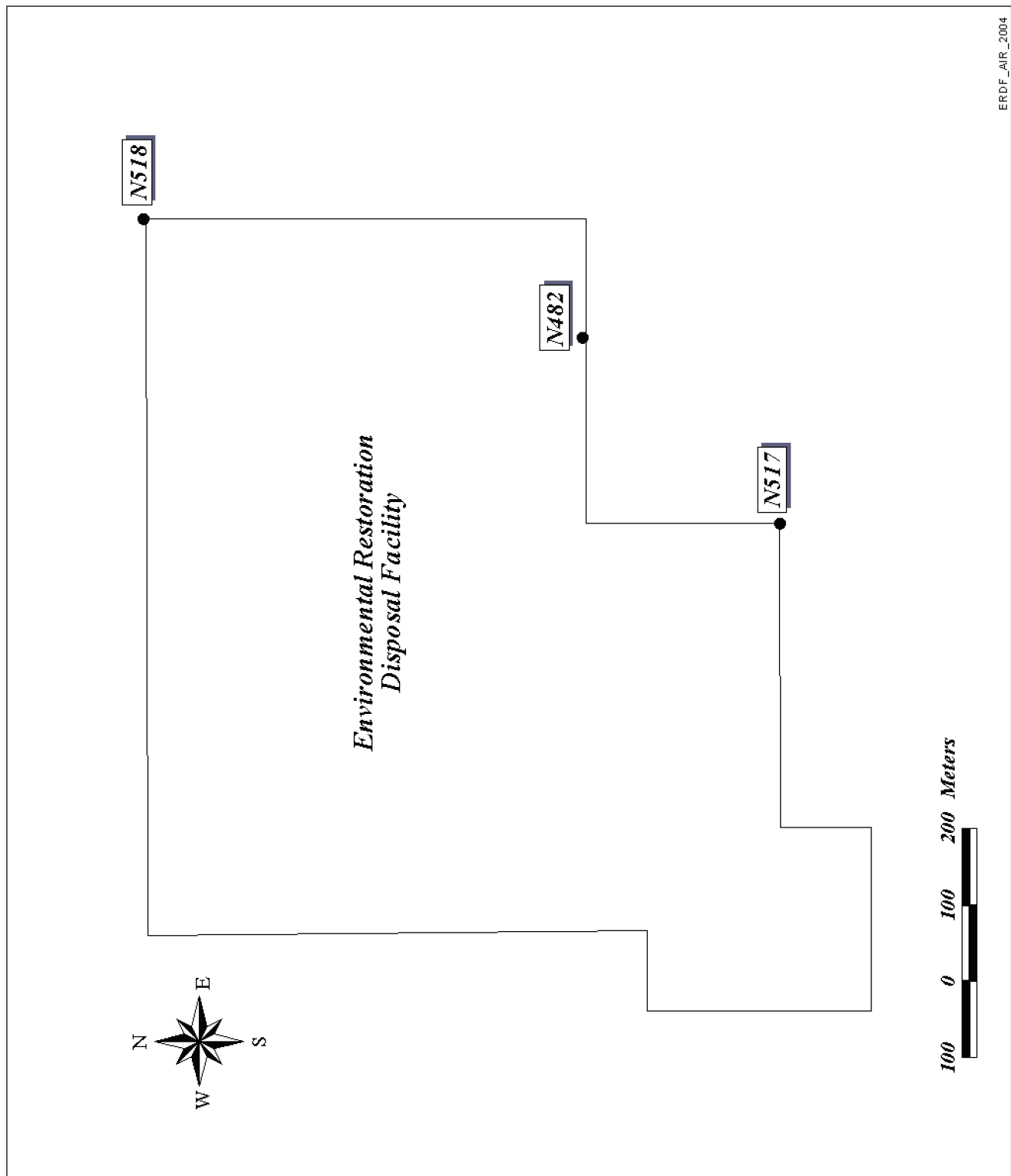


Figure 2-12. 600 Area Air Sampler Location.

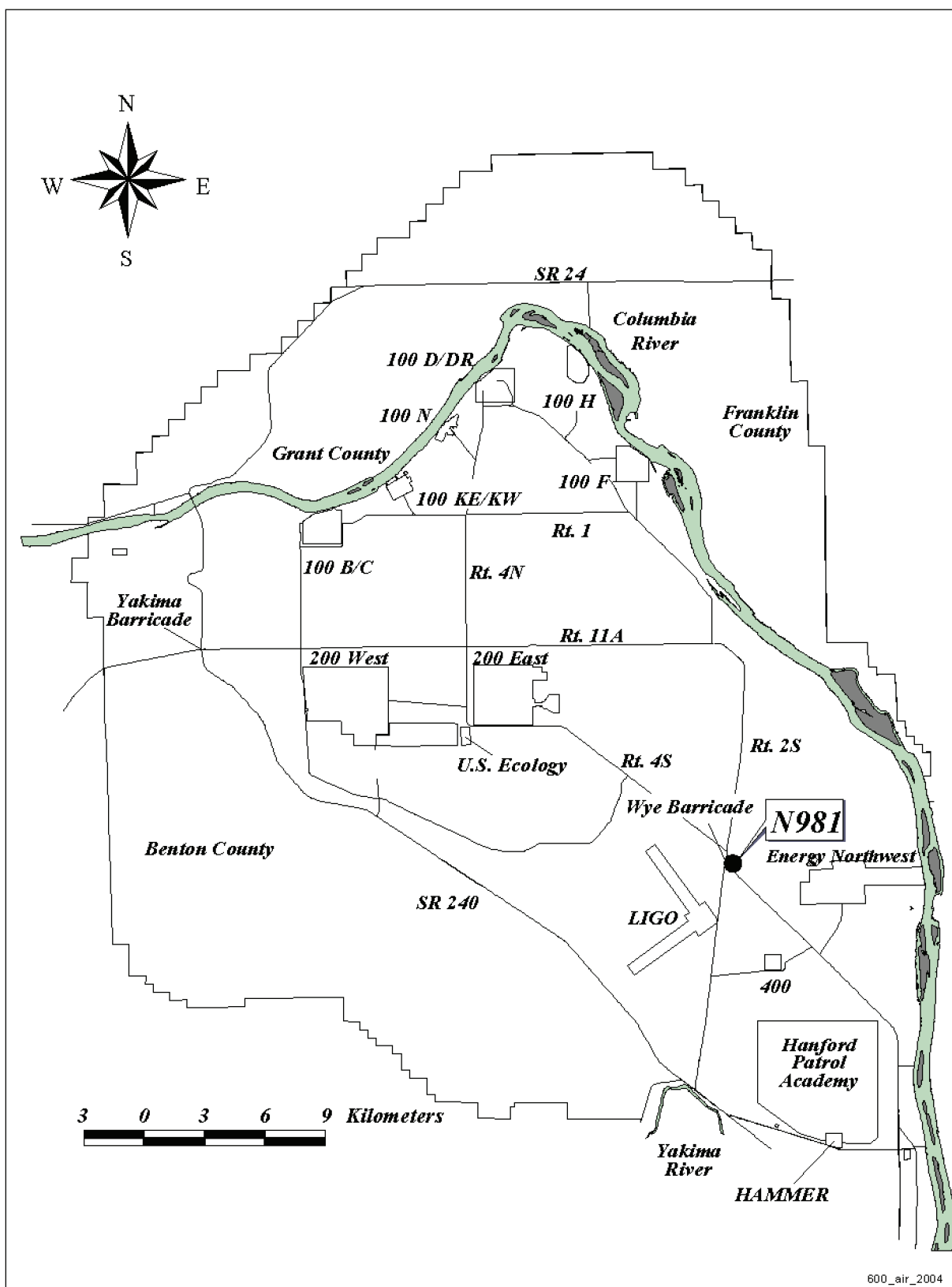


Figure 2-13. Annual Average Strontium-90 Concentrations in Air, 100-K Area.

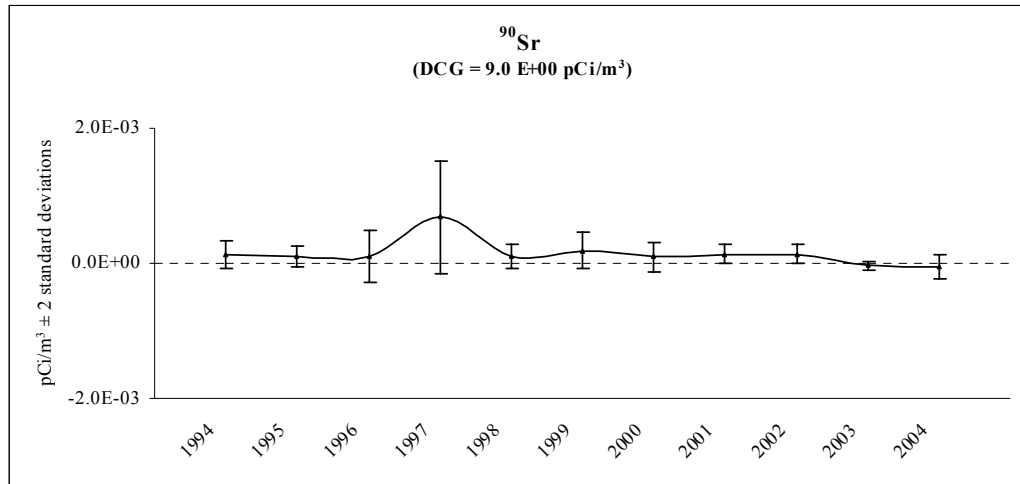


Figure 2-14. Annual Average Plutonium-239/240 Concentrations in Air, 100-K Area.

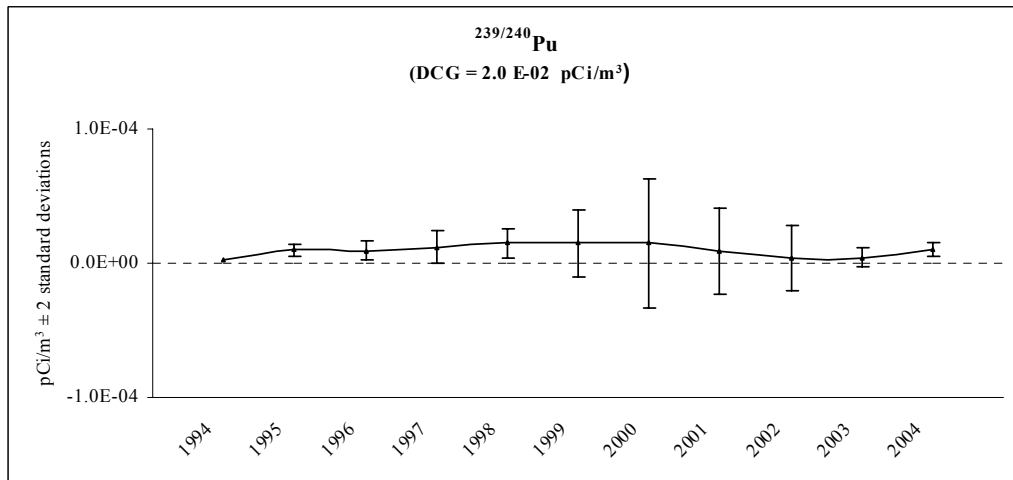


Figure 2-15. Annual Average Americium-241 Concentrations in Air, 100-K Area.

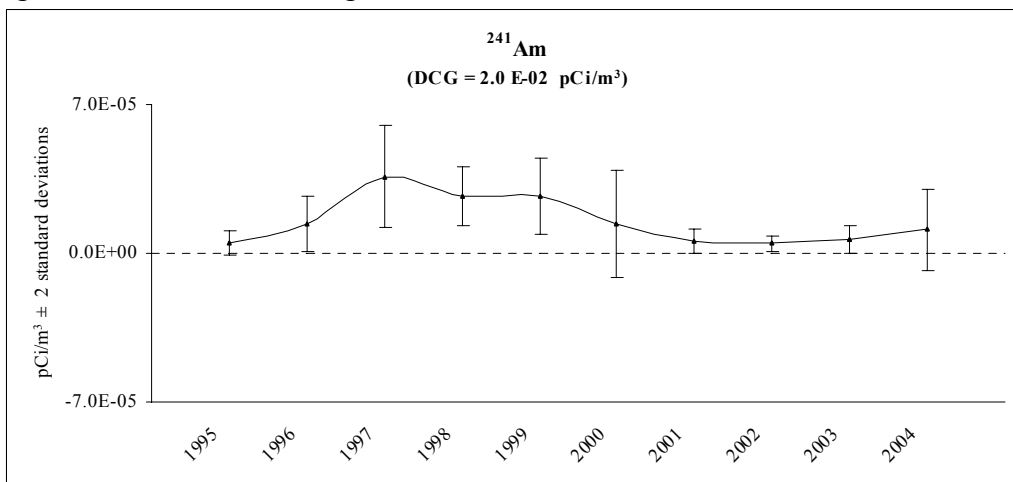


Figure 2-16. Annual Average Cobalt-60 Concentrations in Air, 100-N.

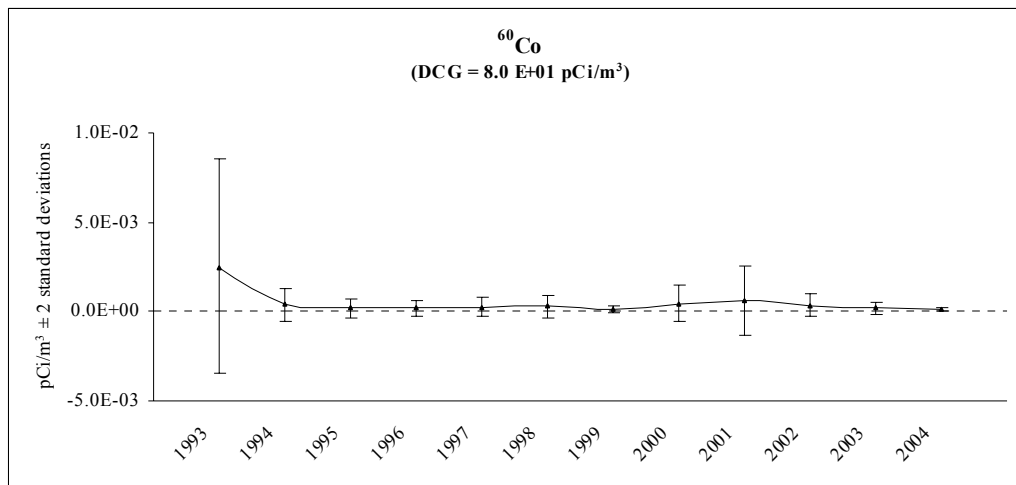


Figure 2-17. Annual Average Strontium-90 Concentrations in Air, 100-N.

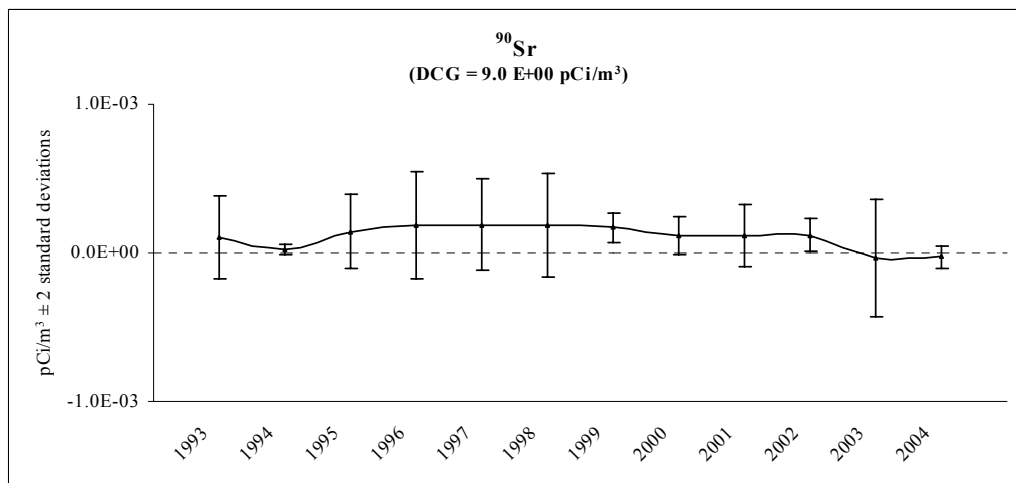


Figure 2-18. Annual Average Cesium-137 Concentrations in Air, 100-N.

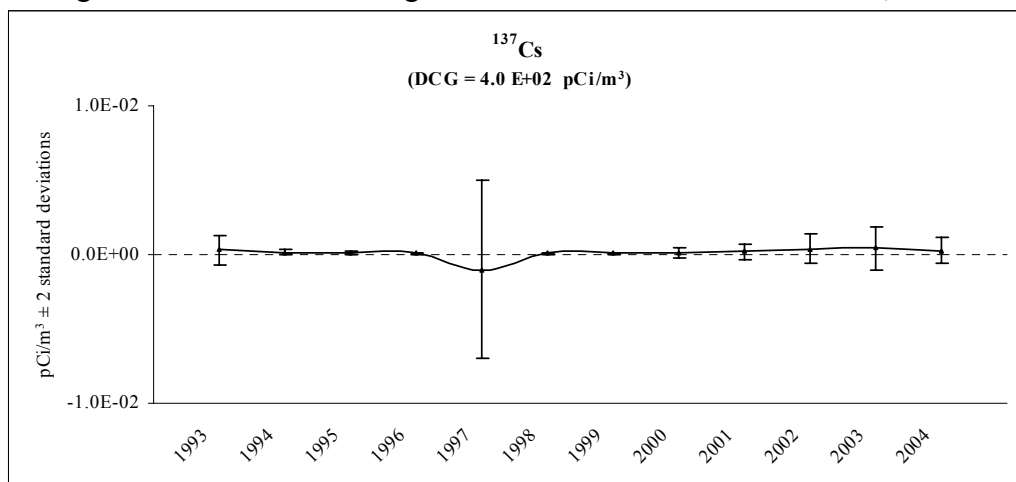




Figure 2-19. Annual Average Plutonium-239/240 Concentrations in Air, 100-N Area.

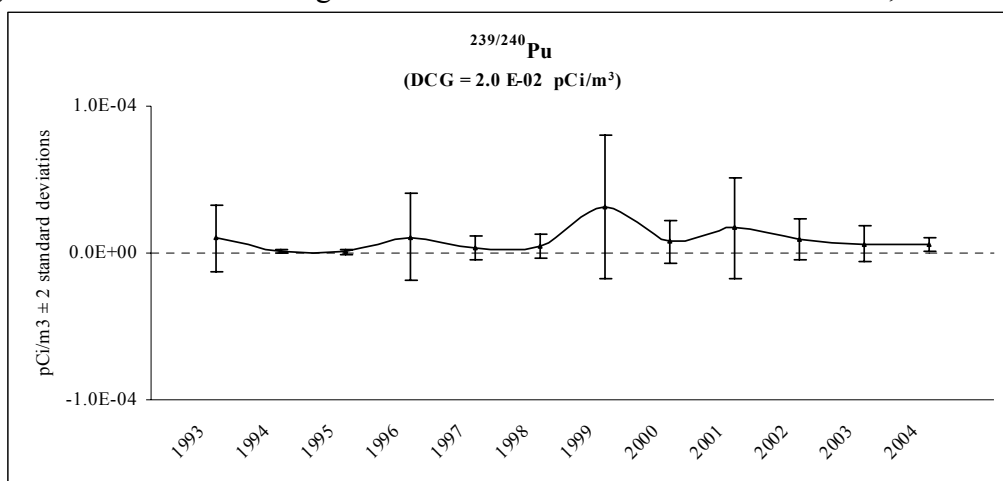


Figure 2-20. Annual Average Strontium-90 Concentrations in Air, 200 Areas.

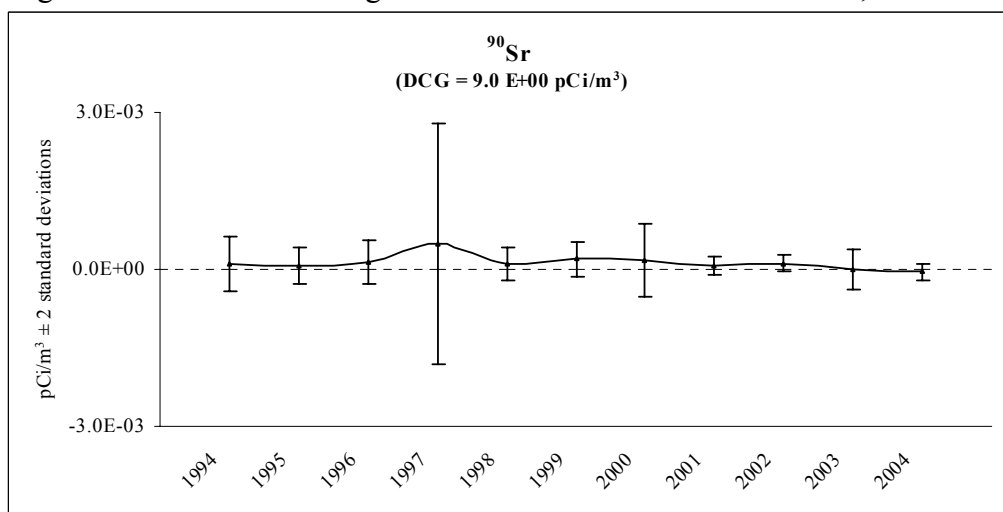


Figure 2-21. Annual Average Cesium-137 Concentrations in Air, 200 Areas.

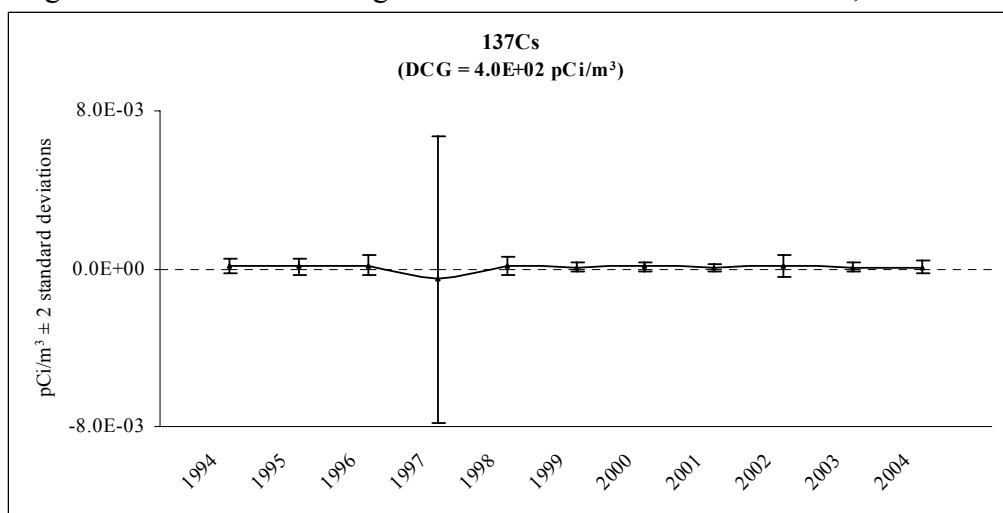


Figure 2-22. Annual Average Plutonium-239/240 Concentrations in Air, 200 Areas.

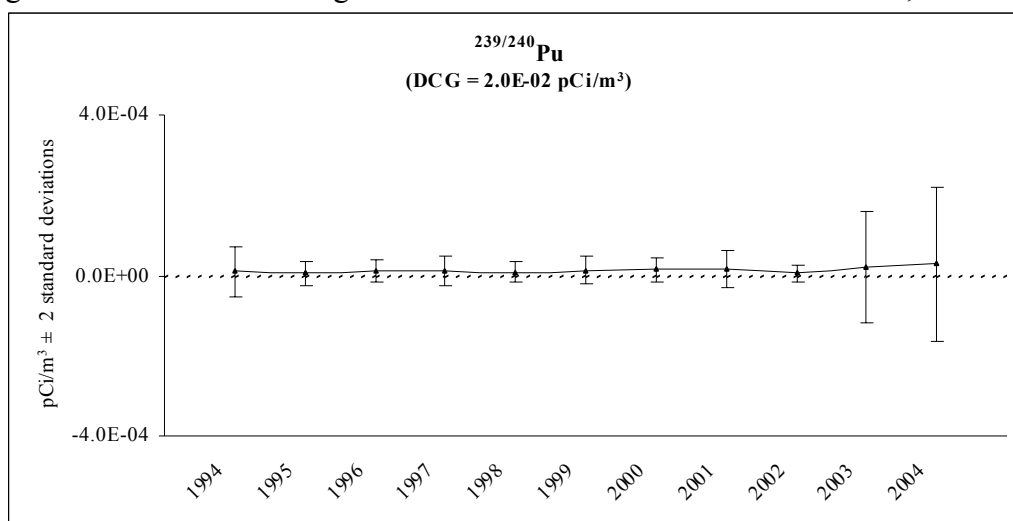


Figure 2-23. Annual Average Uranium-234 Concentrations in Air, 300 Area.

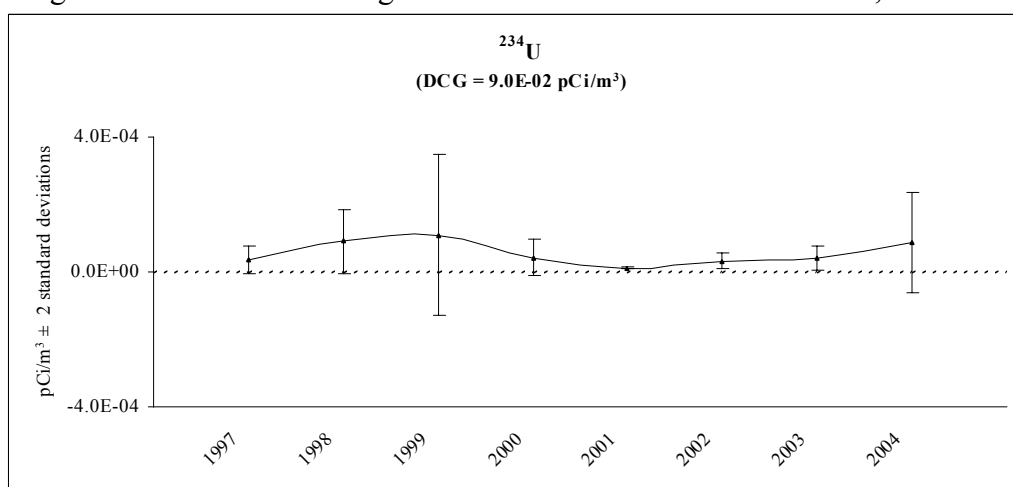


Figure 2-24. Annual Average Uranium-238 Concentrations in Air, 300 Area.

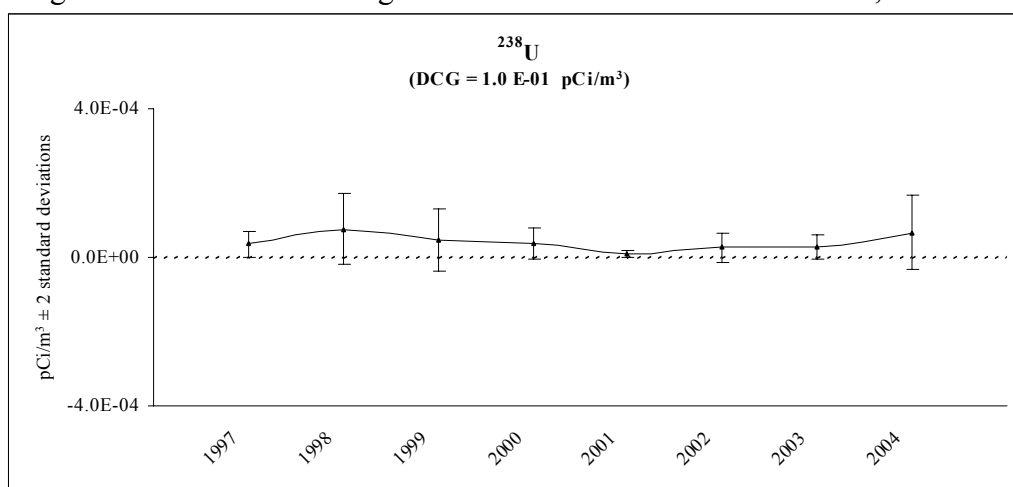


Table 2-2. PNNL Supplemental Air Sampling Locations<sup>a</sup>, 2004.

Site	Sampling Location
100-B/C Remedial Action project	100 B, 100 B SE, Yakima Barricade
100-KR-1 Remedial Action project	Yakima Barricade
100-NR-1 Remedial Action project	Yakima Barricade
300-FF-2 Remedial Action project	300 Water Intake, 300 Trench, 300 NE
Environmental Restoration Disposal Facility	200 W SE

<sup>a</sup>Maps showing specific locations are available in PNNL-15222.

Table 2-3. Summary of Near-Facility Ambient Air Sampling Results (pCi/m<sup>3</sup>) for Selected Radionuclides, 2004.

Isotope	Number of		Mean <sup>a</sup>	Maximum <sup>b</sup>	Location	Sampler
	Detects	Samples				
<sup>60</sup> Co	2	159	8.7E-06 ± 1.9E-04	5.6E-04 ± 1.3E-03	105-D	N515
<sup>137</sup> Cs	13	159	5.9E-05 ± 3.5E-04	1.3E-03 ± 5.1E-04	200 West	N155
<sup>239/240</sup> Pu	43	155	1.8E-05 ± 1.5E-04	5.4E-04 ± 2.1E-04	200 West	N165
<sup>90</sup> Sr	2	152	-6.0E-05 ± 2.3E-04	3.6E-04 ± 1.6E-04	200 East	N984
<sup>234</sup> U	143	159	1.9E-05 ± 5.2E-05	1.9E-04 ± 9.7E-05	100-K	N538
<sup>235</sup> U	34	159	4.6E-06 ± 1.5E-05	6.7E-05 ± 6.8E-05	105-D	N515
<sup>238</sup> U	136	159	1.5E-05 ± 3.8E-05	1.3E-04 ± 7.9E-05	100-K	N537

<sup>a</sup> ± 2 standard deviations

<sup>b</sup> ± total analytical uncertainty

Table 2-4. Near-Facility Air Sampling Results, 2004 (pCi/m<sup>3</sup> ± total analytical uncertainty).  
(40 sheets total)

Location	Isotope	Result ± Uncertainty	RQ*	Location	Isotope	Result ± Uncertainty	RQ*
<b>N464</b> (100-B/C)	<sup>144</sup> Ce	1.8E-03 ± 1.8E-03	U	<b>N465</b> (100-B/C)	<sup>144</sup> Ce	1.6E-03 ± 2.2E-03	U
Composite Period	<sup>60</sup> Co	-1.6E-05 ± 1.6E-04	U	Composite Period	<sup>60</sup> Co	4.3E-05 ± 2.5E-04	U
10/21/04 to 12/21/04	<sup>134</sup> Cs	-3.7E-05 ± 2.2E-04	U	10/21/04 to 12/21/04	<sup>134</sup> Cs	6.2E-05 ± 2.6E-04	U
	<sup>137</sup> Cs	1.5E-04 ± 2.0E-04	U		<sup>137</sup> Cs	-1.9E-06 ± 1.9E-05	U
	<sup>152</sup> Eu	-1.0E-04 ± 4.6E-04	U		<sup>152</sup> Eu	-3.2E-04 ± 6.0E-04	U
	<sup>154</sup> Eu	-1.7E-04 ± 7.6E-04	U		<sup>154</sup> Eu	1.7E-04 ± 6.4E-04	U
	<sup>155</sup> Eu	2.3E-04 ± 4.4E-04	U		<sup>155</sup> Eu	-3.1E-04 ± 6.2E-04	U
	<sup>238</sup> Pu	-2.2E-06 ± 2.2E-05	U		<sup>238</sup> Pu	-7.0E-06 ± 4.2E-05	U
	<sup>239/240</sup> Pu	2.2E-06 ± 1.1E-05	U		<sup>239/240</sup> Pu	1.9E-05 ± 1.6E-05	
	<sup>103</sup> Ru	-8.9E-05 ± 1.6E-04	U		<sup>103</sup> Ru	1.1E-04 ± 1.8E-04	U
	<sup>106</sup> Ru	1.0E-03 ± 1.8E-03	U		<sup>106</sup> Ru	-7.7E-04 ± 1.7E-03	U
	<sup>125</sup> Sb	-1.2E-04 ± 4.6E-04	U		<sup>125</sup> Sb	-2.5E-04 ± 5.0E-04	U
	<sup>113</sup> Sn	6.3E-05 ± 2.0E-04	U		<sup>113</sup> Sn	5.5E-05 ± 2.1E-04	U
	<sup>90</sup> Sr	-1.1E-04 ± 2.5E-04	U		<sup>90</sup> Sr	-5.2E-04 ± 5.3E-04	U
	<sup>234</sup> U	3.6E-05 ± 2.1E-05			<sup>234</sup> U	7.3E-06 ± 1.3E-05	U
	<sup>235</sup> U	1.4E-05 ± 1.4E-05	U		<sup>235</sup> U	2.1E-05 ± 1.6E-05	
	<sup>238</sup> U	1.5E-05 ± 1.4E-05	U		<sup>238</sup> U	1.7E-05 ± 1.6E-05	U
	<sup>65</sup> Zn	4.1E-04 ± 5.5E-04	U		<sup>65</sup> Zn	3.1E-04 ± 5.2E-04	U
<b>N466</b> (100-B/C)	<sup>144</sup> Ce	-2.7E-04 ± 6.1E-04	U	<b>N466</b> (100-B/C)	<sup>144</sup> Ce	-2.4E-04 ± 7.6E-04	U
Composite Period	<sup>60</sup> Co	-2.4E-05 ± 6.9E-05	U	Composite Period	<sup>60</sup> Co	2.4E-05 ± 6.4E-05	U
12/22/03 to 06/21/04	<sup>134</sup> Cs	-1.4E-06 ± 1.4E-05	U	06/21/04 to 12/21/04	<sup>134</sup> Cs	-2.2E-05 ± 6.3E-05	U
	<sup>137</sup> Cs	-1.3E-05 ± 5.7E-05	U		<sup>137</sup> Cs	-9.0E-06 ± 6.4E-05	U
	<sup>152</sup> Eu	-2.3E-05 ± 1.3E-04	U		<sup>152</sup> Eu	-2.5E-04 ± 2.6E-04	U
	<sup>154</sup> Eu	-1.3E-04 ± 2.1E-04	U		<sup>154</sup> Eu	2.0E-04 ± 2.0E-04	U
	<sup>155</sup> Eu	-2.3E-05 ± 1.4E-04	U		<sup>155</sup> Eu	-2.4E-05 ± 1.6E-04	U
	<sup>238</sup> Pu	2.4E-06 ± 8.7E-06	U		<sup>238</sup> Pu	-7.6E-06 ± 2.1E-05	U
	<sup>239/240</sup> Pu	2.4E-06 ± 4.4E-06	U		<sup>239/240</sup> Pu	3.2E-06 ± 4.9E-06	U
	<sup>103</sup> Ru	-6.9E-06 ± 6.3E-05	U		<sup>103</sup> Ru	-5.9E-06 ± 5.9E-05	U
	<sup>106</sup> Ru	-2.4E-04 ± 5.0E-04	U		<sup>106</sup> Ru	-3.1E-04 ± 5.5E-04	U
	<sup>125</sup> Sb	1.5E-04 ± 1.8E-04	U		<sup>125</sup> Sb	8.2E-05 ± 1.4E-04	U
	<sup>113</sup> Sn	6.8E-06 ± 6.3E-05	U		<sup>113</sup> Sn	3.0E-07 ± 3.0E-06	U
	<sup>90</sup> Sr	-2.8E-05 ± 1.0E-04	U		<sup>90</sup> Sr	-8.3E-05 ± 8.6E-05	U
	<sup>234</sup> U	1.4E-05 ± 8.5E-06			<sup>234</sup> U	1.1E-05 ± 7.6E-06	
	<sup>235</sup> U	4.2E-06 ± 4.1E-06			<sup>235</sup> U	5.8E-06 ± 4.6E-06	
	<sup>238</sup> U	1.3E-05 ± 8.1E-06			<sup>238</sup> U	1.4E-05 ± 7.9E-06	
	<sup>65</sup> Zn	-5.0E-05 ± 1.5E-04	U		<sup>65</sup> Zn	-1.1E-04 ± 1.4E-04	U

RQ = Result Qualifier. U = The analyte was analyzed for but not detected.

Table 2-4. Near-Facility Air Sampling Results, 2004 (pCi/m<sup>3</sup> ± total analytical uncertainty).  
(40 sheets total)

Location	Isotope	Result ± Uncertainty	RQ*	Location	Isotope	Result ± Uncertainty	RQ*
N496 (100-B/C)	<sup>144</sup> Ce	-5.5E-04 ± 7.0E-04	U	N496 (100-B/C)	<sup>144</sup> Ce	-8.6E-04 ± 8.9E-04	U
Composite Period	<sup>60</sup> Co	-6.5E-06 ± 6.4E-05	U	Composite Period	<sup>60</sup> Co	-3.6E-05 ± 1.0E-04	U
12/22/03 to 06/21/04	<sup>134</sup> Cs	7.1E-05 ± 7.3E-05	U	06/21/04 to 12/21/04	<sup>134</sup> Cs	7.2E-05 ± 1.0E-04	U
	<sup>137</sup> Cs	-9.4E-07 ± 9.4E-06	U		<sup>137</sup> Cs	1.1E-05 ± 8.7E-05	U
	<sup>152</sup> Eu	9.5E-06 ± 9.5E-05	U		<sup>152</sup> Eu	4.5E-05 ± 2.3E-04	U
	<sup>154</sup> Eu	-1.2E-04 ± 2.0E-04	U		<sup>154</sup> Eu	-1.5E-04 ± 2.8E-04	U
	<sup>155</sup> Eu	-1.2E-04 ± 1.7E-04	U		<sup>155</sup> Eu	-1.6E-04 ± 1.7E-04	U
	<sup>238</sup> Pu	-4.9E-06 ± 1.0E-05	U		<sup>238</sup> Pu	2.1E-06 ± 1.4E-05	U
	<sup>239/240</sup> Pu	-8.3E-07 ± 4.4E-06	U		<sup>239/240</sup> Pu	1.0E-05 ± 6.8E-06	
	<sup>103</sup> Ru	-4.1E-05 ± 8.4E-05	U		<sup>103</sup> Ru	1.4E-05 ± 1.1E-04	U
	<sup>106</sup> Ru	1.6E-04 ± 5.8E-04	U		<sup>106</sup> Ru	9.8E-06 ± 9.8E-05	U
	<sup>125</sup> Sb	6.7E-06 ± 6.7E-05	U		<sup>125</sup> Sb	-4.4E-05 ± 2.4E-04	U
	<sup>113</sup> Sn	-1.7E-05 ± 7.6E-05	U		<sup>113</sup> Sn	2.1E-05 ± 1.1E-04	U
	<sup>90</sup> Sr	-4.8E-05 ± 9.5E-05	U		<sup>90</sup> Sr	-1.5E-04 ± 1.6E-04	U
	<sup>234</sup> U	8.9E-06 ± 6.9E-06			<sup>234</sup> U	1.4E-05 ± 8.0E-06	
	<sup>235</sup> U	1.5E-06 ± 2.1E-06	U		<sup>235</sup> U	1.5E-06 ± 2.1E-06	U
	<sup>238</sup> U	6.5E-06 ± 5.2E-06			<sup>238</sup> U	8.4E-06 ± 5.6E-06	
	<sup>65</sup> Zn	-5.4E-05 ± 1.4E-04	U		<sup>65</sup> Zn	-3.2E-04 ± 3.3E-04	U
N497 (100-B/C)	<sup>144</sup> Ce	-2.4E-04 ± 7.0E-04	U	N497 (100-B/C)	<sup>144</sup> Ce	9.8E-06 ± 9.8E-05	U
Composite Period	<sup>60</sup> Co	7.3E-05 ± 8.1E-05	U	Composite Period	<sup>60</sup> Co	6.2E-05 ± 7.4E-05	U
12/22/03 to 06/21/04	<sup>134</sup> Cs	-9.4E-06 ± 8.3E-05	U	06/21/04 to 12/21/04	<sup>134</sup> Cs	-2.3E-05 ± 6.5E-05	U
	<sup>137</sup> Cs	3.0E-05 ± 6.1E-05	U		<sup>137</sup> Cs	3.2E-06 ± 3.2E-05	U
	<sup>152</sup> Eu	-6.1E-05 ± 1.6E-04	U		<sup>152</sup> Eu	-2.0E-05 ± 1.3E-04	U
	<sup>154</sup> Eu	5.2E-05 ± 2.0E-04	U		<sup>154</sup> Eu	4.0E-05 ± 1.9E-04	U
	<sup>155</sup> Eu	-2.8E-05 ± 1.8E-04	U		<sup>155</sup> Eu	5.0E-05 ± 1.4E-04	U
	<sup>238</sup> Pu	4.5E-06 ± 7.2E-06	U		<sup>238</sup> Pu	-2.9E-06 ± 1.8E-05	U
	<sup>239/240</sup> Pu	7.5E-07 ± 2.7E-06	U		<sup>239/240</sup> Pu	-9.8E-07 ± 4.4E-06	U
	<sup>103</sup> Ru	3.1E-05 ± 7.6E-05	U		<sup>103</sup> Ru	-2.4E-05 ± 7.1E-05	U
	<sup>106</sup> Ru	-5.4E-05 ± 5.4E-04	U		<sup>106</sup> Ru	-8.0E-05 ± 5.0E-04	U
	<sup>125</sup> Sb	9.6E-05 ± 1.5E-04	U		<sup>125</sup> Sb	-4.0E-05 ± 1.3E-04	U
	<sup>113</sup> Sn	2.2E-08 ± 2.2E-07	U		<sup>113</sup> Sn	1.6E-05 ± 6.2E-05	U
	<sup>90</sup> Sr	-1.0E-04 ± 1.1E-04	U		<sup>90</sup> Sr	-4.2E-05 ± 8.1E-05	U
	<sup>234</sup> U	1.4E-05 ± 8.4E-06			<sup>234</sup> U	9.8E-06 ± 7.6E-06	
	<sup>235</sup> U	6.9E-07 ± 3.1E-06	U		<sup>235</sup> U	5.9E-06 ± 5.0E-06	
	<sup>238</sup> U	8.2E-06 ± 6.3E-06			<sup>238</sup> U	7.7E-06 ± 6.1E-06	
	<sup>65</sup> Zn	2.0E-04 ± 1.5E-04	U		<sup>65</sup> Zn	-1.6E-04 ± 1.6E-04	U

RQ = Result Qualifier. U = The analyte was analyzed for but not detected.

Table 2-4. Near-Facility Air Sampling Results, 2004 (pCi/m<sup>3</sup> ± total analytical uncertainty).  
(40 sheets total)

Location	Isotope	Result ± Uncertainty	RQ*	Location	Isotope	Result ± Uncertainty	RQ*
N492 (100-D/DR)	<sup>144</sup> Ce	-1.1E-03 ± 1.2E-03	U	N492 (100-D/DR)	<sup>144</sup> Ce	4.4E-04 ± 1.1E-03	U
Composite Period	<sup>60</sup> Co	9.8E-05 ± 1.7E-04	U	Composite Period	<sup>60</sup> Co	1.2E-04 ± 1.7E-04	U
12/22/03 to 03/29/04	<sup>134</sup> Cs	1.8E-05 ± 1.5E-04	U	03/29/04 to 06/22/04	<sup>134</sup> Cs	7.8E-05 ± 1.4E-04	U
	<sup>137</sup> Cs	4.3E-05 ± 1.2E-04	U		<sup>137</sup> Cs	-2.2E-05 ± 1.2E-04	U
	<sup>152</sup> Eu	2.0E-05 ± 2.0E-04	U		<sup>152</sup> Eu	-1.5E-04 ± 3.1E-04	U
	<sup>154</sup> Eu	-2.9E-04 ± 4.4E-04	U		<sup>154</sup> Eu	5.4E-05 ± 4.1E-04	U
	<sup>155</sup> Eu	1.9E-04 ± 3.1E-04	U		<sup>155</sup> Eu	3.7E-05 ± 2.9E-04	U
	<sup>238</sup> Pu	-6.8E-06 ± 1.8E-05	U		<sup>238</sup> Pu	2.2E-05 ± 3.0E-05	U
	<sup>239/240</sup> Pu	6.8E-06 ± 7.7E-06	U		<sup>239/240</sup> Pu	-1.8E-06 ± 8.1E-06	U
	<sup>103</sup> Ru	-3.5E-05 ± 1.0E-04	U		<sup>103</sup> Ru	-2.9E-05 ± 1.1E-04	U
	<sup>106</sup> Ru	-2.5E-05 ± 2.6E-04	U		<sup>106</sup> Ru	-8.7E-04 ± 1.2E-03	U
	<sup>125</sup> Sb	4.1E-05 ± 2.8E-04	U		<sup>125</sup> Sb	-2.0E-04 ± 3.1E-04	U
	<sup>113</sup> Sn	-6.9E-05 ± 1.2E-04	U		<sup>113</sup> Sn	-2.5E-05 ± 1.3E-04	U
	<sup>90</sup> Sr	-3.3E-04 ± 3.4E-04	U		<sup>90</sup> Sr	-3.0E-05 ± 1.8E-04	U
	<sup>234</sup> U	1.8E-05 ± 1.3E-05			<sup>234</sup> U	9.7E-06 ± 8.1E-06	
	<sup>235</sup> U	2.9E-06 ± 7.3E-06	U		<sup>235</sup> U	1.5E-06 ± 5.2E-06	U
	<sup>238</sup> U	1.0E-05 ± 8.3E-06			<sup>238</sup> U	1.4E-05 ± 1.1E-05	
	<sup>65</sup> Zn	-2.5E-04 ± 3.1E-04	U		<sup>65</sup> Zn	2.2E-04 ± 3.2E-04	U
N492 (100-D/DR)	<sup>144</sup> Ce	4.8E-04 ± 1.3E-03	U	N492 (100-D/DR)	<sup>144</sup> Ce	-6.5E-04 ± 1.4E-03	U
Composite Period	<sup>60</sup> Co	-9.3E-05 ± 1.6E-04	U	Composite Period	<sup>60</sup> Co	7.7E-06 ± 7.7E-05	U
06/22/04 to 09/28/04	<sup>134</sup> Cs	4.0E-06 ± 4.0E-05	U	09/28/04 to 12/22/04	<sup>134</sup> Cs	1.2E-04 ± 1.6E-04	U
	<sup>137</sup> Cs	-8.1E-05 ± 1.4E-04	U		<sup>137</sup> Cs	-1.0E-04 ± 1.4E-04	U
	<sup>152</sup> Eu	-3.5E-05 ± 3.5E-04	U		<sup>152</sup> Eu	3.0E-04 ± 3.4E-04	U
	<sup>154</sup> Eu	-5.5E-04 ± 5.3E-04	U		<sup>154</sup> Eu	-3.2E-04 ± 4.9E-04	U
	<sup>155</sup> Eu	2.5E-04 ± 3.4E-04	U		<sup>155</sup> Eu	-9.5E-05 ± 3.5E-04	U
	<sup>238</sup> Pu	-1.3E-06 ± 1.3E-05	U		<sup>238</sup> Pu	1.6E-06 ± 1.6E-05	U
	<sup>239/240</sup> Pu	7.6E-06 ± 6.8E-06			<sup>239/240</sup> Pu	-1.6E-06 ± 7.2E-06	U
	<sup>103</sup> Ru	7.3E-05 ± 1.2E-04	U		<sup>103</sup> Ru	1.7E-05 ± 1.1E-04	U
	<sup>106</sup> Ru	-6.4E-04 ± 1.2E-03	U		<sup>106</sup> Ru	5.3E-04 ± 1.2E-03	U
	<sup>125</sup> Sb	2.7E-04 ± 3.3E-04	U		<sup>125</sup> Sb	5.3E-05 ± 3.1E-04	U
	<sup>113</sup> Sn	-1.7E-04 ± 1.7E-04	U		<sup>113</sup> Sn	-1.1E-04 ± 1.3E-04	U
	<sup>90</sup> Sr	1.4E-04 ± 1.6E-04	U		<sup>90</sup> Sr	-3.0E-04 ± 3.1E-04	U
	<sup>234</sup> U	2.2E-05 ± 1.5E-05			<sup>234</sup> U	2.2E-05 ± 1.8E-05	
	<sup>235</sup> U	1.2E-05 ± 9.6E-06			<sup>235</sup> U	3.5E-06 ± 5.0E-06	U
	<sup>238</sup> U	2.6E-05 ± 1.5E-05			<sup>238</sup> U	1.6E-05 ± 1.3E-05	
	<sup>65</sup> Zn	4.5E-04 ± 4.0E-04	U		<sup>65</sup> Zn	8.9E-05 ± 3.8E-04	U

RQ = Result Qualifier. U = The analyte was analyzed for but not detected.

Table 2-4. Near-Facility Air Sampling Results, 2004 (pCi/m<sup>3</sup> ± total analytical uncertainty).  
(40 sheets total)

Location	Isotope	Result ± Uncertainty	RQ*	Location	Isotope	Result ± Uncertainty	RQ*
<b>N494</b> (100-F)	<sup>144</sup> Ce	-2.5E-03 ± 2.7E-03	U	<b>N495</b> (100-F)	<sup>144</sup> Ce	-1.9E-03 ± 3.9E-03	U
Composite Period	<sup>60</sup> Co	-5.1E-05 ± 3.1E-04	U	Composite Period	<sup>60</sup> Co	-2.0E-04 ± 3.4E-04	U
12/22/03 to 02/03/04	<sup>134</sup> Cs	5.3E-05 ± 2.9E-04	U	12/22/03 to 02/03/04	<sup>134</sup> Cs	2.4E-04 ± 3.5E-04	U
	<sup>137</sup> Cs	3.7E-05 ± 2.6E-04	U		<sup>137</sup> Cs	-6.9E-05 ± 3.5E-04	U
	<sup>152</sup> Eu	-2.8E-04 ± 6.4E-04	U		<sup>152</sup> Eu	-7.8E-04 ± 1.1E-03	U
	<sup>154</sup> Eu	2.8E-04 ± 8.8E-04	U		<sup>154</sup> Eu	-6.4E-04 ± 1.1E-03	U
	<sup>155</sup> Eu	6.6E-05 ± 6.6E-04	U		<sup>155</sup> Eu	1.1E-03 ± 1.1E-03	U
	<sup>238</sup> Pu	-1.3E-05 ± 6.0E-05	U		<sup>238</sup> Pu	-6.7E-06 ± 4.9E-05	U
	<sup>239/240</sup> Pu	3.3E-06 ± 3.4E-06	U		<sup>239/240</sup> Pu	1.4E-05 ± 1.4E-05	
	<sup>103</sup> Ru	3.8E-04 ± 2.4E-04	U		<sup>103</sup> Ru	-6.9E-05 ± 3.3E-04	U
	<sup>106</sup> Ru	1.5E-03 ± 2.5E-03	U		<sup>106</sup> Ru	-2.2E-03 ± 3.3E-03	U
	<sup>125</sup> Sb	-1.9E-04 ± 5.9E-04	U		<sup>125</sup> Sb	1.6E-04 ± 8.4E-04	U
	<sup>113</sup> Sn	-2.8E-05 ± 2.6E-04	U		<sup>113</sup> Sn	7.5E-05 ± 3.9E-04	U
	<sup>90</sup> Sr	1.2E-04 ± 4.0E-04	U		<sup>90</sup> Sr	-4.7E-04 ± 4.8E-04	U
	<sup>234</sup> U	4.2E-05 ± 2.7E-05			<sup>234</sup> U	5.0E-05 ± 3.0E-05	
	<sup>235</sup> U	3.3E-06 ± 3.4E-06	U		<sup>235</sup> U	7.0E-06 ± 1.0E-05	U
	<sup>238</sup> U	1.3E-05 ± 1.6E-05	U		<sup>238</sup> U	1.9E-05 ± 1.9E-05	U
	<sup>65</sup> Zn	-5.7E-05 ± 5.7E-04	U		<sup>65</sup> Zn	5.4E-04 ± 7.9E-04	U
<b>N515</b> (100-D/DR)	<sup>144</sup> Ce	7.5E-03 ± 9.4E-03	U	<b>N523</b> (100-D/DR)	<sup>144</sup> Ce	-9.1E-04 ± 1.7E-03	U
Composite Period	<sup>60</sup> Co	5.6E-04 ± 1.3E-03	U	Composite Period	<sup>60</sup> Co	1.3E-04 ± 2.0E-04	U
12/22/03 to 01/08/04	<sup>134</sup> Cs	4.5E-04 ± 1.1E-03	U	12/22/03 to 03/29/04	<sup>134</sup> Cs	2.1E-05 ± 1.7E-04	U
	<sup>137</sup> Cs	-3.0E-04 ± 1.3E-03	U		<sup>137</sup> Cs	2.7E-04 ± 1.9E-04	U
	<sup>152</sup> Eu	-1.8E-04 ± 1.8E-03	U		<sup>152</sup> Eu	-9.6E-05 ± 4.2E-04	U
	<sup>154</sup> Eu	3.4E-03 ± 3.6E-03	U		<sup>154</sup> Eu	1.8E-04 ± 4.8E-04	U
	<sup>155</sup> Eu	3.3E-05 ± 3.3E-04	U		<sup>155</sup> Eu	4.1E-05 ± 4.2E-04	U
	<sup>238</sup> Pu	1.1E-04 ± 1.9E-04	U		<sup>238</sup> Pu	-2.2E-06 ± 2.2E-05	U
	<sup>239/240</sup> Pu	6.7E-05 ± 6.3E-05			<sup>239/240</sup> Pu	8.4E-06 ± 8.6E-06	
	<sup>103</sup> Ru	-2.3E-04 ± 8.9E-04	U		<sup>103</sup> Ru	-2.2E-05 ± 1.5E-04	U
	<sup>106</sup> Ru	-5.2E-03 ± 9.6E-03	U		<sup>106</sup> Ru	-8.9E-04 ± 1.5E-03	U
	<sup>125</sup> Sb	9.2E-04 ± 2.4E-03	U		<sup>125</sup> Sb	-2.2E-04 ± 3.9E-04	U
	<sup>113</sup> Sn	-8.4E-04 ± 1.0E-03	U		<sup>113</sup> Sn	5.5E-05 ± 1.6E-04	U
	<sup>90</sup> Sr	-7.5E-04 ± 1.6E-03	U		<sup>90</sup> Sr	-1.5E-04 ± 2.1E-04	U
	<sup>234</sup> U	6.3E-05 ± 7.5E-05	U		<sup>234</sup> U	4.8E-05 ± 2.6E-05	
	<sup>235</sup> U	6.7E-05 ± 6.8E-05			<sup>235</sup> U	7.3E-06 ± 1.3E-05	U
	<sup>238</sup> U	7.8E-05 ± 7.3E-05			<sup>238</sup> U	3.5E-05 ± 2.3E-05	
	<sup>65</sup> Zn	2.4E-03 ± 3.2E-03	U		<sup>65</sup> Zn	-2.0E-04 ± 3.9E-04	U

RQ = Result Qualifier. U = The analyte was analyzed for but not detected.

Table 2-4. Near-Facility Air Sampling Results, 2004 (pCi/m<sup>3</sup> ± total analytical uncertainty).  
(40 sheets total)

Location	Isotope	Result ± Uncertainty	RQ*	Location	Isotope	Result ± Uncertainty	RQ*
N523 (100-D/DR)	<sup>144</sup> Ce	-9.3E-05 ± 9.3E-04	U	N523 (100-D/DR)	<sup>144</sup> Ce	2.0E-04 ± 1.0E-03	U
Composite Period	<sup>60</sup> Co	2.6E-05 ± 1.6E-04	U	Composite Period	<sup>60</sup> Co	-6.5E-05 ± 1.4E-04	U
03/29/04 to 06/22/04	<sup>134</sup> Cs	3.4E-06 ± 3.4E-05	U	06/22/04 to 09/28/04	<sup>134</sup> Cs	-3.5E-06 ± 3.5E-05	U
	<sup>137</sup> Cs	1.4E-04 ± 1.8E-04	U		<sup>137</sup> Cs	1.2E-04 ± 1.3E-04	U
	<sup>152</sup> Eu	1.4E-04 ± 2.9E-04	U		<sup>152</sup> Eu	-2.0E-04 ± 3.1E-04	U
	<sup>154</sup> Eu	1.4E-04 ± 4.1E-04	U		<sup>154</sup> Eu	-1.8E-04 ± 4.2E-04	U
	<sup>155</sup> Eu	-3.7E-05 ± 3.2E-04	U		<sup>155</sup> Eu	1.4E-04 ± 2.9E-04	U
	<sup>238</sup> Pu	9.6E-06 ± 2.0E-05	U		<sup>238</sup> Pu	-5.1E-06 ± 1.3E-05	U
	<sup>239/240</sup> Pu	8.0E-06 ± 9.8E-06	U		<sup>239/240</sup> Pu	3.9E-06 ± 4.8E-06	
	<sup>103</sup> Ru	-2.1E-05 ± 1.0E-04	U		<sup>103</sup> Ru	1.1E-04 ± 1.2E-04	U
	<sup>106</sup> Ru	-9.0E-04 ± 1.1E-03	U		<sup>106</sup> Ru	7.2E-04 ± 1.1E-03	U
	<sup>125</sup> Sb	-1.2E-05 ± 1.2E-04	U		<sup>125</sup> Sb	-1.7E-05 ± 1.7E-04	U
	<sup>113</sup> Sn	1.1E-05 ± 1.1E-04	U		<sup>113</sup> Sn	-1.0E-04 ± 1.2E-04	U
	<sup>90</sup> Sr	-1.1E-04 ± 2.0E-04	U		<sup>90</sup> Sr	-7.9E-05 ± 1.4E-04	U
	<sup>234</sup> U	1.9E-05 ± 1.3E-05			<sup>234</sup> U	2.2E-05 ± 1.5E-05	
	<sup>235</sup> U	3.2E-06 ± 6.5E-06	U		<sup>235</sup> U	8.1E-06 ± 9.1E-06	U
	<sup>238</sup> U	9.0E-06 ± 9.0E-06	U		<sup>238</sup> U	8.9E-06 ± 9.0E-06	U
	<sup>65</sup> Zn	-2.5E-04 ± 4.0E-04	U		<sup>65</sup> Zn	2.3E-04 ± 3.5E-04	U
N523 (100-D/DR)	<sup>144</sup> Ce	5.9E-04 ± 1.7E-03	U	N524 (100-H)	<sup>144</sup> Ce	-4.3E-04 ± 1.2E-03	U
Composite Period	<sup>60</sup> Co	1.1E-04 ± 2.3E-04	U	Composite Period	<sup>60</sup> Co	1.6E-05 ± 1.3E-04	U
09/28/04 to 12/22/04	<sup>134</sup> Cs	8.9E-05 ± 2.4E-04	U	12/22/03 to 03/29/04	<sup>134</sup> Cs	6.8E-05 ± 1.3E-04	U
	<sup>137</sup> Cs	-1.7E-05 ± 1.7E-04	U		<sup>137</sup> Cs	1.6E-04 ± 1.3E-04	U
	<sup>152</sup> Eu	4.5E-05 ± 4.5E-04	U		<sup>152</sup> Eu	2.2E-04 ± 2.5E-04	U
	<sup>154</sup> Eu	-3.3E-04 ± 7.3E-04	U		<sup>154</sup> Eu	1.6E-04 ± 3.8E-04	U
	<sup>155</sup> Eu	-3.2E-04 ± 3.9E-04	U		<sup>155</sup> Eu	9.1E-05 ± 2.8E-04	U
	<sup>238</sup> Pu	1.3E-05 ± 2.4E-05	U		<sup>238</sup> Pu	1.5E-06 ± 1.5E-05	U
	<sup>239/240</sup> Pu	-2.6E-06 ± 7.3E-06	U		<sup>239/240</sup> Pu	1.2E-05 ± 1.0E-05	
	<sup>103</sup> Ru	-2.1E-04 ± 2.1E-04	U		<sup>103</sup> Ru	1.8E-05 ± 9.7E-05	U
	<sup>106</sup> Ru	6.3E-04 ± 1.7E-03	U		<sup>106</sup> Ru	-5.8E-04 ± 9.9E-04	U
	<sup>125</sup> Sb	-2.8E-04 ± 5.3E-04	U		<sup>125</sup> Sb	-1.6E-04 ± 2.4E-04	U
	<sup>113</sup> Sn	3.9E-05 ± 2.3E-04	U		<sup>113</sup> Sn	-7.1E-05 ± 1.0E-04	U
	<sup>90</sup> Sr	3.1E-05 ± 1.7E-04	U		<sup>90</sup> Sr	-8.0E-05 ± 1.5E-04	U
	<sup>234</sup> U	1.1E-05 ± 1.1E-05	U		<sup>234</sup> U	1.7E-05 ± 1.3E-05	
	<sup>235</sup> U	3.4E-06 ± 4.8E-06	U		<sup>235</sup> U	5.8E-06 ± 6.0E-06	
	<sup>238</sup> U	1.2E-05 ± 9.5E-06			<sup>238</sup> U	1.9E-05 ± 1.2E-05	
	<sup>65</sup> Zn	1.1E-04 ± 5.3E-04	U		<sup>65</sup> Zn	-1.2E-04 ± 2.7E-04	U

RQ = Result Qualifier. U = The analyte was analyzed for but not detected.



Table 2-4. Near-Facility Air Sampling Results, 2004 (pCi/m<sup>3</sup> ± total analytical uncertainty).  
(40 sheets total)

Location	Isotope	Result ± Uncertainty	RQ*	Location	Isotope	Result ± Uncertainty	RQ*
N524 (100-H)	<sup>144</sup> Ce	-1.3E-04 ± 1.3E-03	U	N524 (100-H)	<sup>144</sup> Ce	2.3E-04 ± 1.3E-03	U
Composite Period	<sup>60</sup> Co	-6.4E-05 ± 1.8E-04	U	Composite Period	<sup>60</sup> Co	1.1E-04 ± 1.4E-04	U
03/29/04 to 06/22/04	<sup>134</sup> Cs	-4.0E-06 ± 4.0E-05	U	06/22/04 to 09/28/04	<sup>134</sup> Cs	-8.6E-05 ± 1.1E-04	U
	<sup>137</sup> Cs	6.3E-05 ± 1.5E-04	U		<sup>137</sup> Cs	5.1E-04 ± 3.0E-04	
	<sup>152</sup> Eu	1.3E-04 ± 3.6E-04	U		<sup>152</sup> Eu	-1.2E-04 ± 3.7E-04	U
	<sup>154</sup> Eu	-2.4E-04 ± 5.2E-04	U		<sup>154</sup> Eu	-7.4E-05 ± 3.4E-04	U
	<sup>155</sup> Eu	3.7E-04 ± 3.6E-04	U		<sup>155</sup> Eu	8.2E-05 ± 3.5E-04	U
	<sup>238</sup> Pu	2.1E-05 ± 2.8E-05	U		<sup>238</sup> Pu	-5.1E-06 ± 1.8E-05	U
	<sup>239/240</sup> Pu	1.7E-06 ± 1.7E-06	U		<sup>239/240</sup> Pu	3.8E-06 ± 5.8E-06	U
	<sup>103</sup> Ru	-2.5E-05 ± 1.2E-04	U		<sup>103</sup> Ru	8.3E-05 ± 1.1E-04	U
	<sup>106</sup> Ru	6.6E-04 ± 1.4E-03	U		<sup>106</sup> Ru	5.4E-05 ± 5.4E-04	U
	<sup>125</sup> Sb	-2.3E-04 ± 3.9E-04	U		<sup>125</sup> Sb	-3.9E-05 ± 2.9E-04	U
	<sup>113</sup> Sn	-8.8E-05 ± 1.4E-04	U		<sup>113</sup> Sn	-1.2E-04 ± 1.5E-04	U
	<sup>90</sup> Sr	-3.0E-05 ± 2.6E-04	U		<sup>90</sup> Sr	-1.3E-05 ± 1.1E-04	U
	<sup>234</sup> U	1.1E-05 ± 1.1E-05	U		<sup>234</sup> U	2.9E-05 ± 1.6E-05	
	<sup>235</sup> U	6.5E-06 ± 6.7E-06			<sup>235</sup> U	6.1E-06 ± 7.5E-06	U
	<sup>238</sup> U	1.7E-05 ± 1.2E-05			<sup>238</sup> U	3.2E-05 ± 1.9E-05	
	<sup>65</sup> Zn	-2.1E-04 ± 3.6E-04	U		<sup>65</sup> Zn	-3.5E-05 ± 3.1E-04	U
N524 (100-H)	<sup>144</sup> Ce	-5.7E-04 ± 1.9E-03	U	N525 (100-H)	<sup>144</sup> Ce	1.9E-04 ± 1.1E-03	U
Composite Period	<sup>60</sup> Co	9.4E-05 ± 3.2E-04	U	Composite Period	<sup>60</sup> Co	-4.3E-05 ± 1.5E-04	U
09/28/04 to 12/22/04	<sup>134</sup> Cs	-1.2E-04 ± 2.6E-04	U	12/22/03 to 03/29/04	<sup>134</sup> Cs	-9.0E-06 ± 9.0E-05	U
	<sup>137</sup> Cs	-2.1E-04 ± 2.4E-04	U		<sup>137</sup> Cs	-1.3E-06 ± 1.3E-05	U
	<sup>152</sup> Eu	-2.0E-04 ± 5.9E-04	U		<sup>152</sup> Eu	6.0E-04 ± 4.2E-04	
	<sup>154</sup> Eu	4.9E-05 ± 5.0E-04	U		<sup>154</sup> Eu	-4.0E-04 ± 4.5E-04	U
	<sup>155</sup> Eu	-2.6E-05 ± 2.6E-04	U		<sup>155</sup> Eu	-1.2E-04 ± 3.1E-04	U
	<sup>238</sup> Pu	-1.6E-06 ± 1.6E-05	U		<sup>238</sup> Pu	3.3E-06 ± 1.8E-05	U
	<sup>239/240</sup> Pu	4.7E-06 ± 7.2E-06	U		<sup>239/240</sup> Pu	-1.6E-06 ± 5.5E-06	U
	<sup>103</sup> Ru	-1.3E-04 ± 2.0E-04	U		<sup>103</sup> Ru	5.2E-05 ± 1.0E-04	U
	<sup>106</sup> Ru	1.9E-04 ± 1.9E-03	U		<sup>106</sup> Ru	-2.4E-04 ± 1.1E-03	U
	<sup>125</sup> Sb	3.5E-04 ± 5.7E-04	U		<sup>125</sup> Sb	1.6E-04 ± 2.8E-04	U
	<sup>113</sup> Sn	-4.3E-05 ± 2.4E-04	U		<sup>113</sup> Sn	-4.4E-05 ± 1.2E-04	U
	<sup>90</sup> Sr	-2.6E-04 ± 2.7E-04	U		<sup>90</sup> Sr	-2.6E-05 ± 1.2E-04	U
	<sup>234</sup> U	2.0E-05 ± 1.4E-05			<sup>234</sup> U	2.1E-05 ± 1.5E-05	
	<sup>235</sup> U	1.6E-06 ± 1.7E-06	U		<sup>235</sup> U	4.1E-06 ± 5.8E-06	U
	<sup>238</sup> U	1.2E-05 ± 1.1E-05	U		<sup>238</sup> U	5.5E-06 ± 8.4E-06	U
	<sup>65</sup> Zn	5.1E-04 ± 5.7E-04	U		<sup>65</sup> Zn	-3.7E-06 ± 3.7E-05	U

RQ = Result Qualifier. U = The analyte was analyzed for but not detected.

Table 2-4. Near-Facility Air Sampling Results, 2004 (pCi/m<sup>3</sup> ± total analytical uncertainty).  
(40 sheets total)

Location	Isotope	Result ± Uncertainty	RQ*	Location	Isotope	Result ± Uncertainty	RQ*
N525 (100-H)	<sup>144</sup> Ce	2.2E-04 ± 1.2E-03	U	N525 (100-H)	<sup>144</sup> Ce	-1.4E-04 ± 1.4E-03	U
Composite Period	<sup>60</sup> Co	1.1E-04 ± 1.7E-04	U	Composite Period	<sup>60</sup> Co	4.9E-05 ± 2.3E-04	U
03/29/04 to 06/22/04	<sup>134</sup> Cs	3.5E-05 ± 1.5E-04	U	06/22/04 to 09/28/04	<sup>134</sup> Cs	-1.8E-04 ± 2.1E-04	U
	<sup>137</sup> Cs	1.1E-05 ± 1.1E-04	U		<sup>137</sup> Cs	-4.1E-05 ± 1.8E-04	U
	<sup>152</sup> Eu	-9.6E-05 ± 2.9E-04	U		<sup>152</sup> Eu	-4.4E-05 ± 4.4E-04	U
	<sup>154</sup> Eu	3.7E-06 ± 3.8E-05	U		<sup>154</sup> Eu	1.5E-04 ± 5.8E-04	U
	<sup>155</sup> Eu	-7.5E-05 ± 3.1E-04	U		<sup>155</sup> Eu	-2.5E-04 ± 3.5E-04	U
	<sup>238</sup> Pu	3.3E-06 ± 2.5E-05	U		<sup>238</sup> Pu	1.9E-05 ± 1.8E-05	U
	<sup>239/240</sup> Pu	1.5E-06 ± 1.5E-05	U		<sup>239/240</sup> Pu	1.3E-06 ± 7.0E-06	U
	<sup>103</sup> Ru	-3.3E-05 ± 1.1E-04	U		<sup>103</sup> Ru	-6.8E-05 ± 1.6E-04	U
	<sup>106</sup> Ru	-7.7E-04 ± 1.2E-03	U		<sup>106</sup> Ru	-4.4E-04 ± 1.6E-03	U
	<sup>125</sup> Sb	-2.5E-04 ± 3.2E-04	U		<sup>125</sup> Sb	6.9E-05 ± 4.4E-04	U
	<sup>113</sup> Sn	1.7E-05 ± 1.3E-04	U		<sup>113</sup> Sn	6.0E-05 ± 2.2E-04	U
	<sup>90</sup> Sr	-1.7E-04 ± 2.2E-04	U		<sup>90</sup> Sr	-3.2E-04 ± 3.3E-04	U
	<sup>234</sup> U	1.5E-05 ± 1.0E-05			<sup>234</sup> U	2.3E-05 ± 1.6E-05	
	<sup>235</sup> U	3.2E-06 ± 4.5E-06	U		<sup>235</sup> U	1.1E-05 ± 1.1E-05	U
	<sup>238</sup> U	1.5E-05 ± 1.0E-05			<sup>238</sup> U	1.2E-05 ± 1.1E-05	U
	<sup>65</sup> Zn	-6.2E-05 ± 3.1E-04	U		<sup>65</sup> Zn	9.4E-05 ± 4.4E-04	U
N525 (100-H)	<sup>144</sup> Ce	-6.2E-04 ± 1.4E-03	U	N401 (100-K)	<sup>241</sup> Am	6.1E-06 ± 9.8E-06	U
Composite Period	<sup>60</sup> Co	2.9E-05 ± 1.6E-04	U	Composite Period	<sup>144</sup> Ce	2.5E-04 ± 6.6E-04	U
09/28/04 to 12/22/04	<sup>134</sup> Cs	-1.1E-04 ± 1.4E-04	U	12/22/03 to 06/21/04	<sup>60</sup> Co	4.4E-05 ± 7.5E-05	U
	<sup>137</sup> Cs	6.9E-05 ± 1.4E-04	U		<sup>134</sup> Cs	4.9E-05 ± 7.1E-05	U
	<sup>152</sup> Eu	8.4E-06 ± 8.4E-05	U		<sup>137</sup> Cs	5.8E-05 ± 6.5E-05	U
	<sup>154</sup> Eu	-2.7E-04 ± 4.9E-04	U		<sup>152</sup> Eu	-1.9E-05 ± 1.5E-04	U
	<sup>155</sup> Eu	1.4E-04 ± 3.3E-04	U		<sup>154</sup> Eu	8.0E-05 ± 2.1E-04	U
	<sup>238</sup> Pu	1.4E-05 ± 2.2E-05	U		<sup>155</sup> Eu	4.2E-06 ± 4.2E-05	U
	<sup>239/240</sup> Pu	4.5E-06 ± 6.8E-06	U		<sup>238</sup> Pu	3.0E-05 ± 3.7E-05	U
	<sup>103</sup> Ru	-3.1E-06 ± 3.1E-05	U		<sup>239/240</sup> Pu	1.7E-06 ± 1.7E-05	U
	<sup>106</sup> Ru	-5.4E-04 ± 1.2E-03	U		<sup>241</sup> Pu	-7.0E-04 ± 7.3E-04	U
	<sup>125</sup> Sb	-2.9E-04 ± 3.7E-04	U		<sup>103</sup> Ru	1.5E-05 ± 6.3E-05	U
	<sup>113</sup> Sn	-4.3E-05 ± 1.6E-04	U		<sup>106</sup> Ru	4.2E-04 ± 5.9E-04	U
	<sup>90</sup> Sr	-2.1E-04 ± 2.1E-04	U		<sup>125</sup> Sb	-4.4E-05 ± 1.4E-04	U
	<sup>234</sup> U	2.6E-05 ± 1.6E-05			<sup>113</sup> Sn	1.5E-05 ± 6.6E-05	U
	<sup>235</sup> U	6.4E-06 ± 6.6E-06			<sup>90</sup> Sr	1.4E-05 ± 1.4E-04	U
	<sup>238</sup> U	1.8E-05 ± 1.2E-05			<sup>234</sup> U	2.2E-05 ± 1.1E-05	
	<sup>65</sup> Zn	-3.5E-05 ± 3.5E-04	U		<sup>235</sup> U	7.0E-07 ± 7.0E-06	U
					<sup>238</sup> U	7.0E-06 ± 5.1E-06	
					<sup>65</sup> Zn	1.2E-04 ± 1.5E-04	U

RQ = Result Qualifier. U = The analyte was analyzed for but not detected.

Table 2-4. Near-Facility Air Sampling Results, 2004 (pCi/m<sup>3</sup> ± total analytical uncertainty).  
(40 sheets total)

Location	Isotope	Result ± Uncertainty	RQ*	Location	Isotope	Result ± Uncertainty	RQ*
N401 (100-K) Composite Period 06/21/04 to 12/21/04	<sup>60</sup> Co	-2.0E-05 ± 7.8E-05	U	N402 (100-K) Composite Period 12/22/03 to 06/21/04	<sup>60</sup> Co	4.7E-05 ± 1.2E-04	U
	<sup>134</sup> Cs	-1.8E-05 ± 7.2E-05	U		<sup>134</sup> Cs	-6.4E-05 ± 9.8E-05	U
	<sup>137</sup> Cs	-3.1E-05 ± 6.8E-05	U		<sup>137</sup> Cs	3.9E-05 ± 9.1E-05	U
	<sup>152</sup> Eu	-7.4E-05 ± 1.7E-04	U		<sup>152</sup> Eu	2.1E-04 ± 2.7E-04	U
	<sup>154</sup> Eu	-4.7E-05 ± 2.1E-04	U		<sup>154</sup> Eu	2.6E-04 ± 3.2E-04	U
	<sup>155</sup> Eu	-2.4E-04 ± 2.5E-04	U		<sup>155</sup> Eu	-9.2E-07 ± 9.2E-06	U
	<sup>238</sup> Pu	-2.0E-05 ± 3.0E-05	U		<sup>238</sup> Pu	-1.7E-06 ± 1.7E-05	U
	<sup>239/240</sup> Pu	1.0E-05 ± 1.4E-05	U		<sup>239/240</sup> Pu	8.5E-06 ± 9.7E-06	U
	<sup>241</sup> Pu	1.4E-03 ± 7.9E-04			<sup>241</sup> Pu	-1.4E-03 ± 1.4E-02	U
	<sup>103</sup> Ru	-3.6E-05 ± 6.2E-05	U		<sup>103</sup> Ru	-5.7E-05 ± 9.9E-05	U
	<sup>106</sup> Ru	-1.3E-04 ± 5.4E-04	U		<sup>106</sup> Ru	-3.7E-04 ± 8.3E-04	U
	<sup>125</sup> Sb	2.0E-05 ± 1.6E-04	U		<sup>125</sup> Sb	1.7E-04 ± 2.2E-04	U
	<sup>113</sup> Sn	1.9E-05 ± 7.2E-05	U		<sup>113</sup> Sn	-2.4E-05 ± 1.0E-04	U
	<sup>90</sup> Sr	4.4E-05 ± 8.4E-05	U		<sup>90</sup> Sr	-1.4E-04 ± 2.0E-04	U
	<sup>234</sup> U	1.5E-05 ± 9.0E-06			<sup>234</sup> U	2.9E-06 ± 4.2E-06	U
	<sup>235</sup> U	3.4E-06 ± 3.5E-06			<sup>235</sup> U	7.8E-07 ± 1.6E-06	U
	<sup>238</sup> U	7.0E-06 ± 5.4E-06			<sup>238</sup> U	5.8E-06 ± 4.7E-06	
	<sup>65</sup> Zn	-1.7E-04 ± 1.7E-04	U		<sup>65</sup> Zn	-1.6E-04 ± 2.1E-04	U
N402 (100-K) Composite Period 06/21/04 to 12/21/04	<sup>241</sup> Am	3.6E-05 ± 1.9E-05		N403 (100-K) Composite Period 12/22/03 to 06/21/04	<sup>241</sup> Am	4.0E-06 ± 7.8E-06	U
	<sup>144</sup> Ce	-1.4E-04 ± 6.1E-04	U		<sup>144</sup> Ce	-1.2E-04 ± 6.2E-04	U
	<sup>60</sup> Co	-3.0E-05 ± 8.4E-05	U		<sup>60</sup> Co	7.0E-05 ± 8.3E-05	U
	<sup>134</sup> Cs	6.0E-05 ± 7.2E-05	U		<sup>134</sup> Cs	-4.1E-06 ± 4.1E-05	U
	<sup>137</sup> Cs	1.2E-04 ± 8.8E-05			<sup>137</sup> Cs	3.4E-05 ± 6.6E-05	U
	<sup>152</sup> Eu	-9.7E-06 ± 9.7E-05	U		<sup>152</sup> Eu	2.2E-05 ± 1.6E-04	U
	<sup>154</sup> Eu	-4.3E-06 ± 4.3E-05	U		<sup>154</sup> Eu	7.2E-05 ± 2.1E-04	U
	<sup>155</sup> Eu	4.0E-05 ± 1.7E-04	U		<sup>155</sup> Eu	-3.4E-05 ± 1.7E-04	U
	<sup>238</sup> Pu	-3.1E-06 ± 2.4E-05	U		<sup>238</sup> Pu	3.1E-06 ± 2.6E-05	U
	<sup>239/240</sup> Pu	4.1E-05 ± 2.4E-05			<sup>239/240</sup> Pu	1.2E-05 ± 1.0E-05	
	<sup>241</sup> Pu	1.3E-03 ± 7.4E-04			<sup>241</sup> Pu	-1.2E-05 ± 1.2E-04	U
	<sup>103</sup> Ru	3.4E-06 ± 3.4E-05	U		<sup>103</sup> Ru	-7.3E-05 ± 7.6E-05	U
	<sup>106</sup> Ru	-1.6E-04 ± 5.9E-04	U		<sup>106</sup> Ru	-3.8E-04 ± 6.3E-04	U
	<sup>125</sup> Sb	1.1E-04 ± 1.5E-04	U		<sup>125</sup> Sb	-8.6E-05 ± 1.5E-04	U
	<sup>113</sup> Sn	-1.8E-05 ± 7.0E-05	U		<sup>113</sup> Sn	-8.9E-06 ± 7.0E-05	U
	<sup>90</sup> Sr	-4.3E-05 ± 7.1E-05	U		<sup>90</sup> Sr	6.3E-05 ± 2.0E-04	U
	<sup>234</sup> U	9.3E-06 ± 6.6E-06			<sup>234</sup> U	1.2E-05 ± 7.4E-06	
	<sup>235</sup> U	3.2E-06 ± 3.3E-06			<sup>235</sup> U	2.1E-06 ± 2.6E-06	
	<sup>238</sup> U	6.6E-06 ± 5.0E-06			<sup>238</sup> U	7.7E-06 ± 5.6E-06	
	<sup>65</sup> Zn	-4.3E-05 ± 1.8E-04	U		<sup>65</sup> Zn	1.8E-04 ± 1.7E-04	U

RQ = Result Qualifier. U = The analyte was analyzed for but not detected.

Table 2-4. Near-Facility Air Sampling Results, 2004 (pCi/m<sup>3</sup> ± total analytical uncertainty).  
(40 sheets total)

Location	Isotope	Result ± Uncertainty	RQ*	Location	Isotope	Result ± Uncertainty	RQ*
N403 (100-K) Composite Period 06/21/04 to 12/21/04	<sup>241</sup> Am	2.6E-05 ± 1.8E-05		N404 (100-K) Composite Period 12/22/03 to 06/21/04	<sup>241</sup> Am	1.0E-05 ± 7.2E-06	
	<sup>144</sup> Ce	-1.8E-04 ± 5.0E-04	U		<sup>144</sup> Ce	-2.2E-04 ± 8.9E-04	U
	<sup>60</sup> Co	-1.2E-05 ± 8.7E-05	U		<sup>60</sup> Co	1.4E-06 ± 1.4E-05	U
	<sup>134</sup> Cs	1.3E-05 ± 6.9E-05	U		<sup>134</sup> Cs	5.5E-05 ± 1.4E-04	U
	<sup>137</sup> Cs	1.4E-04 ± 1.3E-04			<sup>137</sup> Cs	6.1E-05 ± 1.2E-04	U
	<sup>152</sup> Eu	-1.2E-05 ± 1.2E-04	U		<sup>152</sup> Eu	-1.8E-04 ± 2.6E-04	U
	<sup>154</sup> Eu	2.3E-05 ± 2.2E-04	U		<sup>154</sup> Eu	9.0E-05 ± 3.9E-04	U
	<sup>155</sup> Eu	7.2E-05 ± 1.4E-04	U		<sup>155</sup> Eu	1.1E-05 ± 1.1E-04	U
	<sup>238</sup> Pu	1.1E-05 ± 3.1E-05	U		<sup>238</sup> Pu	-1.2E-05 ± 3.6E-05	U
	<sup>239/240</sup> Pu	2.9E-05 ± 1.9E-05			<sup>239/240</sup> Pu	4.2E-06 ± 1.1E-05	U
	<sup>241</sup> Pu	7.9E-04 ± 7.8E-04	U		<sup>241</sup> Pu	-1.1E-03 ± 1.2E-03	U
	<sup>103</sup> Ru	1.1E-05 ± 5.6E-05	U		<sup>103</sup> Ru	-3.0E-05 ± 1.2E-04	U
	<sup>106</sup> Ru	-3.6E-04 ± 5.7E-04	U		<sup>106</sup> Ru	2.8E-04 ± 9.7E-04	U
	<sup>125</sup> Sb	3.1E-05 ± 1.3E-04	U		<sup>125</sup> Sb	1.0E-04 ± 2.7E-04	U
	<sup>113</sup> Sn	-2.8E-05 ± 6.7E-05	U		<sup>113</sup> Sn	-1.3E-04 ± 1.4E-04	U
	<sup>90</sup> Sr	-7.2E-05 ± 8.1E-05	U		<sup>90</sup> Sr	-8.8E-05 ± 2.4E-04	U
	<sup>234</sup> U	1.8E-05 ± 9.9E-06			<sup>234</sup> U	1.1E-05 ± 7.8E-06	
	<sup>235</sup> U	4.1E-06 ± 4.0E-06			<sup>235</sup> U	3.3E-06 ± 4.1E-06	U
	<sup>238</sup> U	1.7E-05 ± 9.7E-06			<sup>238</sup> U	7.6E-06 ± 5.5E-06	
	<sup>65</sup> Zn	-2.9E-05 ± 1.6E-04	U		<sup>65</sup> Zn	-4.0E-04 ± 4.2E-04	U
N404 (100-K) Composite Period 06/21/04 to 12/21/04	<sup>241</sup> Am	9.4E-06 ± 1.5E-05	U	N476 (100-K) Composite Period 12/22/03 to 06/21/04	<sup>241</sup> Am	1.3E-05 ± 9.2E-06	
	<sup>144</sup> Ce	3.5E-04 ± 8.6E-04	U		<sup>144</sup> Ce	1.1E-04 ± 5.5E-04	U
	<sup>60</sup> Co	5.2E-05 ± 1.2E-04	U		<sup>60</sup> Co	2.3E-06 ± 2.4E-05	U
	<sup>134</sup> Cs	2.0E-05 ± 1.2E-04	U		<sup>134</sup> Cs	1.6E-05 ± 6.3E-05	U
	<sup>137</sup> Cs	4.6E-05 ± 1.1E-04	U		<sup>137</sup> Cs	1.5E-05 ± 5.7E-05	U
	<sup>152</sup> Eu	1.7E-04 ± 2.6E-04	U		<sup>152</sup> Eu	3.9E-05 ± 1.3E-04	U
	<sup>154</sup> Eu	3.4E-05 ± 3.0E-04	U		<sup>154</sup> Eu	-1.4E-04 ± 2.0E-04	U
	<sup>155</sup> Eu	-6.3E-05 ± 1.9E-04	U		<sup>155</sup> Eu	9.6E-05 ± 1.4E-04	U
	<sup>238</sup> Pu	-1.7E-06 ± 1.7E-05	U		<sup>238</sup> Pu	7.5E-06 ± 2.1E-05	U
	<sup>239/240</sup> Pu	1.6E-05 ± 1.6E-05	U		<sup>239/240</sup> Pu	7.5E-06 ± 7.3E-06	
	<sup>241</sup> Pu	1.2E-03 ± 8.8E-04			<sup>241</sup> Pu	-1.0E-03 ± 1.0E-02	U
	<sup>103</sup> Ru	-4.0E-05 ± 1.1E-04	U		<sup>103</sup> Ru	-2.4E-05 ± 7.7E-05	U
	<sup>106</sup> Ru	4.0E-04 ± 8.9E-04	U		<sup>106</sup> Ru	3.8E-04 ± 5.4E-04	U
	<sup>125</sup> Sb	2.7E-05 ± 2.5E-04	U		<sup>125</sup> Sb	-6.6E-05 ± 1.3E-04	U
	<sup>113</sup> Sn	-8.8E-05 ± 1.3E-04	U		<sup>113</sup> Sn	-7.4E-06 ± 6.4E-05	U
	<sup>90</sup> Sr	3.1E-05 ± 7.6E-05	U		<sup>90</sup> Sr	-5.5E-05 ± 1.1E-04	U
	<sup>234</sup> U	1.3E-05 ± 9.0E-06			<sup>234</sup> U	8.2E-06 ± 5.7E-06	
	<sup>235</sup> U	1.7E-06 ± 2.5E-06	U		<sup>235</sup> U	1.3E-06 ± 2.6E-06	U
	<sup>238</sup> U	1.1E-05 ± 7.8E-06			<sup>238</sup> U	8.2E-06 ± 5.9E-06	
	<sup>65</sup> Zn	-3.2E-04 ± 3.3E-04	U		<sup>65</sup> Zn	5.9E-05 ± 1.6E-04	U

RQ = Result Qualifier. U = The analyte was analyzed for but not detected.

Table 2-4. Near-Facility Air Sampling Results, 2004 (pCi/m<sup>3</sup> ± total analytical uncertainty).  
(40 sheets total)

Location	Isotope	Result ± Uncertainty	RQ*	Location	Isotope	Result ± Uncertainty	RQ*
N476 (100-K)	<sup>241</sup> Am	3.4E-06 ± 9.5E-06	U	N477 (100-K)	<sup>241</sup> Am	6.7E-06 ± 5.8E-06	
Composite Period	<sup>144</sup> Ce	7.6E-04 ± 6.9E-04	U	Composite Period	<sup>144</sup> Ce	-3.4E-04 ± 6.9E-04	U
06/21/04 to 12/21/04	<sup>60</sup> Co	3.6E-05 ± 1.1E-04	U	12/22/03 to 06/21/04	<sup>60</sup> Co	8.3E-06 ± 7.2E-05	U
	<sup>134</sup> Cs	-4.1E-05 ± 7.0E-05	U		<sup>134</sup> Cs	-4.4E-05 ± 6.6E-05	U
	<sup>137</sup> Cs	8.6E-05 ± 7.1E-05	U		<sup>137</sup> Cs	1.6E-05 ± 5.5E-05	U
	<sup>152</sup> Eu	-1.1E-04 ± 1.6E-04	U		<sup>152</sup> Eu	-7.6E-05 ± 1.9E-04	U
	<sup>154</sup> Eu	3.3E-05 ± 2.3E-04	U		<sup>154</sup> Eu	-1.7E-04 ± 2.0E-04	U
	<sup>155</sup> Eu	7.3E-06 ± 7.3E-05	U		<sup>155</sup> Eu	-1.7E-06 ± 1.7E-05	U
	<sup>238</sup> Pu	5.8E-06 ± 2.6E-05	U		<sup>238</sup> Pu	-6.8E-06 ± 2.1E-05	U
	<sup>239/240</sup> Pu	4.4E-06 ± 8.0E-06	U		<sup>239/240</sup> Pu	8.3E-06 ± 9.4E-06	U
	<sup>241</sup> Pu	1.3E-03 ± 7.4E-04			<sup>241</sup> Pu	-1.3E-03 ± 1.3E-02	U
	<sup>103</sup> Ru	1.4E-05 ± 7.7E-05	U		<sup>103</sup> Ru	-4.6E-06 ± 4.6E-05	U
	<sup>106</sup> Ru	-5.6E-05 ± 5.6E-04	U		<sup>106</sup> Ru	8.3E-05 ± 5.3E-04	U
	<sup>125</sup> Sb	5.9E-06 ± 5.9E-05	U		<sup>125</sup> Sb	3.0E-05 ± 1.4E-04	U
	<sup>113</sup> Sn	-4.4E-05 ± 7.5E-05	U		<sup>113</sup> Sn	7.0E-05 ± 7.8E-05	U
	<sup>90</sup> Sr	-1.4E-04 ± 1.5E-04	U		<sup>90</sup> Sr	-1.7E-04 ± 1.8E-04	U
	<sup>234</sup> U	1.2E-05 ± 7.6E-06			<sup>234</sup> U	9.6E-06 ± 6.7E-06	
	<sup>235</sup> U	7.9E-07 ± 3.6E-06	U		<sup>235</sup> U	3.3E-06 ± 3.2E-06	
	<sup>238</sup> U	1.3E-05 ± 7.6E-06			<sup>238</sup> U	8.3E-06 ± 6.2E-06	
	<sup>65</sup> Zn	-1.9E-04 ± 2.0E-04	U		<sup>65</sup> Zn	-4.8E-05 ± 1.7E-04	U
N477 (100-K)	<sup>241</sup> Am	9.9E-06 ± 1.1E-05	U	N478 (100-K)	<sup>241</sup> Am	9.1E-06 ± 7.5E-06	
Composite Period	<sup>144</sup> Ce	1.2E-04 ± 5.3E-04	U	Composite Period	<sup>144</sup> Ce	-5.0E-05 ± 5.0E-04	U
06/21/04 to 12/21/04	<sup>60</sup> Co	-5.0E-06 ± 5.0E-05	U	12/22/03 to 06/21/04	<sup>60</sup> Co	-8.5E-05 ± 9.3E-05	U
	<sup>134</sup> Cs	9.9E-07 ± 9.9E-06	U		<sup>134</sup> Cs	4.8E-05 ± 1.0E-04	U
	<sup>137</sup> Cs	-4.7E-07 ± 4.7E-06	U		<sup>137</sup> Cs	-1.5E-05 ± 9.4E-05	U
	<sup>152</sup> Eu	-3.8E-06 ± 3.8E-05	U		<sup>152</sup> Eu	-1.6E-04 ± 2.1E-04	U
	<sup>154</sup> Eu	-1.1E-04 ± 2.1E-04	U		<sup>154</sup> Eu	-1.1E-04 ± 2.6E-04	U
	<sup>155</sup> Eu	-2.5E-05 ± 1.4E-04	U		<sup>155</sup> Eu	-1.9E-05 ± 1.5E-04	U
	<sup>238</sup> Pu	-1.1E-05 ± 2.7E-05	U		<sup>238</sup> Pu	1.7E-05 ± 3.1E-05	U
	<sup>239/240</sup> Pu	1.5E-06 ± 1.2E-05	U		<sup>239/240</sup> Pu	3.4E-06 ± 6.8E-06	U
	<sup>241</sup> Pu	1.1E-03 ± 7.5E-04			<sup>241</sup> Pu	-9.8E-04 ± 9.8E-03	U
	<sup>103</sup> Ru	3.6E-05 ± 7.1E-05	U		<sup>103</sup> Ru	1.5E-04 ± 1.6E-04	U
	<sup>106</sup> Ru	-2.2E-04 ± 5.7E-04	U		<sup>106</sup> Ru	2.8E-04 ± 8.2E-04	U
	<sup>125</sup> Sb	3.3E-05 ± 1.4E-04	U		<sup>125</sup> Sb	1.4E-06 ± 1.4E-05	U
	<sup>113</sup> Sn	-3.5E-05 ± 7.1E-05	U		<sup>113</sup> Sn	-7.3E-05 ± 1.1E-04	U
	<sup>90</sup> Sr	4.7E-07 ± 4.7E-06	U		<sup>90</sup> Sr	-4.2E-05 ± 1.7E-04	U
	<sup>234</sup> U	8.5E-06 ± 6.1E-06			<sup>234</sup> U	1.0E-05 ± 6.9E-06	
	<sup>235</sup> U	2.6E-06 ± 3.1E-06			<sup>235</sup> U	4.1E-06 ± 3.7E-06	
	<sup>238</sup> U	1.3E-05 ± 7.8E-06			<sup>238</sup> U	9.1E-06 ± 5.9E-06	
	<sup>65</sup> Zn	-1.2E-04 ± 1.8E-04	U		<sup>65</sup> Zn	-2.3E-04 ± 2.4E-04	U

RQ = Result Qualifier. U = The analyte was analyzed for but not detected.

Table 2-4. Near-Facility Air Sampling Results, 2004 (pCi/m<sup>3</sup> ± total analytical uncertainty).  
(40 sheets total)

Location	Isotope	Result ± Uncertainty	RQ*	Location	Isotope	Result ± Uncertainty	RQ*
N478 (100-K) Composite Period 06/21/04 to 12/21/04	<sup>241</sup> Am	6.7E-06 ± 1.3E-05	U	N479 (100-K) Composite Period 12/22/03 to 06/21/04	<sup>241</sup> Am	3.9E-06 ± 1.0E-05	U
	<sup>144</sup> Ce	-2.1E-04 ± 6.7E-04	U		<sup>144</sup> Ce	-1.2E-04 ± 5.7E-04	U
	<sup>60</sup> Co	1.2E-04 ± 8.5E-05	U		<sup>60</sup> Co	3.8E-05 ± 7.5E-05	U
	<sup>134</sup> Cs	6.5E-05 ± 8.2E-05	U		<sup>134</sup> Cs	-5.0E-05 ± 6.3E-05	U
	<sup>137</sup> Cs	-1.7E-05 ± 6.1E-05	U		<sup>137</sup> Cs	5.7E-05 ± 6.3E-05	U
	<sup>152</sup> Eu	-1.2E-04 ± 1.6E-04	U		<sup>152</sup> Eu	9.0E-05 ± 1.4E-04	U
	<sup>154</sup> Eu	1.6E-04 ± 2.2E-04	U		<sup>154</sup> Eu	7.9E-05 ± 2.0E-04	U
	<sup>155</sup> Eu	3.5E-05 ± 1.8E-04	U		<sup>155</sup> Eu	1.0E-04 ± 1.5E-04	U
	<sup>238</sup> Pu	-1.6E-06 ± 1.6E-05	U		<sup>238</sup> Pu	-3.0E-06 ± 2.6E-05	U
	<sup>239/240</sup> Pu	1.6E-06 ± 5.5E-06	U		<sup>239/240</sup> Pu	1.5E-06 ± 1.5E-05	U
	<sup>241</sup> Pu	1.7E-03 ± 8.3E-04			<sup>241</sup> Pu	-5.1E-04 ± 5.3E-04	U
	<sup>103</sup> Ru	-5.7E-05 ± 8.1E-05	U		<sup>103</sup> Ru	1.3E-05 ± 7.1E-05	U
	<sup>106</sup> Ru	-1.1E-04 ± 5.8E-04	U		<sup>106</sup> Ru	-3.6E-04 ± 5.4E-04	U
	<sup>125</sup> Sb	-3.3E-06 ± 3.3E-05	U		<sup>125</sup> Sb	3.5E-05 ± 1.3E-04	U
	<sup>113</sup> Sn	-1.4E-05 ± 7.5E-05	U		<sup>113</sup> Sn	-4.4E-05 ± 6.9E-05	U
	<sup>90</sup> Sr	-5.0E-05 ± 6.7E-05	U		<sup>90</sup> Sr	-2.1E-04 ± 2.2E-04	U
	<sup>234</sup> U	9.3E-06 ± 7.1E-06			<sup>234</sup> U	6.0E-06 ± 5.0E-06	
	<sup>235</sup> U	3.4E-06 ± 3.5E-06			<sup>235</sup> U	2.6E-06 ± 2.7E-06	
	<sup>238</sup> U	6.1E-06 ± 5.8E-06	U		<sup>238</sup> U	1.0E-05 ± 6.4E-06	
	<sup>65</sup> Zn	-5.4E-06 ± 5.4E-05	U		<sup>65</sup> Zn	-1.2E-04 ± 1.8E-04	U
N479 (100-K) Composite Period 06/21/04 to 12/21/04	<sup>241</sup> Am	-5.0E-06 ± 1.3E-05	U	N528 (100-K) Composite Period 12/22/03 to 06/21/04	<sup>144</sup> Ce	6.6E-04 ± 6.2E-04	U
	<sup>144</sup> Ce	2.5E-04 ± 7.8E-04	U		<sup>60</sup> Co	4.9E-05 ± 8.5E-05	U
	<sup>60</sup> Co	7.4E-06 ± 7.4E-05	U		<sup>134</sup> Cs	7.5E-06 ± 6.7E-05	U
	<sup>134</sup> Cs	-3.9E-05 ± 1.1E-04	U		<sup>137</sup> Cs	-6.7E-05 ± 7.0E-05	U
	<sup>137</sup> Cs	4.7E-05 ± 9.9E-05	U		<sup>152</sup> Eu	-2.1E-07 ± 2.1E-06	U
	<sup>152</sup> Eu	5.0E-05 ± 2.3E-04	U		<sup>154</sup> Eu	2.2E-04 ± 2.5E-04	U
	<sup>154</sup> Eu	1.4E-04 ± 3.0E-04	U		<sup>155</sup> Eu	-8.2E-05 ± 1.5E-04	U
	<sup>155</sup> Eu	6.3E-05 ± 1.7E-04	U		<sup>238</sup> Pu	-1.4E-06 ± 1.3E-05	U
	<sup>238</sup> Pu	-6.7E-06 ± 2.3E-05	U		<sup>239/240</sup> Pu	4.1E-06 ± 6.2E-06	U
	<sup>239/240</sup> Pu	4.0E-06 ± 6.1E-06	U		<sup>103</sup> Ru	5.5E-05 ± 7.6E-05	U
	<sup>241</sup> Pu	1.6E-03 ± 7.9E-04			<sup>106</sup> Ru	1.5E-04 ± 5.8E-04	U
	<sup>103</sup> Ru	-3.9E-05 ± 1.2E-04	U		<sup>125</sup> Sb	1.9E-05 ± 1.3E-04	U
	<sup>106</sup> Ru	2.9E-04 ± 8.0E-04	U		<sup>113</sup> Sn	8.4E-08 ± 8.4E-07	U
	<sup>125</sup> Sb	-2.4E-04 ± 2.5E-04	U		<sup>90</sup> Sr	-1.0E-04 ± 1.0E-04	U
	<sup>113</sup> Sn	6.2E-05 ± 1.1E-04	U		<sup>234</sup> U	1.2E-05 ± 8.7E-06	
	<sup>90</sup> Sr	7.0E-05 ± 7.4E-05	U		<sup>235</sup> U	2.4E-06 ± 3.5E-06	U
	<sup>234</sup> U	5.0E-06 ± 5.1E-06	U		<sup>238</sup> U	7.9E-06 ± 8.9E-06	U
	<sup>235</sup> U	7.7E-07 ± 1.6E-06	U		<sup>65</sup> Zn	5.1E-05 ± 1.7E-04	U
	<sup>238</sup> U	8.4E-06 ± 6.4E-06					
	<sup>65</sup> Zn	2.5E-05 ± 2.5E-04	U				

RQ = Result Qualifier. U = The analyte was analyzed for but not detected.

Table 2-4. Near-Facility Air Sampling Results, 2004 (pCi/m<sup>3</sup> ± total analytical uncertainty).  
(40 sheets total)

Location	Isotope	Result ± Uncertainty	RQ*	Location	Isotope	Result ± Uncertainty	RQ*
N528 (100-K)	<sup>144</sup> Ce	-6.6E-04 ± 7.2E-04	U	N529 (100-K)	<sup>144</sup> Ce	-6.1E-04 ± 7.2E-04	U
Composite Period	<sup>60</sup> Co	-5.3E-05 ± 7.7E-05	U	Composite Period	<sup>60</sup> Co	-6.7E-05 ± 7.3E-05	U
06/21/04 to 12/21/04	<sup>134</sup> Cs	-3.6E-05 ± 6.6E-05	U	12/22/03 to 06/21/04	<sup>134</sup> Cs	-4.2E-06 ± 4.2E-05	U
	<sup>137</sup> Cs	-2.6E-07 ± 2.6E-06	U		<sup>137</sup> Cs	5.7E-05 ± 6.3E-05	U
	<sup>152</sup> Eu	4.5E-05 ± 1.7E-04	U		<sup>152</sup> Eu	-1.1E-04 ± 1.6E-04	U
	<sup>154</sup> Eu	2.5E-06 ± 2.5E-05	U		<sup>154</sup> Eu	9.4E-05 ± 2.3E-04	U
	<sup>155</sup> Eu	-1.4E-04 ± 1.9E-04	U		<sup>155</sup> Eu	-3.5E-05 ± 1.8E-04	U
	<sup>238</sup> Pu	6.8E-07 ± 6.8E-06	U		<sup>238</sup> Pu	-4.3E-06 ± 1.3E-05	U
	<sup>239/240</sup> Pu	6.8E-07 ± 3.1E-06	U		<sup>239/240</sup> Pu	1.7E-06 ± 2.5E-06	U
	<sup>103</sup> Ru	2.8E-05 ± 7.3E-05	U		<sup>103</sup> Ru	-2.0E-06 ± 2.0E-05	U
	<sup>106</sup> Ru	4.6E-04 ± 6.2E-04	U		<sup>106</sup> Ru	1.8E-04 ± 5.8E-04	U
	<sup>125</sup> Sb	-1.8E-05 ± 1.6E-04	U		<sup>125</sup> Sb	-3.9E-05 ± 1.8E-04	U
	<sup>113</sup> Sn	-3.6E-05 ± 7.8E-05	U		<sup>113</sup> Sn	-3.9E-05 ± 7.6E-05	U
	<sup>90</sup> Sr	-1.3E-04 ± 1.3E-04	U		<sup>90</sup> Sr	3.5E-05 ± 9.2E-05	U
	<sup>234</sup> U	8.5E-06 ± 5.7E-06			<sup>234</sup> U	1.1E-05 ± 7.5E-06	
	<sup>235</sup> U	-6.8E-07 ± 6.8E-06	U		<sup>235</sup> U	7.7E-07 ± 1.5E-06	U
	<sup>238</sup> U	1.1E-05 ± 6.7E-06			<sup>238</sup> U	5.6E-06 ± 5.6E-06	U
	<sup>65</sup> Zn	1.1E-04 ± 1.5E-04	U		<sup>65</sup> Zn	-8.4E-05 ± 1.6E-04	U
N529 (100-K)	<sup>144</sup> Ce	4.8E-04 ± 6.9E-04	U	N530 (100-K)	<sup>144</sup> Ce	-3.1E-04 ± 7.9E-04	U
Composite Period	<sup>60</sup> Co	-1.6E-05 ± 1.1E-04	U	Composite Period	<sup>60</sup> Co	4.4E-05 ± 9.9E-05	U
06/21/04 to 12/21/04	<sup>134</sup> Cs	-5.1E-05 ± 7.7E-05	U	12/22/03 to 06/21/04	<sup>134</sup> Cs	8.8E-05 ± 1.1E-04	U
	<sup>137</sup> Cs	7.4E-05 ± 7.8E-05	U		<sup>137</sup> Cs	2.6E-05 ± 9.8E-05	U
	<sup>152</sup> Eu	-1.4E-04 ± 1.7E-04	U		<sup>152</sup> Eu	2.5E-05 ± 2.1E-04	U
	<sup>154</sup> Eu	9.1E-05 ± 2.3E-04	U		<sup>154</sup> Eu	-5.7E-05 ± 2.8E-04	U
	<sup>155</sup> Eu	-8.2E-05 ± 1.7E-04	U		<sup>155</sup> Eu	3.8E-05 ± 1.5E-04	U
	<sup>238</sup> Pu	-6.8E-06 ± 1.3E-05	U		<sup>238</sup> Pu	-8.7E-07 ± 8.7E-06	U
	<sup>239/240</sup> Pu	6.1E-06 ± 5.7E-06	U		<sup>239/240</sup> Pu	8.7E-07 ± 3.9E-06	U
	<sup>103</sup> Ru	-2.2E-05 ± 7.9E-05	U		<sup>103</sup> Ru	9.4E-05 ± 1.2E-04	U
	<sup>106</sup> Ru	2.6E-04 ± 6.3E-04	U		<sup>106</sup> Ru	-3.3E-04 ± 8.0E-04	U
	<sup>125</sup> Sb	2.5E-04 ± 1.7E-04	U		<sup>125</sup> Sb	1.2E-04 ± 2.2E-04	U
	<sup>113</sup> Sn	2.4E-05 ± 7.3E-05	U		<sup>113</sup> Sn	-3.7E-05 ± 1.1E-04	U
	<sup>90</sup> Sr	-9.9E-05 ± 1.0E-04	U		<sup>90</sup> Sr	-1.4E-04 ± 1.4E-04	U
	<sup>234</sup> U	1.5E-05 ± 8.9E-06			<sup>234</sup> U	1.5E-05 ± 9.3E-06	
	<sup>235</sup> U	2.2E-06 ± 2.7E-06			<sup>235</sup> U	3.4E-06 ± 3.5E-06	
	<sup>238</sup> U	1.5E-05 ± 8.7E-06			<sup>238</sup> U	9.4E-06 ± 6.8E-06	
	<sup>65</sup> Zn	1.5E-04 ± 1.9E-04	U		<sup>65</sup> Zn	-1.6E-04 ± 2.3E-04	U

RQ = Result Qualifier. U = The analyte was analyzed for but not detected.

Table 2-4. Near-Facility Air Sampling Results, 2004 (pCi/m<sup>3</sup> ± total analytical uncertainty).  
(40 sheets total)

Location	Isotope	Result ± Uncertainty	RQ*	Location	Isotope	Result ± Uncertainty	RQ*
<b>N530 (100-K)</b>	<sup>144</sup> Ce	-2.8E-04 ± 5.5E-04	U	<b>N102 (100-N)</b>	<sup>144</sup> Ce	-3.9E-04 ± 6.4E-04	U
Composite Period	<sup>60</sup> Co	4.5E-05 ± 8.5E-05	U	Composite Period	<sup>60</sup> Co	2.0E-04 ± 1.1E-04	
06/21/04 to 12/21/04	<sup>134</sup> Cs	-5.5E-06 ± 5.5E-05	U	12/22/03 to 06/22/04	<sup>134</sup> Cs	-4.8E-05 ± 7.7E-05	U
	<sup>137</sup> Cs	3.0E-05 ± 6.3E-05	U		<sup>137</sup> Cs	2.9E-05 ± 6.9E-05	U
	<sup>152</sup> Eu	-5.8E-05 ± 1.3E-04	U		<sup>152</sup> Eu	-1.2E-04 ± 1.6E-04	U
	<sup>154</sup> Eu	3.5E-05 ± 2.3E-04	U		<sup>154</sup> Eu	-4.9E-06 ± 4.9E-05	U
	<sup>155</sup> Eu	-7.8E-05 ± 1.3E-04	U		<sup>155</sup> Eu	1.9E-05 ± 1.6E-04	U
	<sup>238</sup> Pu	-9.8E-06 ± 1.5E-05	U		<sup>238</sup> Pu	1.0E-05 ± 1.6E-05	U
	<sup>239/240</sup> Pu	6.7E-06 ± 5.4E-06			<sup>239/240</sup> Pu	3.5E-06 ± 5.1E-06	U
	<sup>103</sup> Ru	2.4E-05 ± 6.8E-05	U		<sup>103</sup> Ru	-3.7E-05 ± 8.6E-05	U
	<sup>106</sup> Ru	-4.5E-04 ± 6.2E-04	U		<sup>106</sup> Ru	1.9E-04 ± 6.1E-04	U
	<sup>125</sup> Sb	1.3E-04 ± 1.4E-04	U		<sup>125</sup> Sb	-2.1E-05 ± 1.4E-04	U
	<sup>113</sup> Sn	6.5E-07 ± 6.5E-06	U		<sup>113</sup> Sn	-4.0E-05 ± 7.7E-05	U
	<sup>90</sup> Sr	3.5E-06 ± 3.5E-05	U		<sup>90</sup> Sr	2.8E-05 ± 8.7E-05	U
	<sup>234</sup> U	1.0E-05 ± 7.2E-06			<sup>234</sup> U	8.3E-06 ± 6.0E-06	
	<sup>235</sup> U	4.2E-06 ± 4.1E-06			<sup>235</sup> U	3.3E-06 ± 3.5E-06	
	<sup>238</sup> U	9.1E-06 ± 6.3E-06			<sup>238</sup> U	7.7E-06 ± 6.4E-06	
	<sup>65</sup> Zn	-2.0E-04 ± 2.1E-04	U		<sup>65</sup> Zn	3.2E-04 ± 2.5E-04	
<b>N102 (100-N)</b>	<sup>144</sup> Ce	-4.4E-04 ± 6.3E-04	U	<b>N103 (100-N)</b>	<sup>144</sup> Ce	4.3E-04 ± 7.4E-04	U
Composite Period	<sup>60</sup> Co	1.8E-04 ± 1.0E-04		Composite Period	<sup>60</sup> Co	9.9E-05 ± 7.4E-05	U
06/22/04 to 12/22/04	<sup>134</sup> Cs	1.4E-05 ± 7.1E-05	U	12/22/03 to 06/22/04	<sup>134</sup> Cs	2.3E-05 ± 6.6E-05	U
	<sup>137</sup> Cs	1.8E-04 ± 1.1E-04			<sup>137</sup> Cs	5.7E-06 ± 5.7E-05	U
	<sup>152</sup> Eu	-1.6E-04 ± 1.7E-04	U		<sup>152</sup> Eu	-5.3E-06 ± 5.3E-05	U
	<sup>154</sup> Eu	7.6E-05 ± 2.2E-04	U		<sup>154</sup> Eu	-6.9E-05 ± 2.0E-04	U
	<sup>155</sup> Eu	-5.2E-05 ± 1.6E-04	U		<sup>155</sup> Eu	-8.6E-05 ± 1.8E-04	U
	<sup>238</sup> Pu	-2.0E-05 ± 2.1E-05	U		<sup>238</sup> Pu	5.2E-06 ± 1.4E-05	U
	<sup>239/240</sup> Pu	7.2E-06 ± 5.9E-06			<sup>239/240</sup> Pu	6.9E-06 ± 5.6E-06	
	<sup>103</sup> Ru	4.5E-05 ± 6.6E-05	U		<sup>103</sup> Ru	-4.4E-05 ± 7.9E-05	U
	<sup>106</sup> Ru	4.8E-04 ± 6.6E-04	U		<sup>106</sup> Ru	1.5E-04 ± 5.6E-04	U
	<sup>125</sup> Sb	2.1E-05 ± 1.4E-04	U		<sup>125</sup> Sb	-5.3E-05 ± 1.4E-04	U
	<sup>113</sup> Sn	-3.1E-06 ± 3.1E-05	U		<sup>113</sup> Sn	-3.1E-05 ± 9.2E-05	U
	<sup>90</sup> Sr	-2.9E-05 ± 6.6E-05	U		<sup>90</sup> Sr	-5.6E-05 ± 8.6E-05	U
	<sup>234</sup> U	1.8E-05 ± 1.0E-05			<sup>234</sup> U	1.5E-05 ± 9.5E-06	
	<sup>235</sup> U	8.1E-07 ± 1.6E-06	U		<sup>235</sup> U	5.0E-06 ± 4.6E-06	
	<sup>238</sup> U	1.5E-05 ± 9.5E-06			<sup>238</sup> U	1.0E-05 ± 7.2E-06	
	<sup>65</sup> Zn	-9.2E-06 ± 9.2E-05	U		<sup>65</sup> Zn	-3.1E-05 ± 1.5E-04	U

RQ = Result Qualifier. U = The analyte was analyzed for but not detected.



Table 2-4. Near-Facility Air Sampling Results, 2004 (pCi/m<sup>3</sup> ± total analytical uncertainty).  
(40 sheets total)

Location	Isotope	Result ± Uncertainty	RQ*	Location	Isotope	Result ± Uncertainty	RQ*
<b>N103 (100-N)</b>	<sup>144</sup> Ce	3.0E-04 ± 7.4E-04	U	<b>N106 (100-N)</b>	<sup>144</sup> Ce	-8.5E-05 ± 7.2E-04	U
Composite Period	<sup>60</sup> Co	5.8E-05 ± 7.4E-05	U	Composite Period	<sup>60</sup> Co	4.6E-06 ± 4.7E-05	U
06/22/04 to 12/22/04	<sup>134</sup> Cs	6.4E-05 ± 8.1E-05	U	12/22/03 to 06/22/04	<sup>134</sup> Cs	3.5E-05 ± 9.2E-05	U
	<sup>137</sup> Cs	2.6E-05 ± 6.3E-05	U		<sup>137</sup> Cs	1.6E-05 ± 8.4E-05	U
	<sup>152</sup> Eu	-1.5E-04 ± 1.7E-04	U		<sup>152</sup> Eu	-1.7E-04 ± 2.1E-04	U
	<sup>154</sup> Eu	-5.0E-05 ± 2.0E-04	U		<sup>154</sup> Eu	-2.8E-05 ± 2.7E-04	U
	<sup>155</sup> Eu	8.3E-05 ± 1.9E-04	U		<sup>155</sup> Eu	1.1E-04 ± 1.6E-04	U
	<sup>238</sup> Pu	-5.0E-06 ± 1.3E-05	U		<sup>238</sup> Pu	6.3E-06 ± 1.6E-05	U
	<sup>239/240</sup> Pu	3.5E-06 ± 5.1E-06	U		<sup>239/240</sup> Pu	4.2E-06 ± 6.0E-06	U
	<sup>103</sup> Ru	6.3E-05 ± 7.8E-05	U		<sup>103</sup> Ru	-7.7E-07 ± 7.7E-06	U
	<sup>106</sup> Ru	-5.0E-04 ± 6.0E-04	U		<sup>106</sup> Ru	7.6E-04 ± 7.2E-04	U
	<sup>125</sup> Sb	5.3E-05 ± 1.4E-04	U		<sup>125</sup> Sb	4.9E-05 ± 1.9E-04	U
	<sup>113</sup> Sn	4.7E-05 ± 8.2E-05	U		<sup>113</sup> Sn	5.7E-05 ± 1.0E-04	U
	<sup>90</sup> Sr	-1.5E-05 ± 1.0E-04	U		<sup>90</sup> Sr	-1.4E-05 ± 9.4E-05	U
	<sup>234</sup> U	1.6E-05 ± 1.0E-05			<sup>234</sup> U	1.6E-05 ± 1.1E-05	
	<sup>235</sup> U	4.3E-06 ± 4.1E-06			<sup>235</sup> U	8.9E-07 ± 9.3E-07	U
	<sup>238</sup> U	1.5E-05 ± 9.2E-06			<sup>238</sup> U	5.4E-06 ± 4.9E-06	
	<sup>65</sup> Zn	2.7E-06 ± 2.7E-05	U		<sup>65</sup> Zn	-1.9E-04 ± 2.3E-04	U
<b>N106 (100-N)</b>	<sup>144</sup> Ce	-2.2E-04 ± 7.2E-04	U	<b>N526 (100-N)</b>	<sup>144</sup> Ce	1.7E-04 ± 6.9E-04	U
Composite Period	<sup>60</sup> Co	8.8E-05 ± 8.7E-05	U	Composite Period	<sup>60</sup> Co	1.5E-04 ± 9.7E-05	U
06/22/04 to 12/22/04	<sup>134</sup> Cs	1.9E-05 ± 8.4E-05	U	12/22/03 to 06/22/04	<sup>134</sup> Cs	5.4E-05 ± 7.5E-05	U
	<sup>137</sup> Cs	1.7E-04 ± 1.1E-04			<sup>137</sup> Cs	4.3E-04 ± 1.9E-04	
	<sup>152</sup> Eu	-1.0E-04 ± 1.7E-04	U		<sup>152</sup> Eu	4.0E-05 ± 1.5E-04	U
	<sup>154</sup> Eu	-2.7E-05 ± 2.1E-04	U		<sup>154</sup> Eu	1.3E-05 ± 1.3E-04	U
	<sup>155</sup> Eu	-1.1E-05 ± 1.1E-04	U		<sup>155</sup> Eu	6.7E-05 ± 1.8E-04	U
	<sup>238</sup> Pu	-2.2E-06 ± 1.2E-05	U		<sup>238</sup> Pu	-3.3E-06 ± 1.3E-05	U
	<sup>239/240</sup> Pu	6.6E-06 ± 5.9E-06	U		<sup>239/240</sup> Pu	8.3E-06 ± 7.0E-06	
	<sup>103</sup> Ru	-3.4E-05 ± 8.0E-05	U		<sup>103</sup> Ru	2.6E-05 ± 8.1E-05	U
	<sup>106</sup> Ru	-4.1E-04 ± 6.2E-04	U		<sup>106</sup> Ru	-4.5E-04 ± 5.5E-04	U
	<sup>125</sup> Sb	7.3E-06 ± 7.3E-05	U		<sup>125</sup> Sb	1.5E-05 ± 1.5E-04	U
	<sup>113</sup> Sn	1.7E-05 ± 7.3E-05	U		<sup>113</sup> Sn	-4.7E-05 ± 8.2E-05	U
	<sup>90</sup> Sr	-8.9E-05 ± 9.2E-05	U		<sup>90</sup> Sr	-4.8E-05 ± 8.8E-05	U
	<sup>234</sup> U	1.5E-05 ± 8.9E-06			<sup>234</sup> U	9.0E-06 ± 6.5E-06	
	<sup>235</sup> U	1.8E-06 ± 2.5E-06	U		<sup>235</sup> U	-6.9E-07 ± 1.4E-06	U
	<sup>238</sup> U	1.2E-05 ± 7.7E-06			<sup>238</sup> U	5.9E-06 ± 4.5E-06	
	<sup>65</sup> Zn	-4.0E-05 ± 1.7E-04	U		<sup>65</sup> Zn	-6.5E-05 ± 1.5E-04	U

RQ = Result Qualifier. U = The analyte was analyzed for but not detected.

Table 2-4. Near-Facility Air Sampling Results, 2004 (pCi/m<sup>3</sup> ± total analytical uncertainty).  
(40 sheets total)

Location	Isotope	Result ± Uncertainty	RQ*	Location	Isotope	Result ± Uncertainty	RQ*
N526 (100-N)	<sup>144</sup> Ce	2.3E-04 ± 6.3E-04	U	N482 (ERDF)	<sup>144</sup> Ce	-2.5E-04 ± 7.8E-04	U
Composite Period	<sup>60</sup> Co	1.1E-04 ± 1.2E-04	U	Composite Period	<sup>60</sup> Co	-1.2E-04 ± 1.2E-04	U
06/22/04 to 12/22/04	<sup>134</sup> Cs	-2.7E-05 ± 6.7E-05	U	12/22/03 to 06/22/04	<sup>134</sup> Cs	-2.2E-05 ± 7.8E-05	U
	<sup>137</sup> Cs	1.3E-03 ± 4.8E-04			<sup>137</sup> Cs	3.8E-05 ± 7.0E-05	U
	<sup>152</sup> Eu	-2.5E-05 ± 1.5E-04	U		<sup>152</sup> Eu	-1.3E-04 ± 2.0E-04	U
	<sup>154</sup> Eu	2.3E-04 ± 2.2E-04	U		<sup>154</sup> Eu	-6.6E-05 ± 2.2E-04	U
	<sup>155</sup> Eu	-1.2E-05 ± 1.2E-04	U		<sup>155</sup> Eu	-5.5E-05 ± 1.9E-04	U
	<sup>238</sup> Pu	5.6E-06 ± 1.2E-05	U		<sup>238</sup> Pu	8.4E-07 ± 8.7E-07	U
	<sup>239/240</sup> Pu	9.7E-06 ± 6.3E-06			<sup>239/240</sup> Pu	8.4E-06 ± 6.6E-06	
	<sup>103</sup> Ru	-6.5E-05 ± 8.1E-05	U		<sup>103</sup> Ru	2.9E-05 ± 8.7E-05	U
	<sup>106</sup> Ru	7.0E-05 ± 5.9E-04	U		<sup>106</sup> Ru	-9.5E-05 ± 6.4E-04	U
	<sup>125</sup> Sb	7.8E-05 ± 1.5E-04	U		<sup>125</sup> Sb	-6.2E-05 ± 1.6E-04	U
	<sup>113</sup> Sn	-3.7E-05 ± 7.0E-05	U		<sup>113</sup> Sn	-4.9E-06 ± 4.9E-05	U
	<sup>90</sup> Sr	1.5E-05 ± 8.1E-05	U		<sup>90</sup> Sr	-3.8E-05 ± 8.5E-05	U
	<sup>234</sup> U	1.2E-05 ± 7.7E-06			<sup>234</sup> U	1.9E-05 ± 1.0E-05	
	<sup>235</sup> U	3.4E-06 ± 3.5E-06			<sup>235</sup> U	1.5E-06 ± 2.2E-06	U
	<sup>238</sup> U	1.3E-05 ± 8.2E-06			<sup>238</sup> U	2.0E-05 ± 1.0E-05	
	<sup>65</sup> Zn	1.7E-04 ± 1.8E-04	U		<sup>65</sup> Zn	-1.2E-04 ± 1.8E-04	U
N482 (ERDF)	<sup>144</sup> Ce	-2.1E-04 ± 6.7E-04	U	N517 (ERDF)	<sup>144</sup> Ce	-4.6E-04 ± 6.9E-04	U
Composite Period	<sup>60</sup> Co	6.2E-05 ± 1.0E-04	U	Composite Period	<sup>60</sup> Co	2.6E-05 ± 9.1E-05	U
06/22/04 to 12/22/04	<sup>134</sup> Cs	1.3E-04 ± 9.5E-05	U	12/22/03 to 06/22/04	<sup>134</sup> Cs	-1.5E-05 ± 8.8E-05	U
	<sup>137</sup> Cs	1.3E-05 ± 8.0E-05	U		<sup>137</sup> Cs	5.6E-05 ± 7.4E-05	U
	<sup>152</sup> Eu	1.4E-06 ± 1.4E-05	U		<sup>152</sup> Eu	-2.0E-05 ± 1.9E-04	U
	<sup>154</sup> Eu	-1.3E-04 ± 2.6E-04	U		<sup>154</sup> Eu	3.5E-05 ± 2.4E-04	U
	<sup>155</sup> Eu	-3.6E-05 ± 1.6E-04	U		<sup>155</sup> Eu	6.8E-05 ± 1.8E-04	U
	<sup>238</sup> Pu	5.8E-06 ± 1.5E-05	U		<sup>238</sup> Pu	8.5E-07 ± 8.8E-07	U
	<sup>239/240</sup> Pu	1.6E-06 ± 4.6E-06	U		<sup>239/240</sup> Pu	-2.4E-06 ± 3.6E-06	U
	<sup>103</sup> Ru	-2.6E-05 ± 8.7E-05	U		<sup>103</sup> Ru	2.7E-05 ± 9.0E-05	U
	<sup>106</sup> Ru	-4.1E-04 ± 6.5E-04	U		<sup>106</sup> Ru	-1.2E-04 ± 6.6E-04	U
	<sup>125</sup> Sb	4.5E-05 ± 1.6E-04	U		<sup>125</sup> Sb	-8.5E-05 ± 1.6E-04	U
	<sup>113</sup> Sn	1.2E-05 ± 8.2E-05	U		<sup>113</sup> Sn	-1.2E-05 ± 8.4E-05	U
	<sup>90</sup> Sr	2.0E-06 ± 2.0E-05	U		<sup>90</sup> Sr	1.2E-04 ± 1.3E-04	U
	<sup>234</sup> U	3.2E-05 ± 1.5E-05			<sup>234</sup> U	1.4E-05 ± 8.3E-06	
	<sup>235</sup> U	3.3E-06 ± 3.4E-06			<sup>235</sup> U	7.3E-07 ± 1.5E-06	U
	<sup>238</sup> U	2.8E-05 ± 1.4E-05			<sup>238</sup> U	1.5E-05 ± 8.6E-06	
	<sup>65</sup> Zn	2.1E-04 ± 2.5E-04	U		<sup>65</sup> Zn	1.5E-04 ± 2.0E-04	U

RQ = Result Qualifier. U = The analyte was analyzed for but not detected.

Table 2-4. Near-Facility Air Sampling Results, 2004 (pCi/m<sup>3</sup> ± total analytical uncertainty).  
(40 sheets total)

Location	Isotope	Result ± Uncertainty	RQ*	Location	Isotope	Result ± Uncertainty	RQ*
N517 (ERDF)	<sup>144</sup> Ce	-2.8E-04 ± 8.9E-04	U	N518 (ERDF)	<sup>144</sup> Ce	1.9E-04 ± 5.5E-04	U
Composite Period	<sup>60</sup> Co	6.9E-05 ± 1.2E-04	U	Composite Period	<sup>60</sup> Co	1.2E-05 ± 7.2E-05	U
06/22/04 to 12/22/04	<sup>134</sup> Cs	-7.1E-06 ± 7.1E-05	U	12/22/03 to 06/22/04	<sup>134</sup> Cs	2.2E-05 ± 6.8E-05	U
	<sup>137</sup> Cs	8.9E-06 ± 8.3E-05	U		<sup>137</sup> Cs	1.5E-05 ± 5.6E-05	U
	<sup>152</sup> Eu	-3.6E-05 ± 2.4E-04	U		<sup>152</sup> Eu	-1.4E-04 ± 1.7E-04	U
	<sup>154</sup> Eu	-1.1E-04 ± 2.7E-04	U		<sup>154</sup> Eu	5.7E-06 ± 5.7E-05	U
	<sup>155</sup> Eu	-6.9E-05 ± 2.1E-04	U		<sup>155</sup> Eu	1.0E-05 ± 1.0E-04	U
	<sup>238</sup> Pu	2.6E-06 ± 1.7E-05	U		<sup>238</sup> Pu	-2.9E-06 ± 1.1E-05	U
	<sup>239/240</sup> Pu	5.1E-06 ± 6.8E-06	U		<sup>239/240</sup> Pu	5.8E-06 ± 5.4E-06	U
	<sup>103</sup> Ru	-1.1E-05 ± 9.3E-05	U		<sup>103</sup> Ru	8.1E-06 ± 7.6E-05	U
	<sup>106</sup> Ru	1.8E-04 ± 6.8E-04	U		<sup>106</sup> Ru	4.4E-05 ± 4.4E-04	U
	<sup>125</sup> Sb	-1.1E-05 ± 1.1E-04	U		<sup>125</sup> Sb	-4.6E-05 ± 1.5E-04	U
	<sup>113</sup> Sn	-6.4E-05 ± 9.3E-05	U		<sup>113</sup> Sn	-1.0E-05 ± 7.1E-05	U
	<sup>90</sup> Sr	-1.4E-04 ± 1.4E-04	U		<sup>90</sup> Sr	-6.3E-05 ± 9.7E-05	U
	<sup>234</sup> U	4.8E-05 ± 2.2E-05			<sup>234</sup> U	1.9E-05 ± 1.0E-05	
	<sup>235</sup> U	4.3E-06 ± 6.1E-06	U		<sup>235</sup> U	1.3E-06 ± 1.9E-06	U
	<sup>238</sup> U	4.9E-05 ± 2.2E-05			<sup>238</sup> U	2.0E-05 ± 1.0E-05	
	<sup>65</sup> Zn	-1.2E-04 ± 2.3E-04	U		<sup>65</sup> Zn	1.4E-04 ± 1.5E-04	U
N518 (ERDF)	<sup>144</sup> Ce	6.0E-04 ± 8.1E-04	U	N019 (200 EAST)	<sup>144</sup> Ce	2.8E-05 ± 2.8E-04	U
Composite Period	<sup>60</sup> Co	-7.5E-06 ± 7.5E-05	U	Composite Period	<sup>60</sup> Co	3.4E-06 ± 3.4E-05	U
06/22/04 to 12/22/04	<sup>134</sup> Cs	1.8E-05 ± 1.1E-04	U	12/22/03 to 06/21/04	<sup>134</sup> Cs	9.8E-06 ± 6.7E-05	U
	<sup>137</sup> Cs	5.6E-05 ± 9.9E-05	U		<sup>137</sup> Cs	3.4E-05 ± 6.2E-05	U
	<sup>152</sup> Eu	-9.4E-07 ± 9.4E-06	U		<sup>152</sup> Eu	1.0E-07 ± 1.1E-06	U
	<sup>154</sup> Eu	-2.6E-04 ± 3.1E-04	U		<sup>154</sup> Eu	-1.1E-04 ± 2.0E-04	U
	<sup>155</sup> Eu	3.6E-05 ± 1.7E-04	U		<sup>155</sup> Eu	-1.3E-05 ± 1.3E-04	U
	<sup>238</sup> Pu	-3.9E-06 ± 1.6E-05	U		<sup>238</sup> Pu	-6.8E-06 ± 1.4E-05	U
	<sup>239/240</sup> Pu	2.3E-06 ± 3.6E-06	U		<sup>239/240</sup> Pu	-8.5E-07 ± 3.0E-06	U
	<sup>103</sup> Ru	-1.0E-05 ± 1.0E-04	U		<sup>103</sup> Ru	-3.1E-06 ± 3.1E-05	U
	<sup>106</sup> Ru	4.1E-04 ± 8.1E-04	U		<sup>106</sup> Ru	2.8E-04 ± 5.6E-04	U
	<sup>125</sup> Sb	-1.7E-04 ± 2.3E-04	U		<sup>125</sup> Sb	-1.5E-06 ± 1.6E-05	U
	<sup>113</sup> Sn	-4.8E-05 ± 1.1E-04	U		<sup>113</sup> Sn	-2.9E-05 ± 7.0E-05	U
	<sup>90</sup> Sr	-6.9E-06 ± 6.9E-05	U		<sup>90</sup> Sr	2.9E-05 ± 3.9E-05	U
	<sup>234</sup> U	1.7E-05 ± 9.7E-06			<sup>234</sup> U	9.3E-06 ± 6.5E-06	
	<sup>235</sup> U	7.6E-07 ± 1.5E-06	U		<sup>235</sup> U	3.2E-06 ± 3.3E-06	
	<sup>238</sup> U	1.3E-05 ± 7.7E-06			<sup>238</sup> U	2.2E-06 ± 4.0E-06	U
	<sup>65</sup> Zn	-1.8E-04 ± 2.7E-04	U		<sup>65</sup> Zn	-7.6E-05 ± 1.5E-04	U

RQ = Result Qualifier. U = The analyte was analyzed for but not detected.

Table 2-4. Near-Facility Air Sampling Results, 2004 (pCi/m<sup>3</sup> ± total analytical uncertainty).  
(40 sheets total)

Location	Isotope	Result ± Uncertainty	RQ*	Location	Isotope	Result ± Uncertainty	RQ*
N019 (200 EAST) Composite Period 06/21/04 to 12/21/04	<sup>144</sup> Ce	-3.7E-04 ± 6.6E-04	U	N158 (200 EAST) Composite Period 12/22/03 to 06/21/04	<sup>144</sup> Ce	-3.0E-04 ± 6.4E-04	U
	<sup>60</sup> Co	-1.7E-05 ± 7.9E-05	U		<sup>60</sup> Co	-2.6E-05 ± 8.1E-05	U
	<sup>134</sup> Cs	-2.7E-05 ± 7.5E-05	U		<sup>134</sup> Cs	3.6E-05 ± 6.8E-05	U
	<sup>137</sup> Cs	-2.7E-05 ± 7.0E-05	U		<sup>137</sup> Cs	6.7E-05 ± 8.0E-05	U
	<sup>152</sup> Eu	1.4E-04 ± 1.7E-04	U		<sup>152</sup> Eu	-1.2E-04 ± 1.6E-04	U
	<sup>154</sup> Eu	2.4E-05 ± 2.5E-04	U		<sup>154</sup> Eu	1.5E-04 ± 2.1E-04	U
	<sup>155</sup> Eu	-4.4E-05 ± 1.6E-04	U		<sup>155</sup> Eu	-8.4E-06 ± 8.4E-05	U
	<sup>238</sup> Pu	9.1E-07 ± 9.1E-06	U		<sup>238</sup> Pu	-4.4E-06 ± 1.5E-05	U
	<sup>239/240</sup> Pu	9.1E-06 ± 8.8E-06	U		<sup>239/240</sup> Pu	3.5E-06 ± 6.4E-06	U
	<sup>103</sup> Ru	-5.6E-06 ± 5.6E-05	U		<sup>103</sup> Ru	-4.4E-05 ± 6.5E-05	U
	<sup>106</sup> Ru	2.7E-04 ± 6.4E-04	U		<sup>106</sup> Ru	-1.8E-04 ± 5.8E-04	U
	<sup>125</sup> Sb	-1.7E-04 ± 1.7E-04	U		<sup>125</sup> Sb	5.2E-05 ± 1.6E-04	U
	<sup>113</sup> Sn	2.6E-05 ± 7.1E-05	U		<sup>113</sup> Sn	-3.9E-06 ± 3.9E-05	U
	<sup>90</sup> Sr	1.3E-04 ± 1.2E-04			<sup>90</sup> Sr	-1.4E-05 ± 4.8E-05	U
	<sup>234</sup> U	8.3E-06 ± 6.1E-06			<sup>234</sup> U	6.9E-06 ± 6.1E-06	U
	<sup>235</sup> U	4.6E-06 ± 4.5E-06			<sup>235</sup> U	1.6E-06 ± 2.3E-06	U
	<sup>238</sup> U	1.4E-05 ± 8.8E-06			<sup>238</sup> U	6.9E-06 ± 5.7E-06	
	<sup>65</sup> Zn	-8.1E-05 ± 1.8E-04	U		<sup>65</sup> Zn	5.2E-05 ± 1.5E-04	U
N158 (200 EAST) Composite Period 06/21/04 to 12/21/04	<sup>144</sup> Ce	-3.6E-05 ± 3.6E-04	U	N480 (200 EAST) Composite Period 12/22/03 to 06/21/04	<sup>241</sup> Am	3.9E-06 ± 8.7E-06	U
	<sup>60</sup> Co	-3.0E-05 ± 7.3E-05	U		<sup>144</sup> Ce	4.3E-04 ± 6.3E-04	U
	<sup>134</sup> Cs	-3.3E-05 ± 7.1E-05	U		<sup>60</sup> Co	-8.5E-06 ± 8.5E-05	U
	<sup>137</sup> Cs	4.7E-05 ± 6.7E-05	U		<sup>134</sup> Cs	-1.7E-05 ± 7.5E-05	U
	<sup>152</sup> Eu	-1.9E-04 ± 2.0E-04	U		<sup>137</sup> Cs	-1.0E-05 ± 6.5E-05	U
	<sup>154</sup> Eu	-3.4E-05 ± 2.3E-04	U		<sup>152</sup> Eu	-4.4E-05 ± 1.5E-04	U
	<sup>155</sup> Eu	-2.0E-04 ± 2.0E-04	U		<sup>154</sup> Eu	-1.6E-04 ± 2.3E-04	U
	<sup>238</sup> Pu	3.0E-06 ± 1.0E-05	U		<sup>155</sup> Eu	1.7E-05 ± 1.7E-04	U
	<sup>239/240</sup> Pu	3.0E-06 ± 4.2E-06	U		<sup>238</sup> Pu	-3.1E-06 ± 2.6E-05	U
	<sup>103</sup> Ru	4.1E-06 ± 4.1E-05	U		<sup>239/240</sup> Pu	1.5E-06 ± 1.5E-05	U
	<sup>106</sup> Ru	2.1E-04 ± 5.5E-04	U		<sup>241</sup> Pu	-1.6E-03 ± 1.6E-02	U
	<sup>125</sup> Sb	-3.2E-05 ± 1.5E-04	U		<sup>103</sup> Ru	-2.2E-05 ± 7.7E-05	U
	<sup>113</sup> Sn	2.6E-05 ± 6.8E-05	U		<sup>106</sup> Ru	3.4E-05 ± 3.4E-04	U
	<sup>90</sup> Sr	5.6E-05 ± 1.0E-04	U		<sup>125</sup> Sb	-8.0E-05 ± 1.5E-04	U
	<sup>234</sup> U	1.6E-05 ± 9.6E-06			<sup>113</sup> Sn	5.9E-05 ± 7.6E-05	U
N158 (200 EAST) Composite Period 06/21/04 to 12/21/04	<sup>235</sup> U	6.8E-06 ± 5.5E-06			<sup>90</sup> Sr	-7.0E-06 ± 7.0E-05	U
	<sup>238</sup> U	1.4E-05 ± 8.6E-06			<sup>234</sup> U	1.7E-05 ± 9.4E-06	
	<sup>65</sup> Zn	-1.5E-05 ± 1.5E-04	U		<sup>235</sup> U	6.2E-07 ± 6.2E-06	U
					<sup>238</sup> U	8.4E-06 ± 5.8E-06	
					<sup>65</sup> Zn	4.9E-05 ± 1.9E-04	U

RQ = Result Qualifier. U = The analyte was analyzed for but not detected.

Table 2-4. Near-Facility Air Sampling Results, 2004 (pCi/m<sup>3</sup> ± total analytical uncertainty).  
(40 sheets total)

Location	Isotope	Result ± Uncertainty	RQ*	Location	Isotope	Result ± Uncertainty	RQ*
N480 (200 EAST) Composite Period 06/21/04 to 12/21/04	<sup>241</sup> Am	5.6E-06 ± 1.3E-05	U	N481 (200 EAST) Composite Period 12/22/03 to 06/21/04	<sup>241</sup> Am	6.4E-06 ± 5.0E-06	
	<sup>144</sup> Ce	-4.1E-04 ± 6.2E-04	U		<sup>144</sup> Ce	-5.0E-04 ± 7.0E-04	U
	<sup>60</sup> Co	-3.4E-05 ± 8.3E-05	U		<sup>60</sup> Co	3.7E-05 ± 7.3E-05	U
	<sup>134</sup> Cs	1.2E-05 ± 7.0E-05	U		<sup>134</sup> Cs	-1.4E-05 ± 6.7E-05	U
	<sup>137</sup> Cs	4.1E-06 ± 4.1E-05	U		<sup>137</sup> Cs	1.9E-05 ± 5.9E-05	U
	<sup>152</sup> Eu	7.3E-05 ± 1.5E-04	U		<sup>152</sup> Eu	-5.5E-06 ± 5.6E-05	U
	<sup>154</sup> Eu	1.4E-04 ± 2.3E-04	U		<sup>154</sup> Eu	-6.3E-05 ± 1.9E-04	U
	<sup>155</sup> Eu	9.0E-05 ± 1.6E-04	U		<sup>155</sup> Eu	-4.0E-05 ± 1.8E-04	U
	<sup>238</sup> Pu	1.7E-06 ± 1.7E-05	U		<sup>238</sup> Pu	-1.1E-05 ± 2.5E-05	U
	<sup>239/240</sup> Pu	5.2E-06 ± 6.4E-06			<sup>239/240</sup> Pu	3.3E-06 ± 1.1E-05	U
	<sup>241</sup> Pu	1.7E-03 ± 8.7E-04			<sup>241</sup> Pu	-1.0E-03 ± 1.1E-03	U
	<sup>103</sup> Ru	3.2E-05 ± 7.7E-05	U		<sup>103</sup> Ru	4.6E-05 ± 8.3E-05	U
	<sup>106</sup> Ru	1.8E-05 ± 1.8E-04	U		<sup>106</sup> Ru	-5.7E-05 ± 5.4E-04	U
	<sup>125</sup> Sb	2.9E-06 ± 2.9E-05	U		<sup>125</sup> Sb	3.6E-05 ± 1.5E-04	U
	<sup>113</sup> Sn	3.0E-05 ± 7.4E-05	U		<sup>113</sup> Sn	-3.9E-05 ± 7.5E-05	U
	<sup>90</sup> Sr	-6.3E-05 ± 7.8E-05	U		<sup>90</sup> Sr	-2.0E-04 ± 2.1E-04	U
	<sup>234</sup> U	1.3E-05 ± 8.4E-06			<sup>234</sup> U	1.5E-05 ± 8.8E-06	
	<sup>235</sup> U	8.7E-07 ± 1.8E-06	U		<sup>235</sup> U	1.4E-06 ± 2.0E-06	U
	<sup>238</sup> U	7.0E-06 ± 5.3E-06			<sup>238</sup> U	7.0E-06 ± 5.0E-06	
	<sup>65</sup> Zn	-1.1E-04 ± 1.7E-04	U		<sup>65</sup> Zn	3.5E-05 ± 1.6E-04	U
N481 (200 EAST) Composite Period 06/21/04 to 12/21/04	<sup>241</sup> Am	4.5E-06 ± 1.4E-05	U	N498 (200 EAST) Composite Period 12/22/03 to 06/21/04	<sup>144</sup> Ce	7.4E-05 ± 6.4E-04	U
	<sup>144</sup> Ce	-1.2E-04 ± 8.0E-04	U		<sup>60</sup> Co	1.9E-05 ± 8.5E-05	U
	<sup>60</sup> Co	-2.7E-05 ± 1.2E-04	U		<sup>134</sup> Cs	3.7E-05 ± 7.1E-05	U
	<sup>134</sup> Cs	1.8E-05 ± 9.2E-05	U		<sup>137</sup> Cs	7.2E-05 ± 8.3E-05	U
	<sup>137</sup> Cs	-3.7E-05 ± 8.0E-05	U		<sup>152</sup> Eu	-8.8E-05 ± 1.7E-04	U
	<sup>152</sup> Eu	6.6E-05 ± 2.0E-04	U		<sup>154</sup> Eu	1.6E-04 ± 2.5E-04	U
	<sup>154</sup> Eu	-2.8E-04 ± 3.0E-04	U		<sup>155</sup> Eu	3.9E-05 ± 1.6E-04	U
	<sup>155</sup> Eu	-1.0E-04 ± 1.9E-04	U		<sup>238</sup> Pu	2.5E-06 ± 1.3E-05	U
	<sup>238</sup> Pu	1.3E-06 ± 1.3E-05	U		<sup>239/240</sup> Pu	5.9E-06 ± 6.7E-06	U
	<sup>239/240</sup> Pu	1.3E-05 ± 1.4E-05	U		<sup>103</sup> Ru	-5.7E-05 ± 8.6E-05	U
	<sup>241</sup> Pu	1.1E-03 ± 7.3E-04			<sup>106</sup> Ru	-9.0E-05 ± 6.1E-04	U
	<sup>103</sup> Ru	-6.5E-05 ± 9.4E-05	U		<sup>125</sup> Sb	1.9E-05 ± 1.5E-04	U
	<sup>106</sup> Ru	1.3E-04 ± 7.7E-04	U		<sup>113</sup> Sn	-1.9E-05 ± 7.7E-05	U
	<sup>125</sup> Sb	-2.1E-05 ± 1.9E-04	U		<sup>90</sup> Sr	-2.2E-05 ± 7.4E-05	U
	<sup>113</sup> Sn	-3.3E-05 ± 9.2E-05	U		<sup>234</sup> U	1.2E-05 ± 7.9E-06	
	<sup>90</sup> Sr	-6.7E-05 ± 7.3E-05	U		<sup>235</sup> U	2.2E-06 ± 3.3E-06	U
	<sup>234</sup> U	8.9E-06 ± 6.1E-06			<sup>238</sup> U	9.4E-06 ± 6.7E-06	
	<sup>235</sup> U	3.1E-06 ± 3.2E-06			<sup>65</sup> Zn	-1.0E-04 ± 1.6E-04	U
	<sup>238</sup> U	7.2E-06 ± 5.7E-06					
	<sup>65</sup> Zn	1.3E-04 ± 2.3E-04	U				

RQ = Result Qualifier. U = The analyte was analyzed for but not detected.

Table 2-4. Near-Facility Air Sampling Results, 2004 (pCi/m<sup>3</sup> ± total analytical uncertainty).  
(40 sheets total)

Location	Isotope	Result ± Uncertainty	RQ*	Location	Isotope	Result ± Uncertainty	RQ*
N498 (200 EAST) Composite Period 06/21/04 to 12/21/04	<sup>144</sup> Ce	1.4E-04 ± 5.3E-04	U	N499 (200 EAST) Composite Period 12/22/03 to 06/21/04	<sup>144</sup> Ce	4.0E-04 ± 5.8E-04	U
	<sup>60</sup> Co	-5.4E-06 ± 5.4E-05	U		<sup>60</sup> Co	-4.6E-05 ± 7.7E-05	U
	<sup>134</sup> Cs	-1.9E-05 ± 7.1E-05	U		<sup>134</sup> Cs	-4.4E-05 ± 7.0E-05	U
	<sup>137</sup> Cs	4.5E-05 ± 6.7E-05	U		<sup>137</sup> Cs	-1.0E-05 ± 6.4E-05	U
	<sup>152</sup> Eu	1.9E-04 ± 1.8E-04	U		<sup>152</sup> Eu	-1.8E-05 ± 1.4E-04	U
	<sup>154</sup> Eu	-1.5E-04 ± 2.4E-04	U		<sup>154</sup> Eu	-5.0E-05 ± 2.2E-04	U
	<sup>155</sup> Eu	1.0E-04 ± 1.6E-04	U		<sup>155</sup> Eu	-1.0E-04 ± 1.5E-04	U
	<sup>238</sup> Pu	8.8E-06 ± 1.2E-05	U		<sup>238</sup> Pu	5.2E-06 ± 1.4E-05	U
	<sup>239/240</sup> Pu	2.2E-06 ± 4.0E-06	U		<sup>239/240</sup> Pu	1.3E-06 ± 1.3E-06	U
	<sup>103</sup> Ru	-1.5E-05 ± 6.7E-05	U		<sup>103</sup> Ru	-1.7E-05 ± 6.3E-05	U
	<sup>106</sup> Ru	-2.2E-04 ± 5.5E-04	U		<sup>106</sup> Ru	-2.0E-05 ± 2.0E-04	U
	<sup>125</sup> Sb	-1.0E-04 ± 1.5E-04	U		<sup>125</sup> Sb	3.1E-05 ± 1.3E-04	U
	<sup>113</sup> Sn	-1.7E-05 ± 6.7E-05	U		<sup>113</sup> Sn	-8.8E-06 ± 6.6E-05	U
	<sup>90</sup> Sr	-1.0E-04 ± 1.1E-04	U		<sup>90</sup> Sr	-7.1E-06 ± 7.1E-05	U
	<sup>234</sup> U	1.3E-05 ± 1.0E-05			<sup>234</sup> U	1.1E-05 ± 7.5E-06	
	<sup>235</sup> U	4.4E-06 ± 4.6E-06			<sup>235</sup> U	1.4E-06 ± 2.0E-06	U
	<sup>238</sup> U	1.2E-05 ± 8.6E-06			<sup>238</sup> U	6.5E-06 ± 4.8E-06	
	<sup>65</sup> Zn	-4.0E-05 ± 1.9E-04	U		<sup>65</sup> Zn	1.9E-04 ± 1.8E-04	U
N499 (200 EAST) Composite Period 06/21/04 to 12/21/04	<sup>144</sup> Ce	1.8E-04 ± 7.8E-04	U	N957 (200 EAST) Composite Period 12/23/03 to 06/21/04	<sup>144</sup> Ce	1.7E-04 ± 6.2E-04	U
	<sup>60</sup> Co	4.8E-05 ± 1.1E-04	U		<sup>60</sup> Co	-3.2E-05 ± 8.0E-05	U
	<sup>134</sup> Cs	-2.1E-05 ± 1.1E-04	U		<sup>134</sup> Cs	-2.6E-05 ± 7.0E-05	U
	<sup>137</sup> Cs	1.2E-05 ± 9.6E-05	U		<sup>137</sup> Cs	-3.7E-05 ± 5.9E-05	U
	<sup>152</sup> Eu	4.8E-05 ± 2.4E-04	U		<sup>152</sup> Eu	-4.2E-05 ± 1.6E-04	U
	<sup>154</sup> Eu	-8.5E-05 ± 3.2E-04	U		<sup>154</sup> Eu	-5.2E-05 ± 2.1E-04	U
	<sup>155</sup> Eu	6.7E-05 ± 1.8E-04	U		<sup>155</sup> Eu	-6.0E-05 ± 1.6E-04	U
	<sup>238</sup> Pu	-2.1E-06 ± 6.8E-06	U		<sup>238</sup> Pu	-1.8E-06 ± 6.9E-06	U
	<sup>239/240</sup> Pu	1.4E-06 ± 2.9E-06	U		<sup>239/240</sup> Pu	3.7E-06 ± 4.6E-06	U
	<sup>103</sup> Ru	1.2E-04 ± 1.1E-04	U		<sup>103</sup> Ru	-2.3E-05 ± 7.0E-05	U
	<sup>106</sup> Ru	-1.8E-04 ± 8.6E-04	U		<sup>106</sup> Ru	2.5E-04 ± 5.6E-04	U
	<sup>125</sup> Sb	-2.3E-04 ± 3.0E-04	U		<sup>125</sup> Sb	-7.0E-05 ± 1.4E-04	U
	<sup>113</sup> Sn	2.7E-05 ± 1.1E-04	U		<sup>113</sup> Sn	-4.7E-05 ± 6.8E-05	U
	<sup>90</sup> Sr	1.4E-06 ± 1.4E-05	U		<sup>90</sup> Sr	-1.5E-04 ± 1.6E-04	U
	<sup>234</sup> U	1.2E-05 ± 8.4E-06			<sup>234</sup> U	8.7E-06 ± 6.2E-06	
	<sup>235</sup> U	6.5E-06 ± 5.2E-06			<sup>235</sup> U	1.7E-06 ± 2.5E-06	U
	<sup>238</sup> U	1.6E-05 ± 9.3E-06			<sup>238</sup> U	1.3E-05 ± 8.5E-06	
	<sup>65</sup> Zn	-2.6E-06 ± 2.6E-05	U		<sup>65</sup> Zn	6.8E-07 ± 6.8E-06	U

RQ = Result Qualifier. U = The analyte was analyzed for but not detected.

Table 2-4. Near-Facility Air Sampling Results, 2004 (pCi/m<sup>3</sup> ± total analytical uncertainty).  
(40 sheets total)

Location	Isotope	Result ± Uncertainty	RQ*	Location	Isotope	Result ± Uncertainty	RQ*
N957 (200 EAST) Composite Period 06/21/04 to 12/21/04	<sup>144</sup> Ce	-3.6E-04 ± 7.7E-04	U	N967 (200 EAST) Composite Period 12/22/03 to 06/21/04	<sup>144</sup> Ce	5.1E-04 ± 6.4E-04	U
	<sup>60</sup> Co	-8.3E-06 ± 7.2E-05	U		<sup>60</sup> Co	1.3E-05 ± 6.6E-05	U
	<sup>134</sup> Cs	7.3E-05 ± 7.9E-05	U		<sup>134</sup> Cs	5.4E-06 ± 5.4E-05	U
	<sup>137</sup> Cs	3.6E-05 ± 6.5E-05	U		<sup>137</sup> Cs	3.2E-05 ± 6.5E-05	U
	<sup>152</sup> Eu	-4.5E-05 ± 1.8E-04	U		<sup>152</sup> Eu	4.8E-06 ± 4.8E-05	U
	<sup>154</sup> Eu	1.6E-04 ± 2.1E-04	U		<sup>154</sup> Eu	1.7E-04 ± 2.1E-04	U
	<sup>155</sup> Eu	-5.1E-05 ± 1.9E-04	U		<sup>155</sup> Eu	-2.3E-05 ± 1.4E-04	U
	<sup>238</sup> Pu	2.2E-06 ± 3.3E-06	U		<sup>238</sup> Pu	-1.3E-05 ± 1.7E-05	U
	<sup>239/240</sup> Pu	6.5E-06 ± 4.9E-06			<sup>239/240</sup> Pu	-4.6E-06 ± 5.2E-06	U
	<sup>103</sup> Ru	9.2E-06 ± 7.0E-05	U		<sup>103</sup> Ru	1.8E-05 ± 6.5E-05	U
	<sup>106</sup> Ru	-1.9E-04 ± 6.2E-04	U		<sup>106</sup> Ru	-3.8E-04 ± 5.7E-04	U
	<sup>125</sup> Sb	4.2E-05 ± 1.5E-04	U		<sup>125</sup> Sb	-4.2E-05 ± 1.3E-04	U
	<sup>113</sup> Sn	2.0E-06 ± 2.0E-05	U		<sup>113</sup> Sn	-3.7E-05 ± 6.6E-05	U
	<sup>90</sup> Sr	-1.2E-04 ± 1.2E-04	U		<sup>90</sup> Sr	7.0E-06 ± 7.0E-05	U
	<sup>234</sup> U	5.4E-06 ± 5.5E-06	U		<sup>234</sup> U	9.1E-06 ± 6.7E-06	
	<sup>235</sup> U	1.7E-06 ± 3.4E-06	U		<sup>235</sup> U	7.0E-07 ± 7.3E-07	U
	<sup>238</sup> U	1.0E-05 ± 8.1E-06			<sup>238</sup> U	9.1E-06 ± 6.7E-06	
	<sup>65</sup> Zn	-2.8E-04 ± 2.9E-04	U		<sup>65</sup> Zn	-1.1E-04 ± 1.4E-04	U
N967 (200 EAST) Composite Period 06/21/04 to 12/21/04	<sup>144</sup> Ce	2.6E-04 ± 7.1E-04	U	N968 (200 EAST) Composite Period 12/22/03 to 06/21/04	<sup>144</sup> Ce	9.4E-06 ± 9.4E-05	U
	<sup>60</sup> Co	8.7E-05 ± 7.6E-05	U		<sup>60</sup> Co	3.8E-05 ± 7.4E-05	U
	<sup>134</sup> Cs	-3.8E-05 ± 7.2E-05	U		<sup>134</sup> Cs	-1.5E-05 ± 7.1E-05	U
	<sup>137</sup> Cs	6.5E-06 ± 6.2E-05	U		<sup>137</sup> Cs	4.4E-05 ± 6.5E-05	U
	<sup>152</sup> Eu	-1.3E-04 ± 2.0E-04	U		<sup>152</sup> Eu	-1.3E-05 ± 1.3E-04	U
	<sup>154</sup> Eu	-5.4E-07 ± 5.4E-06	U		<sup>154</sup> Eu	9.3E-05 ± 2.1E-04	U
	<sup>155</sup> Eu	-1.2E-04 ± 2.3E-04	U		<sup>155</sup> Eu	-4.8E-06 ± 4.8E-05	U
	<sup>238</sup> Pu	1.1E-05 ± 1.6E-05	U		<sup>238</sup> Pu	-1.1E-05 ± 1.6E-05	U
	<sup>239/240</sup> Pu	2.0E-06 ± 2.8E-06	U		<sup>239/240</sup> Pu	8.6E-07 ± 3.0E-06	U
	<sup>103</sup> Ru	3.5E-05 ± 6.8E-05	U		<sup>103</sup> Ru	-2.7E-05 ± 6.9E-05	U
	<sup>106</sup> Ru	-6.5E-04 ± 6.8E-04	U		<sup>106</sup> Ru	-4.8E-04 ± 5.7E-04	U
	<sup>125</sup> Sb	-2.6E-05 ± 1.5E-04	U		<sup>125</sup> Sb	-2.6E-05 ± 1.4E-04	U
	<sup>113</sup> Sn	4.0E-07 ± 4.0E-06	U		<sup>113</sup> Sn	7.6E-05 ± 9.0E-05	U
	<sup>90</sup> Sr	-8.0E-05 ± 8.7E-05	U		<sup>90</sup> Sr	-7.1E-05 ± 9.1E-05	U
	<sup>234</sup> U	4.6E-06 ± 3.9E-06			<sup>234</sup> U	1.0E-05 ± 7.6E-06	
	<sup>235</sup> U	1.5E-06 ± 2.1E-06	U		<sup>235</sup> U	3.5E-06 ± 3.6E-06	
	<sup>238</sup> U	7.3E-06 ± 5.2E-06			<sup>238</sup> U	1.3E-05 ± 8.0E-06	
	<sup>65</sup> Zn	-1.2E-04 ± 1.6E-04	U		<sup>65</sup> Zn	-1.0E-04 ± 1.6E-04	U

RQ = Result Qualifier. U = The analyte was analyzed for but not detected.

Table 2-4. Near-Facility Air Sampling Results, 2004 (pCi/m<sup>3</sup> ± total analytical uncertainty).  
(40 sheets total)

Location	Isotope	Result ± Uncertainty	RQ*	Location	Isotope	Result ± Uncertainty	RQ*
N968 (200 EAST) Composite Period 06/21/04 to 12/21/04	<sup>144</sup> Ce	5.5E-04 ± 8.4E-04	U	N969 (200 EAST) Composite Period 12/23/03 to 06/21/04	<sup>144</sup> Ce	6.3E-05 ± 6.3E-04	U
	<sup>60</sup> Co	1.3E-05 ± 1.1E-04	U		<sup>60</sup> Co	-3.5E-05 ± 7.4E-05	U
	<sup>134</sup> Cs	-4.6E-05 ± 1.1E-04	U		<sup>134</sup> Cs	3.0E-05 ± 6.6E-05	U
	<sup>137</sup> Cs	4.1E-05 ± 1.0E-04	U		<sup>137</sup> Cs	-1.7E-05 ± 5.7E-05	U
	<sup>152</sup> Eu	-1.6E-04 ± 2.4E-04	U		<sup>152</sup> Eu	-1.3E-04 ± 1.6E-04	U
	<sup>154</sup> Eu	-2.1E-04 ± 3.0E-04	U		<sup>154</sup> Eu	6.1E-05 ± 2.1E-04	U
	<sup>155</sup> Eu	-3.2E-05 ± 1.8E-04	U		<sup>155</sup> Eu	-3.0E-05 ± 1.9E-04	U
	<sup>238</sup> Pu	-1.9E-06 ± 1.8E-05	U		<sup>238</sup> Pu	-5.5E-06 ± 1.2E-05	U
	<sup>239/240</sup> Pu	-1.9E-06 ± 4.9E-06	U		<sup>239/240</sup> Pu	1.8E-06 ± 4.6E-06	U
	<sup>103</sup> Ru	2.3E-05 ± 1.1E-04	U		<sup>103</sup> Ru	-3.9E-05 ± 7.1E-05	U
	<sup>106</sup> Ru	-4.8E-04 ± 8.8E-04	U		<sup>106</sup> Ru	-4.7E-05 ± 4.7E-04	U
	<sup>125</sup> Sb	-1.7E-04 ± 2.6E-04	U		<sup>125</sup> Sb	-1.6E-05 ± 1.6E-04	U
	<sup>113</sup> Sn	-8.6E-05 ± 1.1E-04	U		<sup>113</sup> Sn	5.3E-05 ± 7.7E-05	U
	<sup>90</sup> Sr	-5.2E-05 ± 8.7E-05	U		<sup>90</sup> Sr	-5.9E-07 ± 5.9E-06	U
	<sup>234</sup> U	1.1E-05 ± 7.4E-06			<sup>234</sup> U	1.4E-05 ± 9.7E-06	
	<sup>235</sup> U	4.3E-06 ± 4.9E-06	U		<sup>235</sup> U	3.4E-06 ± 4.2E-06	U
	<sup>238</sup> U	1.8E-05 ± 9.7E-06			<sup>238</sup> U	7.1E-06 ± 6.7E-06	U
	<sup>65</sup> Zn	-1.9E-05 ± 1.9E-04	U		<sup>65</sup> Zn	2.8E-05 ± 1.5E-04	U
N969 (200 EAST) Composite Period 06/21/04 to 12/21/04	<sup>144</sup> Ce	2.1E-04 ± 6.2E-04	U	N970 (200 EAST) Composite Period 12/22/03 to 06/21/04	<sup>144</sup> Ce	-2.7E-04 ± 7.8E-04	U
	<sup>60</sup> Co	1.9E-06 ± 1.9E-05	U		<sup>60</sup> Co	-5.4E-05 ± 1.1E-04	U
	<sup>134</sup> Cs	1.5E-06 ± 1.5E-05	U		<sup>134</sup> Cs	1.3E-04 ± 1.1E-04	U
	<sup>137</sup> Cs	7.7E-06 ± 6.4E-05	U		<sup>137</sup> Cs	1.4E-05 ± 9.7E-05	U
	<sup>152</sup> Eu	-7.3E-05 ± 1.6E-04	U		<sup>152</sup> Eu	-2.3E-05 ± 2.2E-04	U
	<sup>154</sup> Eu	-2.5E-04 ± 2.6E-04	U		<sup>154</sup> Eu	2.4E-04 ± 3.1E-04	U
	<sup>155</sup> Eu	6.6E-07 ± 6.6E-06	U		<sup>155</sup> Eu	-7.3E-05 ± 1.6E-04	U
	<sup>238</sup> Pu	2.8E-06 ± 1.5E-05	U		<sup>238</sup> Pu	7.1E-06 ± 1.5E-05	U
	<sup>239/240</sup> Pu	4.6E-06 ± 5.2E-06	U		<sup>239/240</sup> Pu	4.1E-06 ± 5.8E-06	U
	<sup>103</sup> Ru	-8.2E-06 ± 6.8E-05	U		<sup>103</sup> Ru	-9.9E-05 ± 1.1E-04	U
	<sup>106</sup> Ru	-6.9E-04 ± 7.1E-04	U		<sup>106</sup> Ru	3.2E-05 ± 3.2E-04	U
	<sup>125</sup> Sb	6.0E-05 ± 1.4E-04	U		<sup>125</sup> Sb	1.2E-05 ± 1.2E-04	U
	<sup>113</sup> Sn	-2.9E-05 ± 6.5E-05	U		<sup>113</sup> Sn	-2.2E-05 ± 1.1E-04	U
	<sup>90</sup> Sr	3.0E-05 ± 8.7E-05	U		<sup>90</sup> Sr	-5.2E-05 ± 9.9E-05	U
	<sup>234</sup> U	2.0E-05 ± 1.1E-05			<sup>234</sup> U	6.3E-06 ± 7.1E-06	U
	<sup>235</sup> U	8.2E-07 ± 8.5E-07	U		<sup>235</sup> U	3.9E-06 ± 4.8E-06	U
	<sup>238</sup> U	1.4E-05 ± 8.8E-06			<sup>238</sup> U	8.9E-06 ± 7.4E-06	
	<sup>65</sup> Zn	1.2E-04 ± 1.7E-04	U		<sup>65</sup> Zn	-2.3E-04 ± 2.5E-04	U

RQ = Result Qualifier. U = The analyte was analyzed for but not detected.



Table 2-4. Near-Facility Air Sampling Results, 2004 (pCi/m<sup>3</sup> ± total analytical uncertainty).  
(40 sheets total)

Location	Isotope	Result ± Uncertainty	RQ*	Location	Isotope	Result ± Uncertainty	RQ*
N970 (200 EAST) Composite Period 06/21/04 to 12/21/04	<sup>144</sup> Ce	-1.9E-04 ± 6.5E-04	U	N972 (200 EAST) Composite Period 12/22/03 to 06/21/04	<sup>144</sup> Ce	7.0E-05 ± 6.0E-04	U
	<sup>60</sup> Co	9.2E-05 ± 8.5E-05	U		<sup>60</sup> Co	-7.3E-05 ± 7.6E-05	U
	<sup>134</sup> Cs	-1.8E-05 ± 7.8E-05	U		<sup>134</sup> Cs	4.9E-05 ± 7.6E-05	U
	<sup>137</sup> Cs	-3.9E-05 ± 7.0E-05	U		<sup>137</sup> Cs	4.5E-05 ± 6.0E-05	U
	<sup>152</sup> Eu	-2.0E-05 ± 1.6E-04	U		<sup>152</sup> Eu	5.7E-05 ± 1.3E-04	U
	<sup>154</sup> Eu	2.3E-05 ± 2.3E-04	U		<sup>154</sup> Eu	4.3E-05 ± 1.8E-04	U
	<sup>155</sup> Eu	1.7E-05 ± 1.7E-04	U		<sup>155</sup> Eu	9.8E-06 ± 9.8E-05	U
	<sup>238</sup> Pu	7.1E-07 ± 7.1E-06	U		<sup>238</sup> Pu	-1.8E-06 ± 1.5E-05	U
	<sup>239/240</sup> Pu	-7.1E-07 ± 7.1E-06	U		<sup>239/240</sup> Pu	8.9E-07 ± 4.7E-06	U
	<sup>103</sup> Ru	1.0E-05 ± 7.3E-05	U		<sup>103</sup> Ru	-2.0E-05 ± 6.1E-05	U
	<sup>106</sup> Ru	-9.0E-05 ± 6.0E-04	U		<sup>106</sup> Ru	9.0E-05 ± 6.2E-04	U
	<sup>125</sup> Sb	9.9E-05 ± 1.6E-04	U		<sup>125</sup> Sb	-1.2E-04 ± 1.4E-04	U
	<sup>113</sup> Sn	-4.1E-05 ± 7.2E-05	U		<sup>113</sup> Sn	1.8E-05 ± 6.3E-05	U
	<sup>90</sup> Sr	-4.3E-05 ± 7.6E-05	U		<sup>90</sup> Sr	-1.4E-05 ± 7.2E-05	U
	<sup>234</sup> U	1.0E-05 ± 6.4E-06			<sup>234</sup> U	8.9E-06 ± 6.6E-06	
	<sup>235</sup> U	3.0E-06 ± 3.1E-06			<sup>235</sup> U	6.9E-07 ± 2.4E-06	U
	<sup>238</sup> U	1.3E-05 ± 7.8E-06			<sup>238</sup> U	4.7E-06 ± 4.0E-06	
	<sup>65</sup> Zn	1.7E-04 ± 2.0E-04	U		<sup>65</sup> Zn	-5.1E-05 ± 1.5E-04	U
N972 (200 EAST) Composite Period 06/21/04 to 12/21/04	<sup>144</sup> Ce	4.7E-04 ± 6.8E-04	U	N973 (200 EAST) Composite Period 12/22/03 to 06/21/04	<sup>144</sup> Ce	4.8E-04 ± 7.2E-04	U
	<sup>60</sup> Co	6.6E-05 ± 8.1E-05	U		<sup>60</sup> Co	-4.1E-05 ± 7.5E-05	U
	<sup>134</sup> Cs	9.5E-06 ± 7.2E-05	U		<sup>134</sup> Cs	-3.2E-05 ± 6.9E-05	U
	<sup>137</sup> Cs	2.2E-05 ± 6.8E-05	U		<sup>137</sup> Cs	7.8E-05 ± 7.4E-05	U
	<sup>152</sup> Eu	-4.8E-05 ± 1.7E-04	U		<sup>152</sup> Eu	3.6E-05 ± 1.9E-04	U
	<sup>154</sup> Eu	4.0E-05 ± 2.1E-04	U		<sup>154</sup> Eu	3.4E-06 ± 3.4E-05	U
	<sup>155</sup> Eu	-6.4E-05 ± 1.6E-04	U		<sup>155</sup> Eu	-9.1E-05 ± 1.9E-04	U
	<sup>238</sup> Pu	3.0E-06 ± 1.0E-05	U		<sup>238</sup> Pu	8.7E-06 ± 1.7E-05	U
	<sup>239/240</sup> Pu	7.1E-07 ± 7.4E-07	U		<sup>239/240</sup> Pu	-9.4E-07 ± 3.3E-06	U
	<sup>103</sup> Ru	3.2E-05 ± 7.1E-05	U		<sup>103</sup> Ru	-7.0E-05 ± 7.4E-05	U
	<sup>106</sup> Ru	-2.4E-04 ± 6.1E-04	U		<sup>106</sup> Ru	-1.3E-04 ± 5.9E-04	U
	<sup>125</sup> Sb	5.2E-05 ± 1.6E-04	U		<sup>125</sup> Sb	8.0E-05 ± 1.6E-04	U
	<sup>113</sup> Sn	2.0E-05 ± 7.3E-05	U		<sup>113</sup> Sn	2.9E-05 ± 7.7E-05	U
	<sup>90</sup> Sr	1.4E-05 ± 6.6E-05	U		<sup>90</sup> Sr	-5.1E-05 ± 9.2E-05	U
	<sup>234</sup> U	1.0E-05 ± 7.7E-06			<sup>234</sup> U	1.3E-05 ± 7.9E-06	
	<sup>235</sup> U	7.8E-07 ± 8.1E-07	U		<sup>235</sup> U	1.6E-06 ± 2.3E-06	U
	<sup>238</sup> U	4.6E-06 ± 4.6E-06	U		<sup>238</sup> U	7.2E-06 ± 5.3E-06	
	<sup>65</sup> Zn	-2.2E-04 ± 2.3E-04	U		<sup>65</sup> Zn	-1.7E-04 ± 1.9E-04	U

RQ = Result Qualifier. U = The analyte was analyzed for but not detected.

Table 2-4. Near-Facility Air Sampling Results, 2004 (pCi/m<sup>3</sup> ± total analytical uncertainty).  
(40 sheets total)

Location	Isotope	Result ± Uncertainty	RQ*	Location	Isotope	Result ± Uncertainty	RQ*
N973 (200 EAST) Composite Period 06/21/04 to 12/21/04	<sup>144</sup> Ce	-1.9E-04 ± 5.6E-04	U	N976 (200 EAST) Composite Period 12/22/03 to 06/21/04	<sup>144</sup> Ce	2.5E-04 ± 6.3E-04	U
	<sup>60</sup> Co	1.6E-05 ± 8.0E-05	U		<sup>60</sup> Co	-3.4E-05 ± 8.5E-05	U
	<sup>134</sup> Cs	2.1E-05 ± 7.3E-05	U		<sup>134</sup> Cs	-3.3E-05 ± 6.5E-05	U
	<sup>137</sup> Cs	3.0E-05 ± 7.1E-05	U		<sup>137</sup> Cs	9.5E-05 ± 7.0E-05	U
	<sup>152</sup> Eu	-8.5E-05 ± 1.5E-04	U		<sup>152</sup> Eu	-9.0E-05 ± 1.5E-04	U
	<sup>154</sup> Eu	-2.3E-04 ± 2.4E-04	U		<sup>154</sup> Eu	-2.6E-05 ± 2.0E-04	U
	<sup>155</sup> Eu	9.6E-05 ± 1.4E-04	U		<sup>155</sup> Eu	-4.9E-05 ± 1.5E-04	U
	<sup>238</sup> Pu	6.8E-06 ± 1.2E-05	U		<sup>238</sup> Pu	2.2E-06 ± 4.9E-06	U
	<sup>239/240</sup> Pu	7.4E-07 ± 7.6E-07	U		<sup>239/240</sup> Pu	2.2E-06 ± 2.7E-06	
	<sup>103</sup> Ru	1.9E-05 ± 6.4E-05	U		<sup>103</sup> Ru	1.1E-05 ± 6.9E-05	U
	<sup>106</sup> Ru	3.3E-05 ± 3.3E-04	U		<sup>106</sup> Ru	-1.6E-04 ± 5.4E-04	U
	<sup>125</sup> Sb	-3.9E-05 ± 1.6E-04	U		<sup>125</sup> Sb	-5.5E-05 ± 1.4E-04	U
	<sup>113</sup> Sn	8.2E-06 ± 7.4E-05	U		<sup>113</sup> Sn	4.1E-05 ± 7.0E-05	U
	<sup>90</sup> Sr	8.8E-05 ± 1.0E-04	U		<sup>90</sup> Sr	5.9E-05 ± 1.0E-04	U
	<sup>234</sup> U	1.2E-05 ± 8.0E-06			<sup>234</sup> U	1.5E-05 ± 1.0E-05	
	<sup>235</sup> U	4.7E-06 ± 4.3E-06			<sup>235</sup> U	1.6E-06 ± 2.3E-06	U
	<sup>238</sup> U	5.7E-06 ± 4.6E-06			<sup>238</sup> U	2.3E-05 ± 1.2E-05	
	<sup>65</sup> Zn	-2.3E-04 ± 2.4E-04	U		<sup>65</sup> Zn	1.4E-04 ± 1.7E-04	U
N976 (200 EAST) Composite Period 06/21/04 to 12/21/04	<sup>144</sup> Ce	-2.4E-04 ± 6.5E-04	U	N977 (200 EAST) Composite Period 12/22/03 to 06/21/04	<sup>144</sup> Ce	-3.2E-04 ± 6.6E-04	U
	<sup>60</sup> Co	-4.6E-05 ± 8.6E-05	U		<sup>60</sup> Co	5.9E-05 ± 8.5E-05	U
	<sup>134</sup> Cs	2.7E-05 ± 7.1E-05	U		<sup>134</sup> Cs	-7.3E-05 ± 8.1E-05	U
	<sup>137</sup> Cs	4.6E-05 ± 6.8E-05	U		<sup>137</sup> Cs	8.7E-06 ± 6.9E-05	U
	<sup>152</sup> Eu	-1.4E-04 ± 1.8E-04	U		<sup>152</sup> Eu	-8.8E-05 ± 1.7E-04	U
	<sup>154</sup> Eu	-1.1E-04 ± 2.1E-04	U		<sup>154</sup> Eu	-9.1E-05 ± 2.5E-04	U
	<sup>155</sup> Eu	-5.4E-05 ± 1.6E-04	U		<sup>155</sup> Eu	3.4E-05 ± 1.6E-04	U
	<sup>238</sup> Pu	-3.6E-06 ± 1.1E-05	U		<sup>238</sup> Pu	-4.3E-06 ± 9.6E-06	U
	<sup>239/240</sup> Pu	-7.1E-07 ± 3.8E-06	U		<sup>239/240</sup> Pu	-2.2E-06 ± 2.7E-06	U
	<sup>103</sup> Ru	2.3E-05 ± 6.8E-05	U		<sup>103</sup> Ru	-6.6E-06 ± 6.6E-05	U
	<sup>106</sup> Ru	-5.1E-04 ± 6.5E-04	U		<sup>106</sup> Ru	9.3E-05 ± 6.3E-04	U
	<sup>125</sup> Sb	-2.6E-06 ± 2.6E-05	U		<sup>125</sup> Sb	1.9E-04 ± 1.7E-04	U
	<sup>113</sup> Sn	-4.9E-05 ± 7.2E-05	U		<sup>113</sup> Sn	-1.0E-04 ± 1.0E-04	U
	<sup>90</sup> Sr	-1.4E-05 ± 7.7E-05	U		<sup>90</sup> Sr	-1.1E-04 ± 1.1E-04	U
	<sup>234</sup> U	3.9E-05 ± 1.8E-05			<sup>234</sup> U	1.2E-05 ± 7.4E-06	
	<sup>235</sup> U	5.3E-06 ± 4.5E-06			<sup>235</sup> U	2.5E-06 ± 3.0E-06	
	<sup>238</sup> U	3.1E-05 ± 1.5E-05			<sup>238</sup> U	9.4E-06 ± 6.3E-06	
	<sup>65</sup> Zn	-7.3E-06 ± 7.3E-05	U		<sup>65</sup> Zn	-1.1E-04 ± 1.8E-04	U

RQ = Result Qualifier. U = The analyte was analyzed for but not detected.

Table 2-4. Near-Facility Air Sampling Results, 2004 (pCi/m<sup>3</sup> ± total analytical uncertainty).  
(40 sheets total)

Location	Isotope	Result ± Uncertainty	RQ*	Location	Isotope	Result ± Uncertainty	RQ*
N977 (200 EAST) Composite Period 06/21/04 to 12/21/04	<sup>144</sup> Ce	-2.6E-04 ± 5.7E-04	U	N978 (200 EAST) Composite Period 12/23/03 to 06/21/04	<sup>144</sup> Ce	2.8E-04 ± 5.5E-04	U
	<sup>60</sup> Co	-4.0E-05 ± 8.0E-05	U		<sup>60</sup> Co	3.0E-05 ± 7.5E-05	U
	<sup>134</sup> Cs	7.2E-06 ± 7.2E-05	U		<sup>134</sup> Cs	5.2E-05 ± 6.8E-05	U
	<sup>137</sup> Cs	6.7E-05 ± 7.0E-05	U		<sup>137</sup> Cs	-4.3E-05 ± 5.8E-05	U
	<sup>152</sup> Eu	-1.9E-05 ± 1.5E-04	U		<sup>152</sup> Eu	-1.7E-06 ± 1.7E-05	U
	<sup>154</sup> Eu	4.2E-05 ± 2.2E-04	U		<sup>154</sup> Eu	-4.1E-05 ± 2.4E-04	U
	<sup>155</sup> Eu	-5.0E-05 ± 1.4E-04	U		<sup>155</sup> Eu	2.2E-04 ± 2.0E-04	U
	<sup>238</sup> Pu	-6.9E-06 ± 1.7E-05	U		<sup>238</sup> Pu	7.6E-07 ± 7.7E-06	U
	<sup>239/240</sup> Pu	7.3E-06 ± 5.4E-06			<sup>239/240</sup> Pu	-3.8E-06 ± 4.0E-06	U
	<sup>103</sup> Ru	-2.6E-05 ± 6.3E-05	U		<sup>103</sup> Ru	-1.2E-05 ± 6.8E-05	U
	<sup>106</sup> Ru	4.2E-04 ± 5.7E-04	U		<sup>106</sup> Ru	7.3E-05 ± 5.5E-04	U
	<sup>125</sup> Sb	-6.6E-05 ± 1.5E-04	U		<sup>125</sup> Sb	-7.5E-05 ± 1.3E-04	U
	<sup>113</sup> Sn	1.5E-05 ± 7.0E-05	U		<sup>113</sup> Sn	4.1E-05 ± 6.6E-05	U
	<sup>90</sup> Sr	-3.7E-05 ± 8.7E-05	U		<sup>90</sup> Sr	4.2E-05 ± 1.9E-04	U
	<sup>234</sup> U	2.2E-05 ± 1.2E-05			<sup>234</sup> U	9.7E-06 ± 7.2E-06	
	<sup>235</sup> U	1.6E-06 ± 3.2E-06	U		<sup>235</sup> U	8.3E-07 ± 1.7E-06	U
	<sup>238</sup> U	1.7E-05 ± 9.9E-06			<sup>238</sup> U	1.0E-05 ± 6.8E-06	
	<sup>65</sup> Zn	-2.1E-04 ± 2.2E-04	U		<sup>65</sup> Zn	-9.0E-05 ± 1.7E-04	U
N978 (200 EAST) Composite Period 06/21/04 to 12/21/04	<sup>144</sup> Ce	-3.2E-04 ± 7.9E-04	U	N984 (200 EAST) Composite Period 12/22/03 to 06/21/04	<sup>144</sup> Ce	-2.2E-04 ± 7.6E-04	U
	<sup>60</sup> Co	-1.0E-04 ± 1.0E-04	U		<sup>60</sup> Co	-2.5E-05 ± 1.2E-04	U
	<sup>134</sup> Cs	4.9E-05 ± 9.9E-05	U		<sup>134</sup> Cs	-1.2E-04 ± 1.3E-04	U
	<sup>137</sup> Cs	2.8E-05 ± 9.7E-05	U		<sup>137</sup> Cs	1.0E-04 ± 1.3E-04	U
	<sup>152</sup> Eu	6.3E-05 ± 2.3E-04	U		<sup>152</sup> Eu	5.8E-05 ± 2.1E-04	U
	<sup>154</sup> Eu	2.6E-04 ± 3.1E-04	U		<sup>154</sup> Eu	-3.6E-05 ± 3.3E-04	U
	<sup>155</sup> Eu	2.8E-05 ± 1.7E-04	U		<sup>155</sup> Eu	1.1E-04 ± 1.6E-04	U
	<sup>238</sup> Pu	-7.1E-06 ± 1.4E-05	U		<sup>238</sup> Pu	8.2E-07 ± 7.6E-06	U
	<sup>239/240</sup> Pu	-8.5E-07 ± 3.0E-06	U		<sup>239/240</sup> Pu	2.5E-06 ± 3.9E-06	U
	<sup>103</sup> Ru	-1.5E-04 ± 1.5E-04	U		<sup>103</sup> Ru	-3.0E-05 ± 1.2E-04	U
	<sup>106</sup> Ru	5.0E-04 ± 7.6E-04	U		<sup>106</sup> Ru	1.6E-04 ± 8.0E-04	U
	<sup>125</sup> Sb	-6.7E-05 ± 2.3E-04	U		<sup>125</sup> Sb	-1.9E-04 ± 2.3E-04	U
	<sup>113</sup> Sn	1.5E-06 ± 1.5E-05	U		<sup>113</sup> Sn	-4.8E-05 ± 1.1E-04	U
	<sup>90</sup> Sr	-2.8E-05 ± 9.7E-05	U		<sup>90</sup> Sr	3.6E-04 ± 1.6E-04	
	<sup>234</sup> U	1.6E-05 ± 8.9E-06			<sup>234</sup> U	8.9E-06 ± 6.1E-06	
	<sup>235</sup> U	7.1E-07 ± 1.4E-06	U		<sup>235</sup> U	2.9E-06 ± 3.0E-06	
	<sup>238</sup> U	1.1E-05 ± 7.7E-06			<sup>238</sup> U	7.3E-06 ± 5.5E-06	
	<sup>65</sup> Zn	-1.1E-04 ± 2.4E-04	U		<sup>65</sup> Zn	-3.8E-04 ± 4.0E-04	U

RQ = Result Qualifier. U = The analyte was analyzed for but not detected.

Table 2-4. Near-Facility Air Sampling Results, 2004 (pCi/m<sup>3</sup> ± total analytical uncertainty).  
(40 sheets total)

Location	Isotope	Result ± Uncertainty	RQ*	Location	Isotope	Result ± Uncertainty	RQ*
N984 (200 EAST) Composite Period 06/21/04 to 12/21/04	<sup>144</sup> Ce	1.2E-04 ± 5.1E-04	U	N985 (200 EAST) Composite Period 12/22/03 to 06/21/04	<sup>144</sup> Ce	-3.3E-04 ± 6.4E-04	U
	<sup>60</sup> Co	-9.5E-06 ± 7.9E-05	U		<sup>60</sup> Co	-3.0E-05 ± 7.4E-05	U
	<sup>134</sup> Cs	7.2E-07 ± 7.2E-06	U		<sup>134</sup> Cs	4.0E-06 ± 4.0E-05	U
	<sup>137</sup> Cs	1.4E-04 ± 9.7E-05			<sup>137</sup> Cs	7.0E-05 ± 6.8E-05	U
	<sup>152</sup> Eu	3.4E-05 ± 1.5E-04	U		<sup>152</sup> Eu	1.1E-05 ± 1.1E-04	U
	<sup>154</sup> Eu	1.1E-04 ± 2.4E-04	U		<sup>154</sup> Eu	2.8E-04 ± 1.9E-04	U
	<sup>155</sup> Eu	-5.9E-05 ± 1.4E-04	U		<sup>155</sup> Eu	5.1E-05 ± 1.6E-04	U
	<sup>238</sup> Pu	9.4E-06 ± 1.3E-05	U		<sup>238</sup> Pu	-7.4E-07 ± 6.8E-06	U
	<sup>239/240</sup> Pu	6.7E-07 ± 6.9E-07	U		<sup>239/240</sup> Pu	7.4E-07 ± 3.3E-06	U
	<sup>103</sup> Ru	5.0E-05 ± 6.8E-05	U		<sup>103</sup> Ru	1.4E-05 ± 7.8E-05	U
	<sup>106</sup> Ru	2.7E-04 ± 6.1E-04	U		<sup>106</sup> Ru	-4.1E-04 ± 5.9E-04	U
	<sup>125</sup> Sb	4.8E-06 ± 4.8E-05	U		<sup>125</sup> Sb	2.3E-05 ± 1.5E-04	U
	<sup>113</sup> Sn	-7.4E-06 ± 7.1E-05	U		<sup>113</sup> Sn	-4.2E-05 ± 7.1E-05	U
	<sup>90</sup> Sr	2.9E-05 ± 8.4E-05	U		<sup>90</sup> Sr	-1.3E-04 ± 1.3E-04	U
	<sup>234</sup> U	9.4E-06 ± 6.8E-06			<sup>234</sup> U	1.3E-05 ± 7.8E-06	
	<sup>235</sup> U	2.5E-06 ± 3.1E-06			<sup>235</sup> U	7.4E-07 ± 1.5E-06	U
	<sup>238</sup> U	6.2E-06 ± 5.4E-06			<sup>238</sup> U	9.6E-06 ± 6.6E-06	
	<sup>65</sup> Zn	-1.6E-05 ± 1.6E-04	U		<sup>65</sup> Zn	-9.1E-05 ± 1.5E-04	U
N985 (200 EAST) Composite Period 06/21/04 to 12/21/04	<sup>144</sup> Ce	-2.9E-04 ± 6.5E-04	U	N999 (200 EAST) Composite Period 12/22/03 to 06/21/04	<sup>144</sup> Ce	-3.6E-04 ± 6.4E-04	U
	<sup>60</sup> Co	4.8E-05 ± 8.7E-05	U		<sup>60</sup> Co	-6.7E-05 ± 1.0E-04	U
	<sup>134</sup> Cs	-6.1E-06 ± 6.1E-05	U		<sup>134</sup> Cs	4.5E-05 ± 6.8E-05	U
	<sup>137</sup> Cs	4.1E-05 ± 7.7E-05	U		<sup>137</sup> Cs	7.2E-05 ± 6.5E-05	U
	<sup>152</sup> Eu	1.2E-04 ± 1.7E-04	U		<sup>152</sup> Eu	-2.0E-04 ± 2.1E-04	U
	<sup>154</sup> Eu	-8.8E-05 ± 2.4E-04	U		<sup>154</sup> Eu	2.4E-04 ± 2.3E-04	U
	<sup>155</sup> Eu	-4.4E-05 ± 1.7E-04	U		<sup>155</sup> Eu	-3.3E-05 ± 1.5E-04	U
	<sup>238</sup> Pu	-1.7E-05 ± 1.7E-05	U		<sup>238</sup> Pu	2.1E-06 ± 1.9E-05	U
	<sup>239/240</sup> Pu	1.4E-06 ± 2.0E-06	U		<sup>239/240</sup> Pu	1.1E-06 ± 2.1E-06	U
	<sup>103</sup> Ru	-6.4E-05 ± 7.5E-05	U		<sup>103</sup> Ru	1.0E-05 ± 7.6E-05	U
	<sup>106</sup> Ru	-4.5E-05 ± 4.5E-04	U		<sup>106</sup> Ru	8.3E-05 ± 6.1E-04	U
	<sup>125</sup> Sb	7.1E-05 ± 1.5E-04	U		<sup>125</sup> Sb	-5.0E-05 ± 1.5E-04	U
	<sup>113</sup> Sn	-2.1E-05 ± 7.1E-05	U		<sup>113</sup> Sn	3.3E-05 ± 7.4E-05	U
	<sup>90</sup> Sr	1.4E-05 ± 8.2E-05	U		<sup>90</sup> Sr	-1.0E-04 ± 1.1E-04	U
	<sup>234</sup> U	1.7E-05 ± 1.0E-05			<sup>234</sup> U	1.2E-05 ± 7.4E-06	
	<sup>235</sup> U	3.5E-06 ± 3.7E-06			<sup>235</sup> U	-7.7E-07 ± 7.7E-06	U
	<sup>238</sup> U	1.2E-05 ± 7.5E-06			<sup>238</sup> U	1.0E-05 ± 6.8E-06	
	<sup>65</sup> Zn	1.1E-04 ± 2.0E-04	U		<sup>65</sup> Zn	-1.7E-04 ± 1.8E-04	U

RQ = Result Qualifier. U = The analyte was analyzed for but not detected.

Table 2-4. Near-Facility Air Sampling Results, 2004 (pCi/m<sup>3</sup> ± total analytical uncertainty).  
(40 sheets total)

Location	Isotope	Result ± Uncertainty	RQ*	Location	Isotope	Result ± Uncertainty	RQ*
N999 (200 EAST) Composite Period 06/21/04 to 12/21/04	<sup>144</sup> Ce	5.1E-04 ± 8.2E-04	U	N541 (200 EAST, 224-B Demolition) Composite Period 06/29/04 to 10/25/04	<sup>144</sup> Ce	8.4E-04 ± 1.0E-03	U
	<sup>60</sup> Co	-2.9E-05 ± 9.9E-05	U		<sup>60</sup> Co	-1.0E-05 ± 1.0E-04	U
	<sup>134</sup> Cs	1.0E-04 ± 1.1E-04	U		<sup>134</sup> Cs	-2.1E-04 ± 2.1E-04	U
	<sup>137</sup> Cs	2.2E-05 ± 1.0E-04	U		<sup>137</sup> Cs	2.2E-05 ± 1.2E-04	U
	<sup>152</sup> Eu	1.3E-04 ± 2.3E-04	U		<sup>152</sup> Eu	-1.9E-04 ± 3.3E-04	U
	<sup>154</sup> Eu	-3.6E-04 ± 3.8E-04	U		<sup>154</sup> Eu	-2.3E-04 ± 3.8E-04	U
	<sup>155</sup> Eu	5.8E-05 ± 1.7E-04	U		<sup>155</sup> Eu	4.8E-05 ± 2.8E-04	U
	<sup>238</sup> Pu	-4.3E-06 ± 1.1E-05	U		<sup>238</sup> Pu	1.2E-05 ± 2.0E-05	U
	<sup>239/240</sup> Pu	-2.9E-06 ± 3.0E-06	U		<sup>239/240</sup> Pu	1.3E-06 ± 1.3E-06	U
	<sup>103</sup> Ru	2.3E-05 ± 1.1E-04	U		<sup>103</sup> Ru	9.8E-06 ± 9.8E-05	U
	<sup>106</sup> Ru	3.4E-04 ± 8.9E-04	U		<sup>106</sup> Ru	5.7E-04 ± 1.1E-03	U
	<sup>125</sup> Sb	2.4E-04 ± 2.4E-04	U		<sup>125</sup> Sb	1.1E-04 ± 2.9E-04	U
	<sup>113</sup> Sn	-4.0E-06 ± 4.0E-05	U		<sup>113</sup> Sn	-7.7E-05 ± 1.1E-04	U
	<sup>90</sup> Sr	-1.0E-04 ± 1.0E-04	U		<sup>90</sup> Sr	-9.4E-05 ± 1.6E-04	U
	<sup>234</sup> U	1.6E-05 ± 8.5E-06			<sup>234</sup> U	3.2E-05 ± 1.8E-05	
	<sup>235</sup> U	1.6E-06 ± 2.3E-06	U		<sup>235</sup> U	1.2E-05 ± 9.1E-06	
	<sup>238</sup> U	1.5E-05 ± 8.1E-06			<sup>238</sup> U	3.3E-05 ± 1.8E-05	
	<sup>65</sup> Zn	-2.4E-04 ± 3.0E-04	U		<sup>65</sup> Zn	-2.0E-04 ± 3.0E-04	U
N542 (200 EAST, 224-B Demolition) Composite Period 06/29/04 to 10/25/04	<sup>144</sup> Ce	-3.4E-04 ± 9.4E-04	U	N543 (200 EAST, 224-B Demolition) Composite Period 06/29/04 to 10/25/04	<sup>144</sup> Ce	-7.7E-04 ± 8.7E-04	U
	<sup>60</sup> Co	-5.9E-08 ± 5.9E-07	U		<sup>60</sup> Co	-3.8E-05 ± 1.2E-04	U
	<sup>134</sup> Cs	1.4E-05 ± 1.1E-04	U		<sup>134</sup> Cs	-1.7E-04 ± 1.8E-04	U
	<sup>137</sup> Cs	-2.3E-05 ± 9.8E-05	U		<sup>137</sup> Cs	-7.2E-05 ± 1.1E-04	U
	<sup>152</sup> Eu	3.4E-04 ± 2.8E-04	U		<sup>152</sup> Eu	1.6E-06 ± 1.6E-05	U
	<sup>154</sup> Eu	5.6E-05 ± 3.9E-04	U		<sup>154</sup> Eu	-2.7E-04 ± 4.0E-04	U
	<sup>155</sup> Eu	7.2E-05 ± 2.4E-04	U		<sup>155</sup> Eu	-9.8E-05 ± 2.2E-04	U
	<sup>238</sup> Pu	-1.0E-05 ± 1.8E-05	U		<sup>238</sup> Pu	2.1E-05 ± 2.3E-05	U
	<sup>239/240</sup> Pu	5.5E-06 ± 6.2E-06	U		<sup>239/240</sup> Pu	2.4E-06 ± 8.4E-06	U
	<sup>103</sup> Ru	-1.8E-05 ± 9.3E-05	U		<sup>103</sup> Ru	7.6E-05 ± 8.6E-05	U
	<sup>106</sup> Ru	5.2E-04 ± 8.8E-04	U		<sup>106</sup> Ru	3.2E-06 ± 3.3E-05	U
	<sup>125</sup> Sb	-5.7E-05 ± 2.1E-04	U		<sup>125</sup> Sb	3.1E-05 ± 2.2E-04	U
	<sup>113</sup> Sn	-4.8E-05 ± 1.0E-04	U		<sup>113</sup> Sn	9.5E-05 ± 1.1E-04	U
	<sup>90</sup> Sr	-6.4E-05 ± 1.4E-04	U		<sup>90</sup> Sr	1.1E-05 ± 1.1E-04	U
	<sup>234</sup> U	2.2E-05 ± 1.4E-05			<sup>234</sup> U	4.0E-05 ± 2.2E-05	
	<sup>235</sup> U	1.3E-06 ± 1.3E-05	U		<sup>235</sup> U	1.1E-05 ± 9.8E-06	
	<sup>238</sup> U	2.1E-05 ± 1.3E-05			<sup>238</sup> U	1.5E-05 ± 1.2E-05	
	<sup>65</sup> Zn	-1.1E-04 ± 3.2E-04	U		<sup>65</sup> Zn	1.9E-04 ± 2.7E-04	U

RQ = Result Qualifier. U = The analyte was analyzed for but not detected.

Table 2-4. Near-Facility Air Sampling Results, 2004 (pCi/m<sup>3</sup> ± total analytical uncertainty).  
(40 sheets total)

Location	Isotope	Result ± Uncertainty	RQ*	Location	Isotope	Result ± Uncertainty	RQ*
N155 (200 WEST) Composite Period 12/22/03 to 06/21/04	<sup>144</sup> Ce	-3.2E-04 ± 7.2E-04	U	N161 (200 WEST) Composite Period 12/22/03 to 06/21/04	<sup>144</sup> Ce	-1.9E-04 ± 5.7E-04	U
	<sup>60</sup> Co	5.2E-06 ± 5.2E-05	U		<sup>60</sup> Co	4.0E-05 ± 8.0E-05	U
	<sup>134</sup> Cs	-3.8E-05 ± 7.0E-05	U		<sup>134</sup> Cs	1.8E-05 ± 6.6E-05	U
	<sup>137</sup> Cs	1.3E-03 ± 5.1E-04			<sup>137</sup> Cs	3.3E-05 ± 6.6E-05	U
	<sup>152</sup> Eu	-4.3E-05 ± 1.8E-04	U		<sup>152</sup> Eu	-4.1E-05 ± 1.3E-04	U
	<sup>154</sup> Eu	1.1E-04 ± 1.9E-04	U		<sup>154</sup> Eu	-8.3E-05 ± 2.1E-04	U
	<sup>155</sup> Eu	-1.1E-04 ± 1.8E-04	U		<sup>155</sup> Eu	-5.4E-05 ± 1.6E-04	U
	<sup>238</sup> Pu	-8.0E-06 ± 1.5E-05	U		<sup>238</sup> Pu	-9.2E-07 ± 9.2E-06	U
	<sup>239/240</sup> Pu	1.6E-05 ± 1.0E-05			<sup>239/240</sup> Pu	1.8E-05 ± 1.0E-05	
	<sup>103</sup> Ru	-4.4E-06 ± 4.4E-05	U		<sup>103</sup> Ru	4.2E-06 ± 4.2E-05	U
	<sup>106</sup> Ru	-4.3E-04 ± 5.7E-04	U		<sup>106</sup> Ru	-4.1E-04 ± 5.7E-04	U
	<sup>125</sup> Sb	9.0E-05 ± 1.7E-04	U		<sup>125</sup> Sb	9.6E-07 ± 9.6E-06	U
	<sup>113</sup> Sn	5.1E-06 ± 5.1E-05	U		<sup>113</sup> Sn	-4.1E-06 ± 4.1E-05	U
	<sup>90</sup> Sr	-2.2E-05 ± 4.2E-05	U		<sup>90</sup> Sr	-6.4E-05 ± 6.6E-05	U
	<sup>234</sup> U	1.3E-05 ± 7.9E-06			<sup>234</sup> U	9.2E-06 ± 7.4E-06	
	<sup>235</sup> U	3.2E-06 ± 3.3E-06			<sup>235</sup> U	1.6E-06 ± 3.1E-06	U
	<sup>238</sup> U	5.8E-06 ± 5.5E-06	U		<sup>238</sup> U	7.1E-06 ± 5.2E-06	
	<sup>65</sup> Zn	-1.1E-04 ± 1.6E-04	U		<sup>65</sup> Zn	-8.0E-05 ± 1.9E-04	U
N155 (200 WEST) Composite Period 06/21/04 to 12/20/04	<sup>144</sup> Ce	2.5E-04 ± 6.2E-04	U	N161 (200 WEST) Composite Period 06/21/04 to 12/20/04	<sup>144</sup> Ce	2.4E-04 ± 7.4E-04	U
	<sup>60</sup> Co	-6.9E-05 ± 7.5E-05	U		<sup>60</sup> Co	2.6E-05 ± 7.6E-05	U
	<sup>134</sup> Cs	-2.2E-05 ± 6.5E-05	U		<sup>134</sup> Cs	-9.3E-05 ± 9.6E-05	U
	<sup>137</sup> Cs	3.2E-05 ± 7.1E-05	U		<sup>137</sup> Cs	-2.2E-05 ± 7.0E-05	U
	<sup>152</sup> Eu	-2.1E-04 ± 2.2E-04	U		<sup>152</sup> Eu	-6.9E-05 ± 1.7E-04	U
	<sup>154</sup> Eu	1.2E-05 ± 1.2E-04	U		<sup>154</sup> Eu	-2.6E-05 ± 2.4E-04	U
	<sup>155</sup> Eu	4.8E-05 ± 1.5E-04	U		<sup>155</sup> Eu	-3.1E-06 ± 3.1E-05	U
	<sup>238</sup> Pu	1.6E-06 ± 1.1E-05	U		<sup>238</sup> Pu	-8.0E-07 ± 8.0E-06	U
	<sup>239/240</sup> Pu	4.2E-06 ± 5.1E-06	U		<sup>239/240</sup> Pu	1.7E-05 ± 1.1E-05	
	<sup>103</sup> Ru	-4.2E-06 ± 4.2E-05	U		<sup>103</sup> Ru	-5.9E-05 ± 6.9E-05	U
	<sup>106</sup> Ru	2.2E-04 ± 5.5E-04	U		<sup>106</sup> Ru	-5.7E-04 ± 6.3E-04	U
	<sup>125</sup> Sb	5.2E-05 ± 1.5E-04	U		<sup>125</sup> Sb	1.2E-04 ± 1.7E-04	U
	<sup>113</sup> Sn	-3.9E-05 ± 6.6E-05	U		<sup>113</sup> Sn	-1.3E-06 ± 1.3E-05	U
	<sup>90</sup> Sr	7.4E-05 ± 9.9E-05	U		<sup>90</sup> Sr	-8.8E-05 ± 1.0E-04	U
	<sup>234</sup> U	2.2E-05 ± 1.2E-05			<sup>234</sup> U	2.8E-05 ± 1.4E-05	
	<sup>235</sup> U	4.3E-06 ± 4.2E-06			<sup>235</sup> U	1.8E-05 ± 1.1E-05	
	<sup>238</sup> U	1.1E-05 ± 8.0E-06			<sup>238</sup> U	2.1E-05 ± 1.1E-05	
	<sup>65</sup> Zn	-2.1E-04 ± 2.2E-04	U		<sup>65</sup> Zn	-8.8E-05 ± 1.7E-04	U

RQ = Result Qualifier. U = The analyte was analyzed for but not detected.

Table 2-4. Near-Facility Air Sampling Results, 2004 (pCi/m<sup>3</sup> ± total analytical uncertainty).  
(40 sheets total)

Location	Isotope	Result ± Uncertainty	RQ*	Location	Isotope	Result ± Uncertainty	RQ*
N165 (200 WEST) Composite Period 12/22/03 to 06/21/04	<sup>144</sup> Ce	-5.8E-05 ± 5.8E-04	U	N165 (200 WEST) Composite Period 06/21/04 to 12/20/04	<sup>144</sup> Ce	1.8E-04 ± 6.2E-04	U
	<sup>60</sup> Co	2.3E-05 ± 7.2E-05	U		<sup>60</sup> Co	7.9E-05 ± 9.1E-05	U
	<sup>134</sup> Cs	-4.3E-05 ± 6.8E-05	U		<sup>134</sup> Cs	-1.4E-06 ± 1.4E-05	U
	<sup>137</sup> Cs	1.0E-04 ± 7.2E-05	U		<sup>137</sup> Cs	6.6E-06 ± 6.6E-05	U
	<sup>152</sup> Eu	-3.0E-05 ± 1.6E-04	U		<sup>152</sup> Eu	3.7E-05 ± 1.7E-04	U
	<sup>154</sup> Eu	-2.4E-05 ± 2.1E-04	U		<sup>154</sup> Eu	-3.4E-05 ± 2.6E-04	U
	<sup>155</sup> Eu	7.3E-05 ± 1.8E-04	U		<sup>155</sup> Eu	8.8E-05 ± 1.6E-04	U
	<sup>238</sup> Pu	8.5E-06 ± 8.4E-06	U		<sup>238</sup> Pu	-4.3E-06 ± 1.1E-05	U
	<sup>239/240</sup> Pu	5.4E-04 ± 2.1E-04			<sup>239/240</sup> Pu	3.6E-04 ± 1.4E-04	
	<sup>103</sup> Ru	2.3E-05 ± 6.7E-05	U		<sup>103</sup> Ru	-3.1E-05 ± 6.2E-05	U
	<sup>106</sup> Ru	-2.8E-04 ± 5.6E-04	U		<sup>106</sup> Ru	1.1E-04 ± 5.9E-04	U
	<sup>125</sup> Sb	-1.1E-04 ± 1.5E-04	U		<sup>125</sup> Sb	2.0E-05 ± 1.6E-04	U
	<sup>113</sup> Sn	-5.8E-05 ± 7.4E-05	U		<sup>113</sup> Sn	6.7E-05 ± 7.1E-05	U
	<sup>90</sup> Sr	-3.5E-05 ± 4.2E-05	U		<sup>90</sup> Sr	-1.6E-04 ± 1.6E-04	U
	<sup>234</sup> U	1.1E-05 ± 7.1E-06			<sup>234</sup> U	1.1E-05 ± 7.4E-06	
	<sup>235</sup> U	7.8E-07 ± 1.6E-06	U		<sup>235</sup> U	7.9E-07 ± 8.2E-07	U
	<sup>238</sup> U	1.1E-05 ± 7.6E-06			<sup>238</sup> U	1.6E-05 ± 9.2E-06	
	<sup>65</sup> Zn	-5.8E-05 ± 1.7E-04	U		<sup>65</sup> Zn	-9.7E-05 ± 1.9E-04	U
N168 (200 WEST) Composite Period 12/22/03 to 06/21/04	<sup>144</sup> Ce	-5.9E-04 ± 6.9E-04	U	N168 (200 WEST) Composite Period 06/21/04 to 12/21/04	<sup>144</sup> Ce	4.8E-04 ± 5.8E-04	U
	<sup>60</sup> Co	-3.3E-05 ± 8.0E-05	U		<sup>60</sup> Co	4.5E-05 ± 9.2E-05	U
	<sup>134</sup> Cs	1.4E-05 ± 6.6E-05	U		<sup>134</sup> Cs	-2.7E-05 ± 7.6E-05	U
	<sup>137</sup> Cs	6.7E-05 ± 6.6E-05	U		<sup>137</sup> Cs	4.2E-05 ± 7.4E-05	U
	<sup>152</sup> Eu	6.6E-05 ± 1.7E-04	U		<sup>152</sup> Eu	-4.9E-05 ± 1.5E-04	U
	<sup>154</sup> Eu	2.2E-05 ± 1.8E-04	U		<sup>154</sup> Eu	-1.5E-04 ± 2.3E-04	U
	<sup>155</sup> Eu	6.0E-05 ± 1.8E-04	U		<sup>155</sup> Eu	4.1E-06 ± 4.1E-05	U
	<sup>238</sup> Pu	-2.7E-06 ± 8.8E-06	U		<sup>238</sup> Pu	-6.7E-06 ± 1.1E-05	U
	<sup>239/240</sup> Pu	7.0E-06 ± 7.1E-06	U		<sup>239/240</sup> Pu	2.2E-06 ± 2.7E-06	
	<sup>103</sup> Ru	-5.7E-05 ± 6.8E-05	U		<sup>103</sup> Ru	-1.2E-05 ± 5.4E-05	U
	<sup>106</sup> Ru	-3.1E-05 ± 3.2E-04	U		<sup>106</sup> Ru	2.3E-04 ± 5.9E-04	U
	<sup>125</sup> Sb	1.1E-04 ± 1.6E-04	U		<sup>125</sup> Sb	4.6E-05 ± 1.5E-04	U
	<sup>113</sup> Sn	3.0E-05 ± 6.6E-05	U		<sup>113</sup> Sn	7.8E-05 ± 7.3E-05	U
	<sup>90</sup> Sr	-4.2E-05 ± 4.4E-05	U		<sup>90</sup> Sr	-8.9E-05 ± 1.0E-04	U
	<sup>234</sup> U	1.5E-05 ± 9.2E-06			<sup>234</sup> U	1.1E-05 ± 7.4E-06	
	<sup>235</sup> U	3.0E-06 ± 3.1E-06			<sup>235</sup> U	3.7E-06 ± 3.6E-06	
	<sup>238</sup> U	7.7E-06 ± 6.5E-06			<sup>238</sup> U	1.1E-05 ± 7.4E-06	
	<sup>65</sup> Zn	-1.4E-05 ± 1.4E-04	U		<sup>65</sup> Zn	-1.1E-04 ± 1.7E-04	U

RQ = Result Qualifier. U = The analyte was analyzed for but not detected.

Table 2-4. Near-Facility Air Sampling Results, 2004 (pCi/m<sup>3</sup> ± total analytical uncertainty).  
(40 sheets total)

Location	Isotope	Result ± Uncertainty	RQ*	Location	Isotope	Result ± Uncertainty	RQ*
N200 (200 WEST) Composite Period 12/22/03 to 06/22/04	<sup>144</sup> Ce	3.1E-04 ± 6.6E-04	U	N200 (200 WEST) Composite Period 06/22/04 to 12/22/04	<sup>144</sup> Ce	1.5E-04 ± 5.9E-04	U
	<sup>60</sup> Co	1.5E-04 ± 1.3E-04	U		<sup>60</sup> Co	-1.1E-05 ± 7.1E-05	U
	<sup>134</sup> Cs	-4.1E-05 ± 7.3E-05	U		<sup>134</sup> Cs	1.1E-06 ± 1.1E-05	U
	<sup>137</sup> Cs	2.0E-05 ± 6.3E-05	U		<sup>137</sup> Cs	1.7E-05 ± 6.3E-05	U
	<sup>152</sup> Eu	8.8E-05 ± 1.6E-04	U		<sup>152</sup> Eu	-2.6E-04 ± 2.7E-04	U
	<sup>154</sup> Eu	7.2E-05 ± 2.3E-04	U		<sup>154</sup> Eu	-1.2E-04 ± 2.1E-04	U
	<sup>155</sup> Eu	1.8E-05 ± 1.7E-04	U		<sup>155</sup> Eu	8.8E-05 ± 1.5E-04	U
	<sup>238</sup> Pu	3.5E-06 ± 1.4E-05	U		<sup>238</sup> Pu	2.1E-06 ± 8.2E-06	U
	<sup>239/240</sup> Pu	5.9E-06 ± 5.7E-06			<sup>239/240</sup> Pu	1.4E-06 ± 2.0E-06	U
	<sup>103</sup> Ru	2.7E-05 ± 6.5E-05	U		<sup>103</sup> Ru	-3.9E-06 ± 3.9E-05	U
	<sup>106</sup> Ru	5.4E-04 ± 6.2E-04	U		<sup>106</sup> Ru	-3.8E-05 ± 3.8E-04	U
	<sup>125</sup> Sb	2.1E-04 ± 1.5E-04	U		<sup>125</sup> Sb	3.0E-06 ± 3.0E-05	U
	<sup>113</sup> Sn	-3.1E-07 ± 3.1E-06	U		<sup>113</sup> Sn	-1.4E-05 ± 5.9E-05	U
	<sup>90</sup> Sr	-4.9E-05 ± 5.1E-05	U		<sup>90</sup> Sr	-5.0E-05 ± 9.1E-05	U
	<sup>234</sup> U	1.4E-05 ± 8.6E-06			<sup>234</sup> U	1.1E-05 ± 7.7E-06	
	<sup>235</sup> U	4.6E-06 ± 4.1E-06			<sup>235</sup> U	3.6E-06 ± 3.5E-06	
	<sup>238</sup> U	1.3E-05 ± 8.3E-06			<sup>238</sup> U	1.6E-05 ± 8.9E-06	
	<sup>65</sup> Zn	1.7E-05 ± 1.7E-04	U		<sup>65</sup> Zn	-7.3E-05 ± 1.7E-04	U
N304 (200 WEST) Composite Period 12/22/03 to 06/21/04	<sup>144</sup> Ce	2.1E-04 ± 5.5E-04	U	N304 (200 WEST) Composite Period 06/21/04 to 12/21/04	<sup>144</sup> Ce	3.5E-05 ± 3.5E-04	U
	<sup>60</sup> Co	2.3E-05 ± 7.0E-05	U		<sup>60</sup> Co	-2.2E-05 ± 9.7E-05	U
	<sup>134</sup> Cs	4.2E-05 ± 7.6E-05	U		<sup>134</sup> Cs	5.3E-05 ± 1.0E-04	U
	<sup>137</sup> Cs	7.2E-05 ± 7.7E-05	U		<sup>137</sup> Cs	-1.1E-05 ± 9.3E-05	U
	<sup>152</sup> Eu	-7.1E-05 ± 1.5E-04	U		<sup>152</sup> Eu	1.3E-05 ± 1.3E-04	U
	<sup>154</sup> Eu	7.4E-05 ± 2.1E-04	U		<sup>154</sup> Eu	3.0E-05 ± 2.8E-04	U
	<sup>155</sup> Eu	-2.2E-05 ± 1.4E-04	U		<sup>155</sup> Eu	-1.3E-04 ± 1.7E-04	U
	<sup>238</sup> Pu	2.7E-06 ± 1.8E-05	U		<sup>238</sup> Pu	6.3E-06 ± 1.4E-05	U
	<sup>239/240</sup> Pu	4.5E-06 ± 6.9E-06	U		<sup>239/240</sup> Pu	5.7E-05 ± 2.5E-05	
	<sup>103</sup> Ru	-2.9E-05 ± 6.4E-05	U		<sup>103</sup> Ru	2.6E-05 ± 9.5E-05	U
	<sup>106</sup> Ru	3.1E-04 ± 5.6E-04	U		<sup>106</sup> Ru	-2.4E-04 ± 7.8E-04	U
	<sup>125</sup> Sb	-5.5E-05 ± 1.4E-04	U		<sup>125</sup> Sb	-1.3E-04 ± 2.4E-04	U
	<sup>113</sup> Sn	1.8E-05 ± 5.9E-05	U		<sup>113</sup> Sn	-7.3E-06 ± 7.3E-05	U
	<sup>90</sup> Sr	-1.5E-05 ± 9.3E-05	U		<sup>90</sup> Sr	1.5E-05 ± 7.2E-05	U
	<sup>234</sup> U	8.1E-06 ± 7.0E-06	U		<sup>234</sup> U	1.6E-05 ± 9.4E-06	
	<sup>235</sup> U	-7.4E-07 ± 2.6E-06	U		<sup>235</sup> U	3.5E-06 ± 3.6E-06	
	<sup>238</sup> U	1.3E-05 ± 7.6E-06			<sup>238</sup> U	1.0E-05 ± 6.8E-06	
	<sup>65</sup> Zn	2.4E-04 ± 1.8E-04	U		<sup>65</sup> Zn	-1.7E-04 ± 2.4E-04	U

RQ = Result Qualifier. U = The analyte was analyzed for but not detected.



Table 2-4. Near-Facility Air Sampling Results, 2004 (pCi/m<sup>3</sup> ± total analytical uncertainty).  
(40 sheets total)

Location	Isotope	Result ± Uncertainty	RQ*	Location	Isotope	Result ± Uncertainty	RQ*
N433 (200 WEST)	<sup>144</sup> Ce	-6.7E-05 ± 6.7E-04	U	N433 (200 WEST)	<sup>144</sup> Ce	1.2E-04 ± 6.7E-04	U
Composite Period	<sup>60</sup> Co	1.2E-04 ± 8.4E-05	U	Composite Period	<sup>60</sup> Co	-1.2E-05 ± 7.8E-05	U
12/22/03 to 06/21/04	<sup>134</sup> Cs	2.4E-05 ± 8.0E-05	U	06/21/04 to 12/20/04	<sup>134</sup> Cs	5.7E-05 ± 7.5E-05	U
	<sup>137</sup> Cs	6.7E-05 ± 6.8E-05	U		<sup>137</sup> Cs	6.0E-05 ± 6.7E-05	U
	<sup>152</sup> Eu	-4.6E-05 ± 1.8E-04	U		<sup>152</sup> Eu	-1.9E-04 ± 2.0E-04	U
	<sup>154</sup> Eu	9.2E-05 ± 2.2E-04	U		<sup>154</sup> Eu	2.6E-05 ± 2.1E-04	U
	<sup>155</sup> Eu	-8.6E-05 ± 2.0E-04	U		<sup>155</sup> Eu	5.1E-05 ± 1.7E-04	U
	<sup>238</sup> Pu	1.0E-05 ± 1.4E-05	U		<sup>238</sup> Pu	3.3E-06 ± 1.6E-05	U
	<sup>239/240</sup> Pu	4.8E-05 ± 2.2E-05			<sup>239/240</sup> Pu	1.3E-05 ± 7.9E-06	
	<sup>103</sup> Ru	3.0E-05 ± 7.0E-05	U		<sup>103</sup> Ru	-3.0E-05 ± 5.9E-05	U
	<sup>106</sup> Ru	-4.8E-04 ± 7.2E-04	U		<sup>106</sup> Ru	9.2E-05 ± 5.6E-04	U
	<sup>125</sup> Sb	-5.4E-05 ± 1.6E-04	U		<sup>125</sup> Sb	7.5E-06 ± 7.5E-05	U
	<sup>113</sup> Sn	-1.9E-05 ± 7.6E-05	U		<sup>113</sup> Sn	-4.7E-05 ± 6.9E-05	U
	<sup>90</sup> Sr	-6.9E-05 ± 1.1E-04	U		<sup>90</sup> Sr	-2.4E-05 ± 9.9E-05	U
	<sup>234</sup> U	9.2E-06 ± 6.5E-06			<sup>234</sup> U	1.5E-05 ± 9.7E-06	
	<sup>235</sup> U	6.0E-06 ± 4.8E-06			<sup>235</sup> U	4.7E-06 ± 4.6E-06	
	<sup>238</sup> U	6.2E-06 ± 5.5E-06	U		<sup>238</sup> U	1.4E-05 ± 9.4E-06	
	<sup>65</sup> Zn	-1.7E-04 ± 1.8E-04	U		<sup>65</sup> Zn	1.5E-04 ± 1.6E-04	U
N441 (200 WEST)	<sup>144</sup> Ce	-4.5E-04 ± 7.0E-04	U	N441 (200 WEST)	<sup>144</sup> Ce	-2.2E-04 ± 6.6E-04	U
Composite Period	<sup>60</sup> Co	6.3E-06 ± 6.3E-05	U	Composite Period	<sup>60</sup> Co	1.0E-04 ± 1.2E-04	U
12/22/03 to 06/21/04	<sup>134</sup> Cs	-2.0E-05 ± 6.6E-05	U	06/21/04 to 12/21/04	<sup>134</sup> Cs	-1.7E-05 ± 7.3E-05	U
	<sup>137</sup> Cs	1.3E-04 ± 8.4E-05	U		<sup>137</sup> Cs	1.4E-04 ± 1.2E-04	
	<sup>152</sup> Eu	-6.2E-05 ± 1.7E-04	U		<sup>152</sup> Eu	-2.5E-06 ± 2.5E-05	U
	<sup>154</sup> Eu	2.3E-05 ± 1.9E-04	U		<sup>154</sup> Eu	5.0E-05 ± 2.4E-04	U
	<sup>155</sup> Eu	-6.2E-05 ± 1.8E-04	U		<sup>155</sup> Eu	1.2E-04 ± 1.7E-04	U
	<sup>238</sup> Pu	4.0E-05 ± 2.5E-05			<sup>238</sup> Pu	-6.0E-06 ± 1.7E-05	U
	<sup>239/240</sup> Pu	4.9E-04 ± 1.9E-04			<sup>239/240</sup> Pu	5.9E-06 ± 5.5E-06	U
	<sup>103</sup> Ru	-9.8E-05 ± 1.0E-04	U		<sup>103</sup> Ru	-4.1E-06 ± 4.1E-05	U
	<sup>106</sup> Ru	-7.7E-05 ± 6.2E-04	U		<sup>106</sup> Ru	-2.9E-04 ± 6.1E-04	U
	<sup>125</sup> Sb	4.8E-05 ± 1.5E-04	U		<sup>125</sup> Sb	1.2E-04 ± 1.6E-04	U
	<sup>113</sup> Sn	-4.2E-06 ± 4.2E-05	U		<sup>113</sup> Sn	-1.3E-05 ± 7.0E-05	U
	<sup>90</sup> Sr	7.0E-06 ± 6.3E-05	U		<sup>90</sup> Sr	-2.3E-05 ± 7.7E-05	U
	<sup>234</sup> U	9.8E-06 ± 7.5E-06			<sup>234</sup> U	1.9E-05 ± 1.1E-05	
	<sup>235</sup> U	1.4E-06 ± 2.8E-06	U		<sup>235</sup> U	8.3E-06 ± 6.6E-06	
	<sup>238</sup> U	1.0E-05 ± 6.9E-06			<sup>238</sup> U	2.1E-05 ± 1.3E-05	
	<sup>65</sup> Zn	-5.4E-05 ± 1.6E-04	U		<sup>65</sup> Zn	1.1E-04 ± 1.8E-04	U

RQ = Result Qualifier. U = The analyte was analyzed for but not detected.

Table 2-4. Near-Facility Air Sampling Results, 2004 (pCi/m<sup>3</sup> ± total analytical uncertainty).  
(40 sheets total)

Location	Isotope	Result ± Uncertainty	RQ*	Location	Isotope	Result ± Uncertainty	RQ*
N442 (200 WEST) Composite Period 12/22/03 to 06/21/04	<sup>144</sup> Ce	4.4E-05 ± 4.4E-04	U	N442 (200 WEST) Composite Period 06/21/04 to 12/21/04	<sup>144</sup> Ce	-9.5E-05 ± 5.4E-04	U
	<sup>60</sup> Co	-5.5E-05 ± 8.0E-05	U		<sup>60</sup> Co	8.7E-06 ± 8.7E-05	U
	<sup>134</sup> Cs	7.0E-05 ± 7.4E-05	U		<sup>134</sup> Cs	1.5E-05 ± 7.4E-05	U
	<sup>137</sup> Cs	1.2E-04 ± 9.6E-05			<sup>137</sup> Cs	2.9E-05 ± 6.3E-05	U
	<sup>152</sup> Eu	6.3E-05 ± 1.3E-04	U		<sup>152</sup> Eu	4.6E-06 ± 4.6E-05	U
	<sup>154</sup> Eu	-9.3E-06 ± 9.3E-05	U		<sup>154</sup> Eu	3.3E-06 ± 3.3E-05	U
	<sup>155</sup> Eu	-5.4E-05 ± 1.4E-04	U		<sup>155</sup> Eu	9.4E-05 ± 1.5E-04	U
	<sup>238</sup> Pu	2.6E-05 ± 2.1E-05	U		<sup>238</sup> Pu	2.3E-06 ± 1.3E-05	U
	<sup>239/240</sup> Pu	4.3E-04 ± 1.7E-04			<sup>239/240</sup> Pu	1.5E-05 ± 9.6E-06	
	<sup>103</sup> Ru	1.4E-05 ± 6.2E-05	U		<sup>103</sup> Ru	1.4E-05 ± 5.6E-05	U
	<sup>106</sup> Ru	1.5E-04 ± 5.1E-04	U		<sup>106</sup> Ru	-2.1E-04 ± 5.6E-04	U
	<sup>125</sup> Sb	6.3E-05 ± 1.4E-04	U		<sup>125</sup> Sb	-2.5E-05 ± 1.4E-04	U
	<sup>113</sup> Sn	-2.9E-05 ± 6.3E-05	U		<sup>113</sup> Sn	-4.1E-06 ± 4.1E-05	U
	<sup>90</sup> Sr	-5.6E-05 ± 7.1E-05	U		<sup>90</sup> Sr	2.2E-05 ± 9.4E-05	U
	<sup>234</sup> U	1.0E-05 ± 7.5E-06			<sup>234</sup> U	1.2E-05 ± 7.7E-06	
	<sup>235</sup> U	6.8E-07 ± 6.8E-06	U		<sup>235</sup> U	3.3E-06 ± 3.4E-06	
	<sup>238</sup> U	6.1E-06 ± 4.7E-06			<sup>238</sup> U	1.7E-05 ± 9.7E-06	
	<sup>65</sup> Zn	-1.1E-04 ± 1.6E-04	U		<sup>65</sup> Zn	-1.6E-04 ± 1.7E-04	U
N449 (200 WEST) Composite Period 12/22/03 to 06/21/04	<sup>144</sup> Ce	2.5E-04 ± 6.8E-04	U	N449 (200 WEST) Composite Period 06/21/04 to 12/20/04	<sup>144</sup> Ce	-3.6E-04 ± 6.6E-04	U
	<sup>60</sup> Co	-2.8E-05 ± 8.0E-05	U		<sup>60</sup> Co	4.9E-05 ± 8.1E-05	U
	<sup>134</sup> Cs	-6.0E-05 ± 8.5E-05	U		<sup>134</sup> Cs	-4.1E-05 ± 8.3E-05	U
	<sup>137</sup> Cs	-3.9E-05 ± 6.1E-05	U		<sup>137</sup> Cs	1.2E-04 ± 9.6E-05	U
	<sup>152</sup> Eu	4.3E-05 ± 1.6E-04	U		<sup>152</sup> Eu	-8.1E-05 ± 1.8E-04	U
	<sup>154</sup> Eu	1.0E-04 ± 2.1E-04	U		<sup>154</sup> Eu	-1.8E-04 ± 2.5E-04	U
	<sup>155</sup> Eu	-3.6E-05 ± 1.7E-04	U		<sup>155</sup> Eu	-2.7E-05 ± 1.3E-04	U
	<sup>238</sup> Pu	-5.5E-06 ± 1.3E-05	U		<sup>238</sup> Pu	-7.5E-06 ± 1.2E-05	U
	<sup>239/240</sup> Pu	1.3E-05 ± 9.2E-06			<sup>239/240</sup> Pu	3.7E-06 ± 4.6E-06	U
	<sup>103</sup> Ru	-6.1E-05 ± 7.0E-05	U		<sup>103</sup> Ru	-2.0E-05 ± 8.2E-05	U
	<sup>106</sup> Ru	-3.9E-04 ± 5.5E-04	U		<sup>106</sup> Ru	3.2E-04 ± 7.1E-04	U
	<sup>125</sup> Sb	1.8E-04 ± 1.5E-04	U		<sup>125</sup> Sb	-6.5E-05 ± 1.8E-04	U
	<sup>113</sup> Sn	4.3E-06 ± 4.4E-05	U		<sup>113</sup> Sn	5.0E-06 ± 5.0E-05	U
	<sup>90</sup> Sr	-7.6E-05 ± 1.0E-04	U		<sup>90</sup> Sr	-3.5E-05 ± 7.1E-05	U
	<sup>234</sup> U	9.1E-06 ± 6.7E-06			<sup>234</sup> U	9.8E-06 ± 6.7E-06	
	<sup>235</sup> U	7.6E-07 ± 3.4E-06	U		<sup>235</sup> U	1.9E-06 ± 3.0E-06	U
	<sup>238</sup> U	3.6E-06 ± 4.5E-06	U		<sup>238</sup> U	1.1E-05 ± 7.0E-06	
	<sup>65</sup> Zn	-3.1E-04 ± 3.2E-04	U		<sup>65</sup> Zn	-5.3E-05 ± 1.9E-04	U

RQ = Result Qualifier. U = The analyte was analyzed for but not detected.

Table 2-4. Near-Facility Air Sampling Results, 2004 (pCi/m<sup>3</sup> ± total analytical uncertainty).  
(40 sheets total)

Location	Isotope	Result ± Uncertainty	RQ*	Location	Isotope	Result ± Uncertainty	RQ*
N456 (200 WEST)	<sup>144</sup> Ce	-4.1E-04 ± 7.6E-04	U	N456 (200 WEST)	<sup>144</sup> Ce	-5.3E-05 ± 5.3E-04	U
Composite Period	<sup>60</sup> Co	4.1E-06 ± 4.1E-05	U	Composite Period	<sup>60</sup> Co	6.5E-05 ± 8.8E-05	U
12/22/03 to 06/21/04	<sup>134</sup> Cs	8.9E-06 ± 7.4E-05	U	06/21/04 to 12/20/04	<sup>134</sup> Cs	7.0E-05 ± 7.0E-05	U
	<sup>137</sup> Cs	4.3E-05 ± 7.6E-05	U		<sup>137</sup> Cs	2.0E-05 ± 6.7E-05	U
	<sup>152</sup> Eu	-1.5E-04 ± 1.9E-04	U		<sup>152</sup> Eu	-1.2E-04 ± 1.7E-04	U
	<sup>154</sup> Eu	-2.7E-05 ± 2.3E-04	U		<sup>154</sup> Eu	-1.8E-05 ± 1.8E-04	U
	<sup>155</sup> Eu	2.2E-04 ± 2.1E-04	U		<sup>155</sup> Eu	-2.9E-05 ± 1.6E-04	U
	<sup>238</sup> Pu	-1.1E-05 ± 1.3E-05	U		<sup>238</sup> Pu	-3.1E-06 ± 1.4E-05	U
	<sup>239/240</sup> Pu	5.3E-06 ± 6.0E-06	U		<sup>239/240</sup> Pu	4.6E-06 ± 6.5E-06	U
	<sup>103</sup> Ru	-5.5E-05 ± 7.4E-05	U		<sup>103</sup> Ru	-1.5E-05 ± 5.6E-05	U
	<sup>106</sup> Ru	2.2E-04 ± 7.2E-04	U		<sup>106</sup> Ru	-3.6E-04 ± 5.6E-04	U
	<sup>125</sup> Sb	-1.5E-05 ± 1.5E-04	U		<sup>125</sup> Sb	-3.5E-05 ± 1.4E-04	U
	<sup>113</sup> Sn	-6.0E-06 ± 6.0E-05	U		<sup>113</sup> Sn	-8.6E-06 ± 7.9E-05	U
	<sup>90</sup> Sr	-4.1E-05 ± 1.1E-04	U		<sup>90</sup> Sr	-8.5E-05 ± 1.1E-04	U
	<sup>234</sup> U	1.0E-05 ± 7.5E-06			<sup>234</sup> U	1.6E-05 ± 9.6E-06	
	<sup>235</sup> U	4.2E-06 ± 4.1E-06			<sup>235</sup> U	4.4E-06 ± 4.2E-06	
	<sup>238</sup> U	5.4E-06 ± 4.6E-06			<sup>238</sup> U	1.4E-05 ± 8.5E-06	
	<sup>65</sup> Zn	-1.1E-04 ± 1.7E-04	U		<sup>65</sup> Zn	-4.8E-05 ± 1.6E-04	U
N457 (200 WEST)	<sup>144</sup> Ce	2.6E-04 ± 7.5E-04	U	N457 (200 WEST)	<sup>144</sup> Ce	-5.3E-04 ± 6.9E-04	U
Composite Period	<sup>60</sup> Co	-1.8E-06 ± 1.8E-05	U	Composite Period	<sup>60</sup> Co	-5.2E-05 ± 9.1E-05	U
12/22/03 to 06/21/04	<sup>134</sup> Cs	-3.2E-05 ± 7.1E-05	U	06/21/04 to 12/20/04	<sup>134</sup> Cs	3.4E-05 ± 7.3E-05	U
	<sup>137</sup> Cs	-7.7E-06 ± 6.4E-05	U		<sup>137</sup> Cs	2.4E-05 ± 6.8E-05	U
	<sup>152</sup> Eu	-7.6E-05 ± 1.8E-04	U		<sup>152</sup> Eu	-3.5E-05 ± 1.6E-04	U
	<sup>154</sup> Eu	1.5E-04 ± 2.3E-04	U		<sup>154</sup> Eu	-2.0E-04 ± 2.6E-04	U
	<sup>155</sup> Eu	-6.8E-05 ± 2.0E-04	U		<sup>155</sup> Eu	3.3E-05 ± 1.7E-04	U
	<sup>238</sup> Pu	-2.7E-06 ± 1.5E-05	U		<sup>238</sup> Pu	-5.2E-06 ± 1.4E-05	U
	<sup>239/240</sup> Pu	5.4E-06 ± 5.5E-06	U		<sup>239/240</sup> Pu	7.4E-07 ± 1.5E-06	U
	<sup>103</sup> Ru	-2.6E-06 ± 2.6E-05	U		<sup>103</sup> Ru	1.3E-05 ± 6.5E-05	U
	<sup>106</sup> Ru	-2.4E-04 ± 5.3E-04	U		<sup>106</sup> Ru	6.4E-05 ± 6.2E-04	U
	<sup>125</sup> Sb	1.1E-04 ± 1.6E-04	U		<sup>125</sup> Sb	-1.9E-05 ± 1.5E-04	U
	<sup>113</sup> Sn	5.9E-06 ± 5.9E-05	U		<sup>113</sup> Sn	-3.9E-05 ± 7.2E-05	U
	<sup>90</sup> Sr	-6.9E-05 ± 8.1E-05	U		<sup>90</sup> Sr	-9.5E-05 ± 9.9E-05	U
	<sup>234</sup> U	7.4E-06 ± 7.1E-06	U		<sup>234</sup> U	1.5E-05 ± 1.0E-05	
	<sup>235</sup> U	2.4E-06 ± 3.6E-06	U		<sup>235</sup> U	3.0E-06 ± 3.7E-06	
	<sup>238</sup> U	1.2E-05 ± 8.0E-06			<sup>238</sup> U	6.4E-06 ± 6.5E-06	U
	<sup>65</sup> Zn	-3.5E-05 ± 1.6E-04	U		<sup>65</sup> Zn	-2.2E-05 ± 1.7E-04	U

RQ = Result Qualifier. U = The analyte was analyzed for but not detected.

Table 2-4. Near-Facility Air Sampling Results, 2004 (pCi/m<sup>3</sup> ± total analytical uncertainty).  
(40 sheets total)

Location	Isotope	Result ± Uncertainty	RQ*	Location	Isotope	Result ± Uncertainty	RQ*
N956 (200 WEST) Composite Period 12/22/03 to 06/21/04	<sup>144</sup> Ce	-5.2E-04 ± 7.8E-04	U	N956 (200 WEST) Composite Period 06/21/04 to 12/20/04	<sup>144</sup> Ce	-5.5E-04 ± 7.4E-04	U
	<sup>60</sup> Co	1.8E-05 ± 1.0E-04	U		<sup>60</sup> Co	9.6E-05 ± 8.4E-05	U
	<sup>134</sup> Cs	2.0E-05 ± 1.2E-04	U		<sup>134</sup> Cs	-5.6E-05 ± 7.3E-05	U
	<sup>137</sup> Cs	4.5E-04 ± 2.2E-04			<sup>137</sup> Cs	1.9E-04 ± 1.3E-04	
	<sup>152</sup> Eu	4.6E-05 ± 2.2E-04	U		<sup>152</sup> Eu	-1.4E-04 ± 1.7E-04	U
	<sup>154</sup> Eu	3.0E-04 ± 3.2E-04	U		<sup>154</sup> Eu	1.2E-04 ± 2.0E-04	U
	<sup>155</sup> Eu	5.0E-05 ± 1.6E-04	U		<sup>155</sup> Eu	-1.0E-04 ± 1.9E-04	U
	<sup>238</sup> Pu	1.7E-06 ± 7.2E-06	U		<sup>238</sup> Pu	5.8E-07 ± 5.8E-06	U
	<sup>239/240</sup> Pu	5.0E-06 ± 4.6E-06			<sup>239/240</sup> Pu	8.9E-06 ± 5.8E-06	
	<sup>103</sup> Ru	-1.0E-05 ± 1.1E-04	U		<sup>103</sup> Ru	7.1E-05 ± 7.2E-05	U
	<sup>106</sup> Ru	1.1E-04 ± 7.5E-04	U		<sup>106</sup> Ru	-5.0E-04 ± 6.3E-04	U
	<sup>125</sup> Sb	-1.4E-04 ± 2.3E-04	U		<sup>125</sup> Sb	1.9E-04 ± 1.8E-04	U
	<sup>113</sup> Sn	3.0E-05 ± 1.2E-04	U		<sup>113</sup> Sn	-2.1E-05 ± 7.4E-05	U
	<sup>90</sup> Sr	-1.6E-04 ± 1.6E-03	U		<sup>90</sup> Sr	-1.3E-04 ± 1.3E-04	U
	<sup>234</sup> U	1.2E-05 ± 7.4E-06			<sup>234</sup> U	1.6E-05 ± 8.9E-06	
	<sup>235</sup> U	2.1E-06 ± 2.5E-06			<sup>235</sup> U	2.3E-06 ± 4.2E-06	U
	<sup>238</sup> U	5.0E-06 ± 4.4E-06			<sup>238</sup> U	1.3E-05 ± 7.8E-06	
	<sup>65</sup> Zn	8.0E-06 ± 8.0E-05	U		<sup>65</sup> Zn	-8.9E-05 ± 1.6E-04	U
N963 (200 WEST) Composite Period 12/22/03 to 06/21/04	<sup>144</sup> Ce	-4.8E-04 ± 6.2E-04	U	N963 (200 WEST) Composite Period 06/21/04 to 12/21/04	<sup>144</sup> Ce	1.5E-04 ± 6.6E-04	U
	<sup>60</sup> Co	2.6E-05 ± 8.4E-05	U		<sup>60</sup> Co	-2.4E-05 ± 8.2E-05	U
	<sup>134</sup> Cs	5.3E-05 ± 7.9E-05	U		<sup>134</sup> Cs	-7.8E-06 ± 7.8E-05	U
	<sup>137</sup> Cs	5.5E-05 ± 8.3E-05	U		<sup>137</sup> Cs	2.2E-05 ± 7.8E-05	U
	<sup>152</sup> Eu	-6.5E-05 ± 1.7E-04	U		<sup>152</sup> Eu	6.4E-05 ± 1.6E-04	U
	<sup>154</sup> Eu	-1.8E-04 ± 2.4E-04	U		<sup>154</sup> Eu	1.3E-04 ± 2.3E-04	U
	<sup>155</sup> Eu	7.0E-05 ± 1.6E-04	U		<sup>155</sup> Eu	3.7E-05 ± 1.7E-04	U
	<sup>238</sup> Pu	9.9E-06 ± 1.7E-05	U		<sup>238</sup> Pu	6.4E-06 ± 4.6E-06	
	<sup>239/240</sup> Pu	1.3E-04 ± 5.2E-05			<sup>239/240</sup> Pu	2.4E-05 ± 1.2E-05	
	<sup>103</sup> Ru	2.3E-06 ± 2.3E-05	U		<sup>103</sup> Ru	7.5E-05 ± 7.6E-05	U
	<sup>106</sup> Ru	2.4E-04 ± 6.3E-04	U		<sup>106</sup> Ru	-2.0E-04 ± 6.5E-04	U
	<sup>125</sup> Sb	1.2E-04 ± 1.6E-04	U		<sup>125</sup> Sb	9.2E-05 ± 1.6E-04	U
	<sup>113</sup> Sn	-2.8E-05 ± 7.5E-05	U		<sup>113</sup> Sn	2.4E-05 ± 7.1E-05	U
	<sup>90</sup> Sr	-1.3E-06 ± 1.3E-05	U		<sup>90</sup> Sr	-8.9E-05 ± 9.2E-05	U
	<sup>234</sup> U	7.1E-06 ± 6.7E-06	U		<sup>234</sup> U	1.5E-05 ± 8.7E-06	
	<sup>235</sup> U	2.1E-06 ± 2.6E-06			<sup>235</sup> U	1.6E-06 ± 3.3E-06	U
	<sup>238</sup> U	7.7E-06 ± 5.6E-06			<sup>238</sup> U	1.3E-05 ± 8.0E-06	
	<sup>65</sup> Zn	-5.8E-06 ± 5.8E-05	U		<sup>65</sup> Zn	-1.6E-04 ± 1.8E-04	U

RQ = Result Qualifier. U = The analyte was analyzed for but not detected.

Table 2-4. Near-Facility Air Sampling Results, 2004 (pCi/m<sup>3</sup> ± total analytical uncertainty).  
(40 sheets total)

Location	Isotope	Result ± Uncertainty	RQ*	Location	Isotope	Result ± Uncertainty	RQ*
N964 (200 WEST) Composite Period 12/22/03 to 06/21/04	<sup>144</sup> Ce	4.9E-04 ± 5.5E-04	U	N964 (200 WEST) Composite Period 06/21/04 to 12/20/04	<sup>144</sup> Ce	-7.4E-05 ± 7.4E-04	U
	<sup>60</sup> Co	8.7E-05 ± 7.9E-05	U		<sup>60</sup> Co	2.3E-05 ± 1.1E-04	U
	<sup>134</sup> Cs	1.4E-05 ± 7.4E-05	U		<sup>134</sup> Cs	-4.5E-05 ± 1.1E-04	U
	<sup>137</sup> Cs	-2.4E-05 ± 6.6E-05	U		<sup>137</sup> Cs	-1.7E-05 ± 1.0E-04	U
	<sup>152</sup> Eu	-6.5E-05 ± 1.4E-04	U		<sup>152</sup> Eu	-8.1E-05 ± 2.3E-04	U
	<sup>154</sup> Eu	9.0E-05 ± 2.0E-04	U		<sup>154</sup> Eu	-2.3E-04 ± 2.7E-04	U
	<sup>155</sup> Eu	-3.8E-05 ± 1.4E-04	U		<sup>155</sup> Eu	4.3E-05 ± 1.8E-04	U
	<sup>238</sup> Pu	-1.7E-06 ± 1.3E-05	U		<sup>238</sup> Pu	6.5E-07 ± 6.5E-06	U
	<sup>239/240</sup> Pu	2.4E-05 ± 1.3E-05			<sup>239/240</sup> Pu	5.8E-06 ± 4.4E-06	
	<sup>103</sup> Ru	7.2E-06 ± 6.8E-05	U		<sup>103</sup> Ru	-3.8E-06 ± 3.8E-05	U
	<sup>106</sup> Ru	4.3E-05 ± 4.3E-04	U		<sup>106</sup> Ru	5.3E-04 ± 8.6E-04	U
	<sup>125</sup> Sb	-9.0E-06 ± 9.0E-05	U		<sup>125</sup> Sb	-5.6E-05 ± 2.4E-04	U
	<sup>113</sup> Sn	-2.4E-05 ± 7.0E-05	U		<sup>113</sup> Sn	-1.8E-05 ± 1.1E-04	U
	<sup>90</sup> Sr	-4.2E-05 ± 9.7E-05	U		<sup>90</sup> Sr	-7.4E-06 ± 7.4E-05	U
	<sup>234</sup> U	1.0E-05 ± 7.1E-06			<sup>234</sup> U	1.5E-05 ± 8.7E-06	
	<sup>235</sup> U	3.4E-06 ± 3.3E-06			<sup>235</sup> U	2.2E-06 ± 3.4E-06	U
	<sup>238</sup> U	8.4E-06 ± 5.5E-06			<sup>238</sup> U	1.3E-05 ± 7.8E-06	
	<sup>65</sup> Zn	-5.1E-05 ± 1.9E-04	U		<sup>65</sup> Zn	-2.5E-04 ± 2.6E-04	U
N965 (200 WEST) Composite Period 12/22/03 to 06/21/04	<sup>144</sup> Ce	-6.5E-04 ± 7.1E-04	U	N965 (200 WEST) Composite Period 06/21/04 to 12/20/04	<sup>144</sup> Ce	2.2E-04 ± 5.8E-04	U
	<sup>60</sup> Co	-2.4E-05 ± 7.7E-05	U		<sup>60</sup> Co	-5.4E-05 ± 8.4E-05	U
	<sup>134</sup> Cs	1.4E-04 ± 1.7E-04			<sup>134</sup> Cs	-5.3E-05 ± 7.1E-05	U
	<sup>137</sup> Cs	5.3E-05 ± 6.9E-05	U		<sup>137</sup> Cs	-2.3E-06 ± 2.3E-05	U
	<sup>152</sup> Eu	-5.2E-05 ± 1.8E-04	U		<sup>152</sup> Eu	-1.1E-04 ± 1.7E-04	U
	<sup>154</sup> Eu	7.9E-05 ± 2.1E-04	U		<sup>154</sup> Eu	-6.9E-06 ± 6.9E-05	U
	<sup>155</sup> Eu	2.7E-05 ± 1.8E-04	U		<sup>155</sup> Eu	-5.0E-05 ± 1.6E-04	U
	<sup>238</sup> Pu	2.4E-06 ± 1.5E-05	U		<sup>238</sup> Pu	-6.5E-07 ± 2.9E-06	U
	<sup>239/240</sup> Pu	-1.6E-06 ± 5.2E-06	U		<sup>239/240</sup> Pu	3.9E-06 ± 3.4E-06	
	<sup>103</sup> Ru	-6.6E-05 ± 7.1E-05	U		<sup>103</sup> Ru	1.2E-05 ± 6.4E-05	U
	<sup>106</sup> Ru	9.6E-05 ± 5.5E-04	U		<sup>106</sup> Ru	-1.6E-04 ± 6.0E-04	U
	<sup>125</sup> Sb	-2.6E-05 ± 1.5E-04	U		<sup>125</sup> Sb	-1.5E-05 ± 1.5E-04	U
	<sup>113</sup> Sn	4.3E-05 ± 7.1E-05	U		<sup>113</sup> Sn	3.2E-05 ± 6.9E-05	U
	<sup>90</sup> Sr	-1.6E-04 ± 1.7E-04	U		<sup>90</sup> Sr	-3.0E-05 ± 8.0E-05	U
	<sup>234</sup> U	1.2E-05 ± 7.4E-06			<sup>234</sup> U	1.8E-05 ± 9.9E-06	
	<sup>235</sup> U	2.7E-06 ± 2.8E-06			<sup>235</sup> U	5.3E-06 ± 4.5E-06	
	<sup>238</sup> U	6.2E-06 ± 4.5E-06			<sup>238</sup> U	7.0E-06 ± 5.5E-06	
	<sup>65</sup> Zn	-1.0E-04 ± 1.5E-04	U		<sup>65</sup> Zn	-1.6E-04 ± 1.7E-04	U

RQ = Result Qualifier. U = The analyte was analyzed for but not detected.

Table 2-4. Near-Facility Air Sampling Results, 2004 (pCi/m<sup>3</sup> ± total analytical uncertainty).  
(40 sheets total)

Location	Isotope	Result ± Uncertainty	RQ*	Location	Isotope	Result ± Uncertainty	RQ*
N966 (200 WEST) Composite Period 12/22/03 to 06/21/04	<sup>144</sup> Ce	4.1E-04 ± 7.6E-04	U	N966 (200 WEST) Composite Period 06/21/04 to 12/21/04	<sup>144</sup> Ce	-3.0E-04 ± 7.8E-04	U
	<sup>60</sup> Co	9.9E-05 ± 1.0E-04	U		<sup>60</sup> Co	-2.6E-05 ± 8.8E-05	U
	<sup>134</sup> Cs	7.8E-06 ± 7.8E-05	U		<sup>134</sup> Cs	-1.9E-05 ± 7.5E-05	U
	<sup>137</sup> Cs	1.0E-04 ± 1.0E-04	U		<sup>137</sup> Cs	6.4E-05 ± 7.3E-05	U
	<sup>152</sup> Eu	-2.0E-04 ± 2.4E-04	U		<sup>152</sup> Eu	-6.8E-05 ± 1.8E-04	U
	<sup>154</sup> Eu	1.9E-04 ± 3.0E-04	U		<sup>154</sup> Eu	-1.4E-04 ± 3.1E-04	U
	<sup>155</sup> Eu	-1.2E-04 ± 1.7E-04	U		<sup>155</sup> Eu	4.5E-05 ± 2.1E-04	U
	<sup>238</sup> Pu	-1.4E-05 ± 1.7E-05	U		<sup>238</sup> Pu	-2.4E-05 ± 2.4E-05	U
	<sup>239/240</sup> Pu	5.2E-06 ± 5.3E-06	U		<sup>239/240</sup> Pu	6.2E-06 ± 5.2E-06	
	<sup>103</sup> Ru	-1.5E-05 ± 1.2E-04	U		<sup>103</sup> Ru	2.1E-05 ± 7.0E-05	U
	<sup>106</sup> Ru	-5.1E-04 ± 8.0E-04	U		<sup>106</sup> Ru	-1.1E-04 ± 6.3E-04	U
	<sup>125</sup> Sb	1.4E-04 ± 2.1E-04	U		<sup>125</sup> Sb	4.2E-05 ± 1.8E-04	U
	<sup>113</sup> Sn	4.6E-05 ± 1.0E-04	U		<sup>113</sup> Sn	-3.9E-05 ± 8.2E-05	U
	<sup>90</sup> Sr	-1.4E-04 ± 1.4E-04	U		<sup>90</sup> Sr	-1.4E-04 ± 1.4E-04	U
	<sup>234</sup> U	6.3E-06 ± 4.6E-06			<sup>234</sup> U	1.2E-05 ± 7.6E-06	
	<sup>235</sup> U	2.8E-06 ± 2.9E-06			<sup>235</sup> U	3.0E-06 ± 3.7E-06	U
	<sup>238</sup> U	7.3E-06 ± 5.0E-06			<sup>238</sup> U	8.6E-06 ± 6.1E-06	
	<sup>65</sup> Zn	1.1E-04 ± 1.8E-04	U		<sup>65</sup> Zn	-2.8E-05 ± 1.8E-04	U
N974 (200 WEST) Composite Period 12/22/03 to 06/21/04	<sup>144</sup> Ce	2.5E-04 ± 8.3E-04	U	N974 (200 WEST) Composite Period 06/21/04 to 12/20/04	<sup>144</sup> Ce	1.7E-04 ± 8.6E-04	U
	<sup>60</sup> Co	2.2E-05 ± 9.5E-05	U		<sup>60</sup> Co	-3.6E-07 ± 3.6E-06	U
	<sup>134</sup> Cs	-3.7E-05 ± 9.8E-05	U		<sup>134</sup> Cs	1.1E-04 ± 1.3E-04	U
	<sup>137</sup> Cs	3.7E-05 ± 9.5E-05	U		<sup>137</sup> Cs	2.1E-05 ± 1.0E-04	U
	<sup>152</sup> Eu	1.4E-04 ± 2.2E-04	U		<sup>152</sup> Eu	9.2E-05 ± 3.0E-04	U
	<sup>154</sup> Eu	2.8E-04 ± 3.1E-04	U		<sup>154</sup> Eu	-4.9E-05 ± 3.1E-04	U
	<sup>155</sup> Eu	2.2E-05 ± 1.6E-04	U		<sup>155</sup> Eu	1.6E-04 ± 2.0E-04	U
	<sup>238</sup> Pu	1.6E-05 ± 2.0E-05	U		<sup>238</sup> Pu	8.9E-07 ± 8.9E-06	U
	<sup>239/240</sup> Pu	3.0E-06 ± 5.4E-06	U		<sup>239/240</sup> Pu	6.9E-06 ± 5.5E-06	
	<sup>103</sup> Ru	4.0E-06 ± 4.0E-05	U		<sup>103</sup> Ru	-5.5E-05 ± 1.2E-04	U
	<sup>106</sup> Ru	5.2E-05 ± 5.2E-04	U		<sup>106</sup> Ru	-3.4E-04 ± 9.8E-04	U
	<sup>125</sup> Sb	-4.9E-05 ± 2.2E-04	U		<sup>125</sup> Sb	6.8E-05 ± 2.5E-04	U
	<sup>113</sup> Sn	1.2E-05 ± 1.1E-04	U		<sup>113</sup> Sn	-3.3E-05 ± 1.2E-04	U
	<sup>90</sup> Sr	2.8E-05 ± 9.4E-05	U		<sup>90</sup> Sr	-4.0E-05 ± 9.8E-05	U
	<sup>234</sup> U	6.7E-06 ± 6.3E-06	U		<sup>234</sup> U	1.2E-05 ± 8.6E-06	
	<sup>235</sup> U	7.1E-06 ± 5.7E-06			<sup>235</sup> U	6.8E-06 ± 5.7E-06	
	<sup>238</sup> U	7.8E-06 ± 6.0E-06			<sup>238</sup> U	3.5E-06 ± 3.7E-06	
	<sup>65</sup> Zn	-2.3E-04 ± 2.4E-04	U		<sup>65</sup> Zn	-4.5E-04 ± 4.6E-04	U

RQ = Result Qualifier. U = The analyte was analyzed for but not detected.

Table 2-4. Near-Facility Air Sampling Results, 2004 (pCi/m<sup>3</sup> ± total analytical uncertainty).  
(40 sheets total)

Location	Isotope	Result ± Uncertainty	RQ*	Location	Isotope	Result ± Uncertainty	RQ*
N975 (200 WEST) Composite Period 12/22/03 to 06/21/04	<sup>144</sup> Ce	-3.7E-04 ± 6.3E-04		N975 (200 WEST) Composite Period 06/21/04 to 12/20/04	<sup>144</sup> Ce	-6.6E-04 ± 6.9E-04	U
	<sup>60</sup> Co	2.2E-06 ± 2.2E-05			<sup>60</sup> Co	4.6E-06 ± 4.6E-05	U
	<sup>134</sup> Cs	-1.5E-05 ± 6.7E-05			<sup>134</sup> Cs	-2.8E-05 ± 7.0E-05	U
	<sup>137</sup> Cs	2.6E-05 ± 6.5E-05			<sup>137</sup> Cs	-2.3E-05 ± 6.6E-05	U
	<sup>152</sup> Eu	-6.3E-05 ± 1.4E-04			<sup>152</sup> Eu	-7.4E-05 ± 1.7E-04	U
	<sup>154</sup> Eu	-3.1E-05 ± 2.3E-04			<sup>154</sup> Eu	7.6E-05 ± 2.3E-04	U
	<sup>155</sup> Eu	-6.5E-06 ± 6.5E-05			<sup>155</sup> Eu	4.8E-05 ± 1.6E-04	U
	<sup>238</sup> Pu	-9.3E-07 ± 9.3E-06	U		<sup>238</sup> Pu	1.0E-05 ± 1.5E-05	U
	<sup>239/240</sup> Pu	2.4E-05 ± 1.4E-05			<sup>239/240</sup> Pu	1.1E-05 ± 7.2E-06	
	<sup>103</sup> Ru	-5.8E-05 ± 8.4E-05			<sup>103</sup> Ru	1.2E-05 ± 6.4E-05	U
	<sup>106</sup> Ru	-3.6E-04 ± 5.6E-04			<sup>106</sup> Ru	-5.8E-04 ± 6.2E-04	U
	<sup>125</sup> Sb	-2.9E-06 ± 2.9E-05			<sup>125</sup> Sb	1.3E-04 ± 1.5E-04	U
	<sup>113</sup> Sn	5.7E-05 ± 7.0E-05			<sup>113</sup> Sn	-1.4E-05 ± 6.6E-05	U
	<sup>90</sup> Sr	2.9E-05 ± 9.2E-05	U		<sup>90</sup> Sr	-3.7E-05 ± 8.7E-05	U
	<sup>234</sup> U	8.6E-06 ± 6.8E-06			<sup>234</sup> U	5.9E-06 ± 4.7E-06	
	<sup>235</sup> U	2.3E-06 ± 2.8E-06			<sup>235</sup> U	2.4E-06 ± 2.9E-06	
	<sup>238</sup> U	1.1E-05 ± 6.9E-06			<sup>238</sup> U	1.0E-05 ± 7.1E-06	
	<sup>65</sup> Zn	-1.2E-05 ± 1.2E-04			<sup>65</sup> Zn	-3.8E-06 ± 3.8E-05	U
N550 (200 WEST, U-Ancillary D&D) Composite Period 09/22/04 to 12/21/04	<sup>144</sup> Ce	-8.3E-04 ± 1.6E-03	U	N551 (200 WEST, U-Ancillary D&D) Composite Period 09/22/04 to 12/21/04	<sup>144</sup> Ce	-1.2E-03 ± 1.9E-03	U
	<sup>60</sup> Co	4.7E-05 ± 1.4E-04	U		<sup>60</sup> Co	1.4E-04 ± 2.6E-04	U
	<sup>134</sup> Cs	-1.8E-04 ± 1.9E-04	U		<sup>134</sup> Cs	8.7E-05 ± 2.4E-04	U
	<sup>137</sup> Cs	8.0E-05 ± 1.5E-04	U		<sup>137</sup> Cs	1.7E-04 ± 2.3E-04	U
	<sup>152</sup> Eu	1.0E-04 ± 4.2E-04	U		<sup>152</sup> Eu	2.2E-05 ± 2.2E-04	U
	<sup>154</sup> Eu	-2.3E-05 ± 2.3E-04	U		<sup>154</sup> Eu	-5.4E-04 ± 6.5E-04	U
	<sup>155</sup> Eu	9.4E-06 ± 9.4E-05	U		<sup>155</sup> Eu	-8.6E-05 ± 3.8E-04	U
	<sup>238</sup> Pu	3.0E-06 ± 2.9E-05	U		<sup>238</sup> Pu	6.0E-06 ± 2.5E-05	U
	<sup>239/240</sup> Pu	3.0E-06 ± 8.4E-06	U		<sup>239/240</sup> Pu	-1.5E-06 ± 6.7E-06	U
	<sup>103</sup> Ru	-1.2E-05 ± 1.2E-04	U		<sup>103</sup> Ru	8.1E-05 ± 2.8E-04	U
	<sup>106</sup> Ru	8.5E-06 ± 8.5E-05	U		<sup>106</sup> Ru	6.6E-04 ± 1.8E-03	U
	<sup>125</sup> Sb	6.9E-05 ± 3.5E-04	U		<sup>125</sup> Sb	2.6E-04 ± 5.1E-04	U
	<sup>113</sup> Sn	-9.0E-05 ± 1.7E-04	U		<sup>113</sup> Sn	1.0E-04 ± 2.7E-04	U
	<sup>90</sup> Sr	-1.1E-04 ± 1.8E-04	U		<sup>90</sup> Sr	-9.4E-05 ± 1.6E-04	U
	<sup>234</sup> U	1.9E-05 ± 1.3E-05			<sup>234</sup> U	1.6E-05 ± 1.4E-05	U
	<sup>235</sup> U	6.8E-06 ± 6.9E-06			<sup>235</sup> U	5.2E-06 ± 6.3E-06	
	<sup>238</sup> U	2.4E-05 ± 1.5E-05			<sup>238</sup> U	1.3E-05 ± 1.2E-05	U
	<sup>65</sup> Zn	-5.6E-04 ± 5.8E-04	U		<sup>65</sup> Zn	1.3E-04 ± 6.5E-04	U

RQ = Result Qualifier. U = The analyte was analyzed for but not detected.

Table 2-4. Near-Facility Air Sampling Results, 2004 (pCi/m<sup>3</sup> ± total analytical uncertainty).  
(40 sheets total)

Location	Isotope	Result ± Uncertainty	RQ*	Location	Isotope	Result ± Uncertainty	RQ*
N987 (200 WEST)	<sup>144</sup> Ce	2.9E-05 ± 2.9E-04	U	N987 (200 WEST)	<sup>144</sup> Ce	2.1E-03 ± 2.2E-03	U
Composite Period	<sup>60</sup> Co	-3.2E-05 ± 8.5E-05	U	Composite Period	<sup>60</sup> Co	-6.9E-05 ± 3.2E-04	U
12/22/03 to 06/21/04	<sup>134</sup> Cs	-2.1E-05 ± 7.1E-05	U	06/21/04 to 08/02/04	<sup>134</sup> Cs	1.2E-04 ± 2.9E-04	U
	<sup>137</sup> Cs	3.3E-05 ± 6.1E-05	U		<sup>137</sup> Cs	-2.6E-04 ± 3.0E-04	U
	<sup>152</sup> Eu	3.3E-05 ± 1.4E-04	U		<sup>152</sup> Eu	-3.9E-05 ± 3.9E-04	U
	<sup>154</sup> Eu	5.0E-05 ± 1.9E-04	U		<sup>154</sup> Eu	-1.2E-04 ± 9.9E-04	U
	<sup>155</sup> Eu	4.6E-05 ± 1.5E-04	U		<sup>155</sup> Eu	4.7E-05 ± 4.7E-04	U
	<sup>238</sup> Pu	-3.0E-06 ± 8.6E-06	U		<sup>238</sup> Pu	-1.5E-05 ± 5.1E-05	U
	<sup>239/240</sup> Pu	1.2E-05 ± 7.2E-06			<sup>239/240</sup> Pu	2.9E-06 ± 1.6E-05	U
	<sup>103</sup> Ru	-5.2E-05 ± 7.7E-05	U		<sup>103</sup> Ru	-3.5E-05 ± 2.7E-04	U
	<sup>106</sup> Ru	-1.7E-04 ± 5.7E-04	U		<sup>106</sup> Ru	1.3E-03 ± 2.3E-03	U
	<sup>125</sup> Sb	-1.8E-04 ± 1.8E-04	U		<sup>125</sup> Sb	3.4E-05 ± 3.4E-04	U
	<sup>113</sup> Sn	-3.3E-05 ± 6.9E-05	U		<sup>113</sup> Sn	-4.6E-06 ± 4.6E-05	U
	<sup>90</sup> Sr	-1.4E-05 ± 9.7E-05	U		<sup>90</sup> Sr	-3.0E-04 ± 3.6E-04	U
	<sup>234</sup> U	1.3E-05 ± 8.4E-06			<sup>234</sup> U	1.8E-05 ± 1.8E-05	U
	<sup>235</sup> U	2.8E-06 ± 2.9E-06			<sup>235</sup> U	1.3E-05 ± 1.6E-05	U
	<sup>238</sup> U	1.1E-05 ± 6.9E-06			<sup>238</sup> U	2.4E-05 ± 1.9E-05	
	<sup>65</sup> Zn	-2.6E-05 ± 1.7E-04	U		<sup>65</sup> Zn	-4.3E-04 ± 7.1E-04	U
N994 (200 WEST)	<sup>144</sup> Ce	1.3E-04 ± 5.9E-04	U	N994 (200 WEST)	<sup>144</sup> Ce	-8.0E-04 ± 8.3E-04	U
Composite Period	<sup>60</sup> Co	4.7E-05 ± 7.8E-05	U	Composite Period	<sup>60</sup> Co	1.7E-05 ± 8.1E-05	U
12/22/03 to 06/21/04	<sup>134</sup> Cs	1.5E-05 ± 6.7E-05	U	06/21/04 to 12/20/04	<sup>134</sup> Cs	-3.8E-05 ± 7.4E-05	U
	<sup>137</sup> Cs	-3.3E-05 ± 5.9E-05	U		<sup>137</sup> Cs	5.8E-05 ± 6.9E-05	U
	<sup>152</sup> Eu	1.7E-04 ± 1.9E-04	U		<sup>152</sup> Eu	1.6E-05 ± 1.6E-04	U
	<sup>154</sup> Eu	9.0E-05 ± 2.3E-04	U		<sup>154</sup> Eu	-1.2E-04 ± 2.3E-04	U
	<sup>155</sup> Eu	-1.9E-04 ± 2.0E-04	U		<sup>155</sup> Eu	-6.2E-05 ± 1.9E-04	U
	<sup>238</sup> Pu	2.1E-06 ± 6.6E-06	U		<sup>238</sup> Pu	1.1E-05 ± 1.5E-05	U
	<sup>239/240</sup> Pu	7.1E-07 ± 7.1E-06	U		<sup>239/240</sup> Pu	2.9E-06 ± 3.1E-06	
	<sup>103</sup> Ru	-2.7E-05 ± 8.1E-05	U		<sup>103</sup> Ru	-2.8E-05 ± 7.7E-05	U
	<sup>106</sup> Ru	-1.1E-04 ± 5.6E-04	U		<sup>106</sup> Ru	-7.1E-04 ± 7.3E-04	U
	<sup>125</sup> Sb	3.5E-05 ± 1.3E-04	U		<sup>125</sup> Sb	-2.9E-06 ± 2.9E-05	U
	<sup>113</sup> Sn	7.8E-06 ± 6.5E-05	U		<sup>113</sup> Sn	-1.6E-05 ± 7.3E-05	U
	<sup>90</sup> Sr	7.1E-06 ± 7.1E-05	U		<sup>90</sup> Sr	-8.1E-05 ± 8.4E-05	U
	<sup>234</sup> U	1.1E-05 ± 6.9E-06			<sup>234</sup> U	1.2E-05 ± 7.3E-06	
	<sup>235</sup> U	1.4E-06 ± 3.5E-06	U		<sup>235</sup> U	8.1E-07 ± 1.6E-06	U
	<sup>238</sup> U	4.5E-06 ± 4.6E-06	U		<sup>238</sup> U	9.6E-06 ± 6.0E-06	
	<sup>65</sup> Zn	2.0E-05 ± 1.4E-04	U		<sup>65</sup> Zn	1.8E-04 ± 1.8E-04	U

RQ = Result Qualifier. U = The analyte was analyzed for but not detected.



Table 2-4. Near-Facility Air Sampling Results, 2004 (pCi/m<sup>3</sup> ± total analytical uncertainty).  
(40 sheets total)

Location	Isotope	Result ± Uncertainty	RQ*	Location	Isotope	Result ± Uncertainty	RQ*
<b>N527 (300-FF-2)</b>	<sup>144</sup> Ce	-6.3E-05 ± 6.3E-04	U	<b>N537 (300-FF-2)</b>	<sup>144</sup> Ce	-2.2E-04 ± 2.2E-03	U
Composite Period	<sup>60</sup> Co	-8.0E-05 ± 1.2E-04	U	Composite Period	<sup>60</sup> Co	-4.3E-05 ± 4.1E-04	U
08/30/04 to 12/22/04	<sup>134</sup> Cs	7.3E-05 ± 1.3E-04	U	08/09/04 to 09/14/04	<sup>134</sup> Cs	-1.9E-05 ± 1.9E-04	U
	<sup>137</sup> Cs	4.4E-06 ± 4.5E-05	U		<sup>137</sup> Cs	-8.5E-05 ± 3.5E-04	U
	<sup>152</sup> Eu	-2.6E-04 ± 2.9E-04	U		<sup>152</sup> Eu	-9.6E-04 ± 1.0E-03	U
	<sup>154</sup> Eu	-4.2E-05 ± 3.9E-04	U		<sup>154</sup> Eu	-3.1E-04 ± 1.2E-03	U
	<sup>155</sup> Eu	-6.7E-05 ± 2.6E-04	U		<sup>155</sup> Eu	2.5E-04 ± 8.1E-04	U
	<sup>238</sup> Pu	5.5E-06 ± 1.0E-05	U		<sup>103</sup> Ru	-2.1E-04 ± 3.3E-04	U
	<sup>239/240</sup> Pu	-4.4E-06 ± 4.5E-06	U		<sup>106</sup> Ru	2.8E-03 ± 3.1E-03	U
	<sup>103</sup> Ru	-6.7E-05 ± 9.5E-05	U		<sup>125</sup> Sb	-6.2E-04 ± 8.0E-04	U
	<sup>106</sup> Ru	1.5E-04 ± 9.6E-04	U		<sup>113</sup> Sn	4.1E-04 ± 4.6E-04	U
	<sup>125</sup> Sb	1.4E-04 ± 2.2E-04	U		<sup>234</sup> U	1.7E-04 ± 9.8E-05	
	<sup>113</sup> Sn	-2.2E-05 ± 9.9E-05	U		<sup>235</sup> U	2.7E-05 ± 3.2E-05	
	<sup>234</sup> U	3.2E-05 ± 1.8E-05			<sup>238</sup> U	1.3E-04 ± 7.9E-05	
	<sup>235</sup> U	9.5E-06 ± 8.0E-06			<sup>65</sup> Zn	-1.2E-03 ± 1.3E-03	U
	<sup>238</sup> U	1.7E-05 ± 1.2E-05					
	<sup>65</sup> Zn	1.0E-04 ± 2.3E-04	U				
<b>N538 (300-FF-2)</b>	<sup>144</sup> Ce	3.9E-05 ± 3.9E-04	U	<b>N539 (300-FF-2)</b>	<sup>144</sup> Ce	-3.8E-04 ± 3.8E-03	U
Composite Period	<sup>60</sup> Co	-6.5E-04 ± 6.6E-04	U	Composite Period	<sup>60</sup> Co	-2.9E-04 ± 7.2E-04	U
08/09/04 to 09/14/04	<sup>134</sup> Cs	-2.1E-04 ± 5.2E-04	U	08/09/04 to 09/14/04	<sup>134</sup> Cs	4.8E-04 ± 5.0E-04	U
	<sup>137</sup> Cs	9.9E-05 ± 4.9E-04	U		<sup>137</sup> Cs	2.4E-04 ± 6.2E-04	U
	<sup>152</sup> Eu	-4.6E-04 ± 1.2E-03	U		<sup>152</sup> Eu	-1.4E-03 ± 1.6E-03	U
	<sup>154</sup> Eu	5.2E-04 ± 1.5E-03	U		<sup>154</sup> Eu	2.0E-03 ± 2.1E-03	U
	<sup>155</sup> Eu	-4.9E-04 ± 1.4E-03	U		<sup>155</sup> Eu	8.7E-04 ± 1.5E-03	U
	<sup>103</sup> Ru	3.3E-04 ± 4.9E-04	U		<sup>103</sup> Ru	-6.0E-05 ± 5.4E-04	U
	<sup>106</sup> Ru	3.9E-03 ± 4.8E-03	U		<sup>106</sup> Ru	3.1E-03 ± 6.0E-03	U
	<sup>125</sup> Sb	-4.7E-04 ± 1.1E-03	U		<sup>125</sup> Sb	7.4E-04 ± 1.3E-03	U
	<sup>113</sup> Sn	8.5E-05 ± 5.4E-04	U		<sup>113</sup> Sn	1.1E-04 ± 6.1E-04	U
	<sup>234</sup> U	1.9E-04 ± 9.7E-05			<sup>234</sup> U	1.7E-04 ± 8.9E-05	
	<sup>235</sup> U	4.7E-05 ± 4.6E-05	U		<sup>235</sup> U	8.3E-06 ± 8.4E-06	U
	<sup>238</sup> U	1.0E-04 ± 6.8E-05			<sup>238</sup> U	1.3E-04 ± 7.8E-05	
	<sup>65</sup> Zn	-1.0E-03 ± 1.3E-03	U		<sup>65</sup> Zn	-1.7E-03 ± 1.7E-03	U

RQ = Result Qualifier. U = The analyte was analyzed for but not detected.

Table 2-4. Near-Facility Air Sampling Results, 2004 (pCi/m<sup>3</sup> ± total analytical uncertainty).  
(40 sheets total)

Location	Isotope	Result ± Uncertainty	RQ*	Location	Isotope	Result ± Uncertainty	RQ*
<b>N540 (300-FF-2)</b>	<sup>144</sup> Ce	5.0E-03 ± 8.7E-03	U	<b>N548 (300-FF-2)</b>	<sup>144</sup> Ce	-7.3E-04 ± 2.0E-03	U
Composite Period	<sup>60</sup> Co	-1.3E-04 ± 8.4E-04	U	Composite Period	<sup>60</sup> Co	-1.5E-04 ± 2.7E-04	U
08/09/04 to 09/14/04	<sup>134</sup> Cs	3.5E-04 ± 7.8E-04	U	08/31/04 to 12/02/04	<sup>134</sup> Cs	3.5E-05 ± 2.8E-04	U
	<sup>137</sup> Cs	4.6E-04 ± 7.8E-04	U		<sup>137</sup> Cs	2.1E-04 ± 2.9E-04	U
	<sup>152</sup> Eu	-9.6E-04 ± 2.0E-03	U		<sup>152</sup> Eu	-3.2E-04 ± 5.3E-04	U
	<sup>154</sup> Eu	-1.7E-04 ± 1.7E-03	U		<sup>154</sup> Eu	-3.9E-04 ± 8.8E-04	U
	<sup>155</sup> Eu	-1.1E-03 ± 2.1E-03	U		<sup>155</sup> Eu	-8.4E-05 ± 5.2E-04	U
	<sup>103</sup> Ru	-1.5E-04 ± 7.2E-04	U		<sup>238</sup> Pu	4.3E-06 ± 6.2E-06	U
	<sup>106</sup> Ru	1.0E-03 ± 6.1E-03	U		<sup>239/240</sup> Pu	4.3E-06 ± 1.1E-05	U
	<sup>125</sup> Sb	-7.4E-05 ± 7.5E-04	U		<sup>103</sup> Ru	9.8E-06 ± 9.8E-05	U
	<sup>113</sup> Sn	-6.4E-05 ± 6.4E-04	U		<sup>106</sup> Ru	-1.3E-03 ± 2.1E-03	U
	<sup>234</sup> U	1.5E-04 ± 9.4E-05			<sup>125</sup> Sb	-2.2E-04 ± 5.4E-04	U
	<sup>235</sup> U	4.0E-05 ± 4.9E-05	U		<sup>113</sup> Sn	-1.8E-05 ± 1.8E-04	U
	<sup>238</sup> U	1.2E-04 ± 9.1E-05			<sup>234</sup> U	2.5E-05 ± 1.9E-05	
	<sup>65</sup> Zn	1.6E-03 ± 1.8E-03	U		<sup>235</sup> U	5.4E-06 ± 7.6E-06	U
					<sup>238</sup> U	6.4E-05 ± 3.3E-05	
					<sup>65</sup> Zn	-6.2E-04 ± 7.1E-04	U
<b>N549 (300-FF-2)</b>	<sup>144</sup> Ce	8.0E-04 ± 2.8E-03	U	<b>N130 (300 TEDF)</b>	<sup>144</sup> Ce	-2.8E-04 ± 7.0E-04	U
Composite Period	<sup>60</sup> Co	-5.1E-05 ± 3.5E-04	U	Composite Period	<sup>60</sup> Co	3.6E-05 ± 7.3E-05	U
08/31/04 to 12/03/04	<sup>134</sup> Cs	1.6E-04 ± 3.9E-04	U	12/22/03 to 06/22/04	<sup>134</sup> Cs	-4.8E-05 ± 6.8E-05	U
	<sup>137</sup> Cs	-3.7E-06 ± 3.7E-05	U		<sup>137</sup> Cs	-2.3E-05 ± 5.7E-05	U
	<sup>152</sup> Eu	-4.0E-04 ± 9.4E-04	U		<sup>152</sup> Eu	-1.4E-04 ± 1.6E-04	U
	<sup>154</sup> Eu	2.9E-04 ± 1.2E-03	U		<sup>154</sup> Eu	1.8E-04 ± 2.3E-04	U
	<sup>155</sup> Eu	1.5E-04 ± 6.0E-04	U		<sup>155</sup> Eu	-3.6E-06 ± 3.6E-05	U
	<sup>238</sup> Pu	3.0E-06 ± 1.6E-05	U		<sup>238</sup> Pu	9.6E-07 ± 1.0E-06	U
	<sup>239/240</sup> Pu	-3.0E-06 ± 6.1E-06	U		<sup>239/240</sup> Pu	1.9E-06 ± 4.8E-06	U
	<sup>103</sup> Ru	2.0E-04 ± 4.2E-04	U		<sup>103</sup> Ru	-8.8E-06 ± 5.7E-05	U
	<sup>106</sup> Ru	4.3E-04 ± 3.2E-03	U		<sup>106</sup> Ru	4.0E-06 ± 4.0E-05	U
	<sup>125</sup> Sb	4.2E-04 ± 8.2E-04	U		<sup>125</sup> Sb	-1.3E-04 ± 1.5E-04	U
	<sup>113</sup> Sn	1.9E-05 ± 1.9E-04	U		<sup>113</sup> Sn	-4.4E-05 ± 6.9E-05	U
	<sup>234</sup> U	3.0E-05 ± 2.1E-05			<sup>90</sup> Sr	1.4E-07 ± 1.4E-06	U
	<sup>235</sup> U	2.8E-06 ± 9.7E-06	U		<sup>234</sup> U	1.4E-05 ± 8.0E-06	
	<sup>238</sup> U	2.0E-05 ± 1.9E-05	U		<sup>235</sup> U	1.5E-06 ± 3.1E-06	U
	<sup>65</sup> Zn	-1.5E-03 ± 1.5E-03	U		<sup>238</sup> U	6.8E-06 ± 5.0E-06	
					<sup>65</sup> Zn	7.0E-05 ± 1.4E-04	U

RQ = Result Qualifier. U = The analyte was analyzed for but not detected.

Table 2-4. Near-Facility Air Sampling Results, 2004 (pCi/m<sup>3</sup> ± total analytical uncertainty).  
(40 sheets total)

Location	Isotope	Result ± Uncertainty	RQ*	Location	Isotope	Result ± Uncertainty	RQ*
N130 (300 TEDF) Composite Period 06/22/04 to 12/22/04	<sup>144</sup> Ce	-2.6E-04 ± 5.5E-04	U	N981 (WYE Barricade) Composite Period 12/22/03 to 06/22/04	<sup>144</sup> Ce	-1.6E-04 ± 6.3E-04	U
	<sup>60</sup> Co	-3.3E-05 ± 7.9E-05	U		<sup>60</sup> Co	-4.6E-05 ± 6.8E-05	U
	<sup>134</sup> Cs	-7.6E-05 ± 7.8E-05	U		<sup>134</sup> Cs	-2.6E-05 ± 6.9E-05	U
	<sup>137</sup> Cs	5.6E-05 ± 6.8E-05	U		<sup>137</sup> Cs	4.4E-05 ± 5.9E-05	U
	<sup>152</sup> Eu	9.7E-05 ± 1.6E-04	U		<sup>152</sup> Eu	9.8E-06 ± 9.8E-05	U
	<sup>154</sup> Eu	-2.4E-06 ± 2.4E-05	U		<sup>154</sup> Eu	-1.1E-04 ± 1.7E-04	U
	<sup>155</sup> Eu	4.5E-05 ± 1.4E-04	U		<sup>155</sup> Eu	2.5E-04 ± 1.9E-04	U
	<sup>238</sup> Pu	-3.8E-06 ± 1.4E-05	U		<sup>238</sup> Pu	6.8E-07 ± 1.4E-06	U
	<sup>239/240</sup> Pu	1.5E-05 ± 9.0E-06			<sup>239/240</sup> Pu	1.4E-06 ± 2.8E-06	U
	<sup>103</sup> Ru	-1.2E-05 ± 5.5E-05	U		<sup>103</sup> Ru	1.2E-04 ± 9.0E-05	U
	<sup>106</sup> Ru	-1.1E-05 ± 1.1E-04	U		<sup>106</sup> Ru	-5.0E-04 ± 5.5E-04	U
	<sup>125</sup> Sb	1.8E-04 ± 1.6E-04	U		<sup>125</sup> Sb	-3.4E-05 ± 1.5E-04	U
	<sup>113</sup> Sn	1.4E-05 ± 6.6E-05	U		<sup>113</sup> Sn	-3.0E-05 ± 7.3E-05	U
	<sup>90</sup> Sr	-5.7E-05 ± 8.9E-05	U		<sup>90</sup> Sr	-6.9E-05 ± 9.8E-05	U
	<sup>234</sup> U	1.9E-05 ± 1.1E-05			<sup>234</sup> U	5.9E-06 ± 5.2E-06	U
	<sup>235</sup> U	6.4E-06 ± 5.1E-06			<sup>235</sup> U	6.9E-07 ± 2.4E-06	U
	<sup>238</sup> U	1.4E-05 ± 8.8E-06			<sup>238</sup> U	5.9E-06 ± 4.5E-06	
	<sup>65</sup> Zn	-6.6E-05 ± 1.6E-04	U		<sup>65</sup> Zn	2.9E-05 ± 1.4E-04	U
N981 (WYE Barricade) Composite Period 06/22/04 to 12/22/04	<sup>144</sup> Ce	1.2E-04 ± 5.9E-04	U				
	<sup>60</sup> Co	-3.1E-06 ± 3.1E-05	U				
	<sup>134</sup> Cs	-2.1E-05 ± 6.5E-05	U				
	<sup>137</sup> Cs	3.7E-06 ± 3.7E-05	U				
	<sup>152</sup> Eu	-1.5E-04 ± 1.7E-04	U				
	<sup>154</sup> Eu	3.5E-05 ± 2.3E-04	U				
	<sup>155</sup> Eu	-1.0E-04 ± 1.4E-04	U				
	<sup>238</sup> Pu	6.6E-07 ± 6.6E-06	U				
	<sup>239/240</sup> Pu	-6.6E-07 ± 2.3E-06	U				
	<sup>103</sup> Ru	6.2E-06 ± 6.3E-05	U				
	<sup>106</sup> Ru	-1.1E-04 ± 5.1E-04	U				
	<sup>125</sup> Sb	-5.4E-05 ± 1.3E-04	U				
	<sup>113</sup> Sn	-5.7E-06 ± 5.7E-05	U				
	<sup>90</sup> Sr	9.8E-05 ± 1.0E-04	U				
	<sup>234</sup> U	7.0E-06 ± 5.2E-06					
	<sup>235</sup> U	2.4E-06 ± 3.6E-06	U				
	<sup>238</sup> U	5.8E-06 ± 4.6E-06					
	<sup>65</sup> Zn	-2.1E-04 ± 2.2E-04	U				

RQ = Result Qualifier. U = The analyte was analyzed for but not detected.

Table 2-5. Pacific Northwest National Laboratory Air Sampling Data, 2004  
(pCi/m<sup>3</sup> ± total analytical uncertainty). (3 sheets total)

Sampler	Isotope	Result ± Uncertainty	RQ*	Sampler	Isotope	Result ± Uncertainty	RQ*
<b>100 B</b>				<b>100 B SE</b>			
Sample Period				Sample Period			
01/06/04 - 02/03/04	<sup>3</sup> H	4.6E+00 ± 1.2E+00		02/03/04 - 03/01/04	<sup>3</sup> H	5.5E+00 ± 1.1E+00	
02/03/04 - 03/01/04	<sup>3</sup> H	9.5E+00 ± 2.0E+00		03/01/04 - 03/31/04	<sup>3</sup> H	3.4E+00 ± 4.9E-01	
03/01/04 - 03/31/04	<sup>3</sup> H	3.7E+00 ± 8.0E-01		03/31/04 - 04/26/04	<sup>3</sup> H	8.5E+00 ± 4.2E+00	
03/31/04 - 04/26/04	<sup>3</sup> H	1.2E+01 ± 6.6E+00		04/26/04 - 05/25/04	<sup>3</sup> H	8.8E-01 ± 1.9E+00	U
04/26/04 - 05/25/04	<sup>3</sup> H	1.5E+00 ± 2.9E+00	U	05/25/04 - 06/21/04	<sup>3</sup> H	6.5E+00 ± 1.0E+00	
05/25/04 - 06/21/04	<sup>3</sup> H	2.7E+00 ± 9.4E-01		06/21/04 - 07/19/04	<sup>3</sup> H	5.8E+00 ± 7.9E-01	
06/21/04 - 07/19/04	<sup>3</sup> H	8.9E-01 ± 5.2E-01	U	07/19/04 - 08/17/04	<sup>3</sup> H	3.4E+00 ± 5.5E-01	
07/19/04 - 08/17/04	<sup>3</sup> H	1.4E+00 ± 7.1E-01		08/17/04 - 09/10/04	<sup>3</sup> H	3.8E+00 ± 8.1E-01	
08/17/04 - 09/10/04	<sup>3</sup> H	3.0E+00 ± 9.0E-01		09/10/04 - 10/13/04	<sup>3</sup> H	1.3E+00 ± 7.9E-01	
09/10/04 - 10/13/04	<sup>3</sup> H	2.3E+00 ± 1.0E+00		10/13/04 - 11/09/04	<sup>3</sup> H	2.0E+00 ± 5.2E-01	
10/13/04 - 11/09/04	<sup>3</sup> H	4.0E+00 ± 1.4E+00		11/09/04 - 12/07/04	<sup>3</sup> H	1.3E+00 ± 6.5E-01	
11/09/04 - 12/07/04	<sup>3</sup> H	6.9E+00 ± 1.7E+00		12/07/04 - 01/04/05	<sup>3</sup> H	1.9E+00 ± 6.3E-01	
12/07/04 - 01/04/05	<sup>3</sup> H	2.0E+01 ± 3.2E+00					
<b>200 W SE</b>				<b>200 W SE</b>			
Composite Period				Composite Period			
12/30/03 - 04/06/04	<sup>60</sup> Co	-2.8E-04 ± 7.5E-04	U	04/06/04 - 06/28/04	<sup>60</sup> Co	1.7E-04 ± 8.5E-04	U
	<sup>134</sup> Cs	-3.7E-04 ± 5.9E-04	U		<sup>134</sup> Cs	2.8E-04 ± 6.2E-04	U
	<sup>137</sup> Cs	1.2E-04 ± 8.2E-04	U		<sup>137</sup> Cs	-3.5E-04 ± 7.3E-04	U
	<sup>152</sup> Eu	-5.3E-04 ± 1.2E-03	U		<sup>152</sup> Eu	7.7E-04 ± 1.3E-03	U
	<sup>154</sup> Eu	8.8E-04 ± 1.4E-03	U		<sup>154</sup> Eu	1.1E-03 ± 1.5E-03	U
	<sup>155</sup> Eu	7.3E-04 ± 9.9E-04	U		<sup>155</sup> Eu	-2.4E-05 ± 9.0E-04	U
	<sup>238</sup> Pu	-3.3E-07 ± 4.0E-06	U		<sup>238</sup> Pu	9.2E-07 ± 1.8E-06	U
	<sup>239,240</sup> Pu	3.2E-06 ± 6.5E-06	U		<sup>239,240</sup> Pu	9.6E-06 ± 7.5E-06	
	<sup>106</sup> Ru	-3.2E-03 ± 5.3E-03	U		<sup>106</sup> Ru	-7.5E-04 ± 5.4E-03	U
	<sup>125</sup> Sb	1.9E-04 ± 1.4E-03	U		<sup>125</sup> Sb	6.1E-04 ± 1.2E-03	U
	<sup>90</sup> Sr	-4.8E-05 ± 3.8E-05	U		<sup>90</sup> Sr	-1.4E-04 ± 1.8E-04	U
	<sup>234</sup> U	2.5E-05 ± 1.0E-05			<sup>234</sup> U	-3.1E-05 ± 3.0E-04	U
	<sup>235</sup> U	8.5E-07 ± 2.8E-06	U		<sup>235</sup> U	2.8E-06 ± 1.8E-05	U
	<sup>238</sup> U	1.9E-05 ± 8.9E-06			<sup>238</sup> U	1.5E-05 ± 1.8E-05	U
<b>200 W SE</b>				<b>200 W SE</b>			
Composite Period				Composite Period			
06/28/04 - 10/04/04	<sup>60</sup> Co	7.0E-05 ± 5.0E-04	U	10/04/04 - 12/27/04	<sup>60</sup> Co	-2.9E-04 ± 8.5E-04	U
	<sup>134</sup> Cs	1.0E-04 ± 5.6E-04	U		<sup>134</sup> Cs	-3.4E-04 ± 9.6E-04	U
	<sup>137</sup> Cs	6.8E-04 ± 5.4E-04	U		<sup>137</sup> Cs	-4.4E-04 ± 8.1E-04	U
	<sup>152</sup> Eu	-3.5E-04 ± 1.3E-03	U		<sup>152</sup> Eu	1.0E-03 ± 1.9E-03	U
	<sup>154</sup> Eu	1.3E-03 ± 1.8E-03	U		<sup>154</sup> Eu	0.0E+00 ± 0.0E+00	U
	<sup>155</sup> Eu	-1.3E-05 ± 7.9E-04	U		<sup>155</sup> Eu	-5.6E-04 ± 1.2E-03	U
	<sup>238</sup> Pu	8.4E-12 ± 1.4E-06	U		<sup>238</sup> Pu	-2.4E-07 ± 4.8E-07	U
	<sup>239,240</sup> Pu	6.0E-07 ± 3.2E-06	U		<sup>239,240</sup> Pu	5.1E-06 ± 5.2E-06	U
	<sup>106</sup> Ru	-5.0E-03 ± 4.9E-03	U		<sup>106</sup> Ru	-6.6E-03 ± 6.2E-03	U
	<sup>125</sup> Sb	-1.0E-03 ± 1.5E-03	U		<sup>125</sup> Sb	4.3E-04 ± 1.6E-03	U
	<sup>90</sup> Sr	5.1E-06 ± 3.1E-05	U		<sup>90</sup> Sr	-9.4E-05 ± 1.8E-04	U
	<sup>234</sup> U	-1.4E-05 ± 2.5E-04	U		<sup>234</sup> U	-2.7E-05 ± 3.0E-04	U
	<sup>235</sup> U	-1.4E-06 ± 1.4E-05	U		<sup>235</sup> U	-4.0E-06 ± 1.6E-05	U
	<sup>238</sup> U	2.2E-05 ± 9.7E-06			<sup>238</sup> U	1.2E-05 ± 7.5E-06	

RQ = Result Qualifier. U = The analyte was analyzed for but not detected.

Table 2-5. Pacific Northwest National Laboratory Air Sampling Data, 2004  
(pCi/m<sup>3</sup> ±total analytical uncertainty). (3 sheets total)

Sampler	Isotope	Result ± Uncertainty	RQ*	Sampler	Isotope	Result ± Uncertainty	RQ*
<b>300 NE</b>	<sup>60</sup> Co	1.6E-04 ± 3.3E-04	U	<b>300 NE</b>	<sup>60</sup> Co	-1.9E-04 ± 3.1E-04	U
Composite Period	<sup>134</sup> Cs	-5.1E-05 ± 5.1E-04	U	Composite Period	<sup>134</sup> Cs	-1.7E-04 ± 3.5E-04	U
01/08/04 - 04/01/04	<sup>137</sup> Cs	2.5E-04 ± 4.6E-04	U	04/01/04 - 07/08/04	<sup>137</sup> Cs	2.9E-04 ± 3.2E-04	U
	<sup>152</sup> Eu	-7.3E-04 ± 9.4E-04	U		<sup>152</sup> Eu	-4.1E-05 ± 7.6E-04	U
	<sup>154</sup> Eu	4.4E-04 ± 1.2E-03	U		<sup>154</sup> Eu	2.3E-04 ± 5.3E-04	U
	<sup>155</sup> Eu	-1.6E-04 ± 6.6E-04	U		<sup>155</sup> Eu	4.0E-04 ± 6.8E-04	U
	<sup>238</sup> Pu	-1.9E-07 ± 6.4E-07	U		<sup>238</sup> Pu	2.8E-07 ± 9.5E-07	U
	<sup>239,240</sup> Pu	-3.6E-08 ± 6.7E-07	U		<sup>239,240</sup> Pu	-7.5E-07 ± 1.8E-06	U
	<sup>106</sup> Ru	-7.2E-04 ± 3.8E-03	U		<sup>106</sup> Ru	2.0E-04 ± 2.4E-03	U
	<sup>125</sup> Sb	-5.6E-04 ± 9.2E-04	U		<sup>125</sup> Sb	-4.7E-04 ± 7.4E-04	U
	<sup>90</sup> Sr	-2.6E-05 ± 3.1E-05	U		<sup>90</sup> Sr	-5.0E-05 ± 7.6E-05	U
	<sup>234</sup> U	2.5E-05 ± 8.1E-06			<sup>234</sup> U	7.9E-06 ± 1.3E-04	U
	<sup>235</sup> U	6.4E-07 ± 1.6E-06	U		<sup>235</sup> U	-4.0E-07 ± 7.3E-06	U
	<sup>238</sup> U	3.6E-05 ± 1.0E-05			<sup>238</sup> U	1.8E-05 ± 1.0E-05	
<b>300 NE</b>	<sup>60</sup> Co	9.3E-05 ± 3.8E-04	U	<b>300 NE</b>	<sup>60</sup> Co	-3.4E-04 ± 4.1E-04	U
Composite Period	<sup>134</sup> Cs	2.1E-04 ± 5.7E-04	U	Composite Period	<sup>134</sup> Cs	2.5E-04 ± 5.3E-04	U
07/08/04 - 10/01/04	<sup>137</sup> Cs	2.0E-04 ± 5.3E-04	U	10/01/04 - 01/05/05	<sup>137</sup> Cs	4.0E-05 ± 5.1E-04	U
	<sup>152</sup> Eu	9.5E-04 ± 1.2E-03	U		<sup>152</sup> Eu	5.2E-04 ± 1.2E-03	U
	<sup>154</sup> Eu	4.4E-04 ± 1.7E-03	U		<sup>154</sup> Eu	5.4E-04 ± 1.2E-03	U
	<sup>155</sup> Eu	7.2E-04 ± 8.2E-04	U		<sup>155</sup> Eu	-6.3E-04 ± 8.7E-04	U
	<sup>238</sup> Pu	-8.0E-07 ± 1.6E-06	U		<sup>238</sup> Pu	6.2E-07 ± 7.2E-07	U
	<sup>239,240</sup> Pu	-2.4E-07 ± 2.6E-06	U		<sup>239,240</sup> Pu	1.7E-05 ± 4.8E-06	
	<sup>106</sup> Ru	-4.0E-04 ± 4.5E-03	U		<sup>106</sup> Ru	2.8E-04 ± 4.7E-03	U
	<sup>125</sup> Sb	-5.6E-04 ± 1.1E-03	U		<sup>125</sup> Sb	-2.8E-04 ± 1.2E-03	U
	<sup>90</sup> Sr	-7.6E-07 ± 2.0E-05	U		<sup>90</sup> Sr	-6.0E-05 ± 7.7E-05	U
	<sup>234</sup> U	1.8E-05 ± 1.5E-04	U		<sup>234</sup> U	2.8E-05 ± 1.3E-04	U
	<sup>235</sup> U	-3.5E-07 ± 8.5E-06	U		<sup>235</sup> U	-9.6E-07 ± 7.5E-06	U
	<sup>238</sup> U	3.2E-05 ± 8.7E-06			<sup>238</sup> U	4.6E-05 ± 1.1E-05	
<b>300 NE</b>				<b>300 NE</b>			
Sample Period				Sample Period			
12/23/03 - 01/21/04	<sup>3</sup> H	2.2E+00 ± 5.6E-01		07/08/04 - 08/04/04	<sup>3</sup> H	1.2E+01 ± 1.4E+00	
01/21/04 - 02/19/04	<sup>3</sup> H	4.5E+00 ± 9.6E-01		08/04/04 - 08/31/04	<sup>3</sup> H	6.3E+00 ± 1.5E+00	
02/19/04 - 03/18/04	<sup>3</sup> H	4.4E+00 ± 9.8E-01		08/31/04 - 10/01/04	<sup>3</sup> H	1.6E+00 ± 8.1E-01	
03/18/04 - 04/13/04	<sup>3</sup> H	4.9E+00 ± 3.2E+00		10/01/04 - 10/28/04	<sup>3</sup> H	8.9E-01 ± 7.8E-01	U
04/13/04 - 05/12/04	<sup>3</sup> H	4.8E+00 ± 3.3E+00		10/28/04 - 11/23/04	<sup>3</sup> H	1.9E+00 ± 1.1E+00	U
05/12/04 - 06/08/04	<sup>3</sup> H	1.2E+01 ± 6.6E+00		11/23/04 - 12/21/04	<sup>3</sup> H	1.3E+00 ± 6.5E-01	
06/08/04 - 07/08/04	<sup>3</sup> H	7.0E+00 ± 1.7E+00		12/21/04 - 01/20/05	<sup>3</sup> H	3.3E-01 ± 3.6E-01	U
<b>300 Trench</b>				<b>300 Trench</b>			
Sample Period				Sample Period			
12/23/03 - 01/21/04	<sup>3</sup> H	8.5E+00 ± 1.4E+00		07/08/04 - 08/04/04	<sup>3</sup> H	1.7E+00 ± 6.0E-01	
01/21/04 - 02/19/04	<sup>3</sup> H	4.6E+00 ± 9.9E-01		08/04/04 - 08/31/04	<sup>3</sup> H	1.1E+00 ± 1.1E+00	U
02/19/04 - 03/18/04	<sup>3</sup> H	7.9E+00 ± 1.4E+00		08/31/04 - 10/01/04	<sup>3</sup> H	1.7E+00 ± 6.8E-01	
03/18/04 - 04/13/04	<sup>3</sup> H	3.1E+00 ± 2.1E+00		10/01/04 - 10/28/04	<sup>3</sup> H	5.9E-02 ± 1.1E-01	U
04/13/04 - 05/12/04	<sup>3</sup> H	3.0E+00 ± 2.0E+00		10/28/04 - 11/23/04	<sup>3</sup> H	1.4E+00 ± 4.9E-01	
05/12/04 - 06/08/04	<sup>3</sup> H	5.2E+00 ± 3.2E+00		11/23/04 - 12/21/04	<sup>3</sup> H	1.3E+00 ± 6.3E-01	
06/08/04 - 07/08/04	<sup>3</sup> H	5.4E+00 ± 1.1E+00		12/21/04 - 01/20/05	<sup>3</sup> H	1.7E-01 ± 4.0E-01	U

RQ = Result Qualifier. U = The analyte was analyzed for but not detected.

Table 2-5. Pacific Northwest National Laboratory Air Sampling Data, 2004  
(pCi/m<sup>3</sup> ± total analytical uncertainty). (3 sheets total)

Sampler	Isotope	Result ± Uncertainty	RQ*	Sampler	Isotope	Result ± Uncertainty	RQ*
<b>300 Water Intake</b>				<b>300 Water Intake</b>			
Sample Period				Sample Period			
12/23/03 - 01/21/04	<sup>3</sup> H	6.0E+00 ± 1.1E+00		07/08/04 - 08/04/04	<sup>3</sup> H	6.2E+00 ± 8.7E-01	
01/21/04 - 02/19/04	<sup>3</sup> H	4.9E+00 ± 1.0E+00		08/04/04 - 08/31/04	<sup>3</sup> H	1.5E+00 ± 9.1E-01	
02/19/04 - 03/18/04	<sup>3</sup> H	5.1E+00 ± 1.1E+00		08/31/04 - 10/01/04	<sup>3</sup> H	1.2E+00 ± 7.6E-01	
03/18/04 - 04/13/04	<sup>3</sup> H	6.5E+00 ± 3.6E+00		10/01/04 - 10/28/04	<sup>3</sup> H	6.9E-01 ± 8.4E-01	U
04/13/04 - 05/12/04	<sup>3</sup> H	3.7E+00 ± 2.4E+00		10/28/04 - 11/23/04	<sup>3</sup> H	1.5E+00 ± 4.8E-01	
05/12/04 - 06/08/04	<sup>3</sup> H	6.6E+00 ± 3.9E+00		11/23/04 - 12/21/04	<sup>3</sup> H	9.2E-01 ± 6.6E-01	
06/08/04 - 07/08/04	<sup>3</sup> H	2.9E+00 ± 8.5E-01		12/21/04 - 01/20/05	<sup>3</sup> H	7.1E-01 ± 3.9E-01	
<b>Yakima Barricade</b>				<b>Yakima Barricade</b>			
Composite Period				Composite Period			
01/09/04 - 04/05/04	<sup>60</sup> Co	4.2E-05 ± 2.2E-04	U	04/05/04 - 07/09/04	<sup>60</sup> Co	-1.7E-04 ± 2.8E-04	U
	<sup>134</sup> Cs	-7.3E-05 ± 4.5E-04	U		<sup>134</sup> Cs	-3.1E-04 ± 3.0E-04	U
	<sup>137</sup> Cs	1.6E-03 ± 6.6E-04	U		<sup>137</sup> Cs	-2.1E-05 ± 2.4E-04	U
	<sup>152</sup> Eu	2.3E-04 ± 7.8E-04	U		<sup>152</sup> Eu	-3.5E-04 ± 8.0E-04	U
	<sup>154</sup> Eu	-6.0E-04 ± 1.1E-03	U		<sup>154</sup> Eu	-6.0E-04 ± 9.8E-04	U
	<sup>155</sup> Eu	5.7E-04 ± 7.7E-04	U		<sup>155</sup> Eu	-6.0E-05 ± 6.1E-04	U
	<sup>238</sup> Pu	4.7E-07 ± 8.8E-07	U		<sup>238</sup> Pu	1.5E-11 ± 8.4E-07	U
	<sup>239,240</sup> Pu	-2.2E-07 ± 4.1E-07	U		<sup>239,240</sup> Pu	4.7E-07 ± 1.9E-06	U
	<sup>106</sup> Ru	-3.3E-03 ± 3.4E-03	U		<sup>106</sup> Ru	-6.6E-05 ± 3.1E-03	U
	<sup>125</sup> Sb	1.5E-04 ± 8.2E-04	U		<sup>125</sup> Sb	1.9E-05 ± 7.8E-04	U
	<sup>90</sup> Sr	-1.5E-05 ± 2.5E-05	U		<sup>90</sup> Sr	-4.2E-05 ± 4.9E-05	U
<b>Yakima Barricade</b>				<b>Yakima Barricade</b>			
Composite Period				Composite Period			
07/09/04 - 10/02/04	<sup>60</sup> Co	5.4E-04 ± 4.4E-04	U	10/02/04 - 01/06/05	<sup>60</sup> Co	-1.5E-04 ± 4.8E-04	U
	<sup>134</sup> Cs	-1.3E-04 ± 5.5E-04	U		<sup>134</sup> Cs	-6.1E-05 ± 4.9E-04	U
	<sup>137</sup> Cs	-1.6E-04 ± 4.8E-04	U		<sup>137</sup> Cs	3.2E-04 ± 4.1E-04	U
	<sup>152</sup> Eu	-5.2E-04 ± 1.2E-03	U		<sup>152</sup> Eu	-6.3E-04 ± 1.1E-03	U
	<sup>154</sup> Eu	-6.9E-04 ± 1.2E-03	U		<sup>154</sup> Eu	2.7E-04 ± 1.3E-03	U
	<sup>155</sup> Eu	1.2E-04 ± 8.3E-04	U		<sup>155</sup> Eu	2.0E-04 ± 9.2E-04	U
	<sup>238</sup> Pu	3.1E-07 ± 6.2E-07	U		<sup>238</sup> Pu	3.6E-08 ± 4.1E-07	U
	<sup>239,240</sup> Pu	1.7E-07 ± 1.1E-06	U		<sup>239,240</sup> Pu	-1.2E-07 ± 9.6E-07	U
	<sup>106</sup> Ru	-5.7E-03 ± 5.3E-03	U		<sup>106</sup> Ru	-9.3E-05 ± 4.1E-03	U
	<sup>125</sup> Sb	-4.4E-04 ± 1.3E-03	U		<sup>125</sup> Sb	-7.4E-07 ± 9.8E-04	U
	<sup>90</sup> Sr	-2.4E-05 ± 5.2E-05	U		<sup>90</sup> Sr	-3.2E-05 ± 4.7E-05	U
<b>Yakima Barricade</b>				<b>Yakima Barricade</b>			
Sample Period				Sample Period			
08/27/04 - 09/07/04	<sup>234</sup> U	-2.3E-04 ± 2.0E-03	U		<sup>235</sup> U	-2.4E-05 ± 1.2E-04	U
	<sup>238</sup> U	1.1E-04 ± 8.1E-05					

RQ = Result Qualifier. U = The analyte was analyzed for but not detected.

### 3.0 SOIL AND VEGETATION MONITORING

The radionuclide content of soil and vegetation was measured to evaluate long-term trends in environmental accumulation of radioactivity in the 100, 200/600, and 300/400 Areas. Soil and vegetation samples were collected on or near facilities that store, handle, or dispose of radioactive waste. The number of soil and vegetation samples collected in 2004 and their locations are shown in Table 3-1.

Table 3-1. Soil and Vegetation Samples Collected During 2004.

Sample Type	Number of Sampling Locations	Operational Area						
		100-B/C	100-F	100-K	100-N	ERDF <sup>b</sup>	200/600 <sup>a</sup>	300/400
Soil	83	2	2	1	7	1	56	14
Vegetation	69	0	0	0	6	0	49	14

<sup>a</sup>Even-numbered soil and vegetation sampling locations in the 200/600 Areas are sampled in even-numbered years.

<sup>b</sup>Environmental Restoration Disposal Facility in the 200 West Area.

Soil sampling locations are illustrated in Figures 3-1 through 3-9. A summary of near-facility soil sampling results for selected radionuclides collected during 2004 is presented in Table 3-2. Historical soil sampling results for the 100, 200/600, and 300/400 Areas are displayed in Table 3-3. The 2004 soil sampling results for all areas are provided in Table 3-4.

Vegetation sampling locations are illustrated in Figures 3-10 through 3-15. A summary of near-facility vegetation sampling results for selected radionuclides collected during 2004 is presented in Table 3-5. Historical vegetation sampling results for the 100-N, 200/600, and 300/400 Areas are displayed in Table 3-6. The 2004 vegetation sampling results for all areas are provided in Table 3-7.

Radionuclide analyses indicated that strontium-90, cesium-137, plutonium-239/240, and uranium were consistently detectable in both soil and vegetation samples in 2004. Generally, the predominant radionuclides observed in soil samples were activation and fission products in the 100 Areas, fission products in the 200 Areas, and uranium in the 300 Area. For vegetation samples, the predominant radionuclides were generally activation and fission products in the 100 Areas, fission products in the 200 Areas, and uranium in the 300 Area.

Strontium-90 results for soil and vegetation samples for this report period showed a frequent occurrence of negative (i.e., less than zero) concentrations. This was primarily due to changes in laboratory background correction calculations that were implemented during 2003. Both historical and current values are within accepted statistical ranges as evidenced by laboratory QA and performance evaluation programs.

Additional discussion of the 2004 soil and vegetation results can be found in Sections 8.9.1 and 8.10.2 of PNNL-15222.

Figure 3-1. 2004 Soil Sampling Locations, 100-B/C Area.

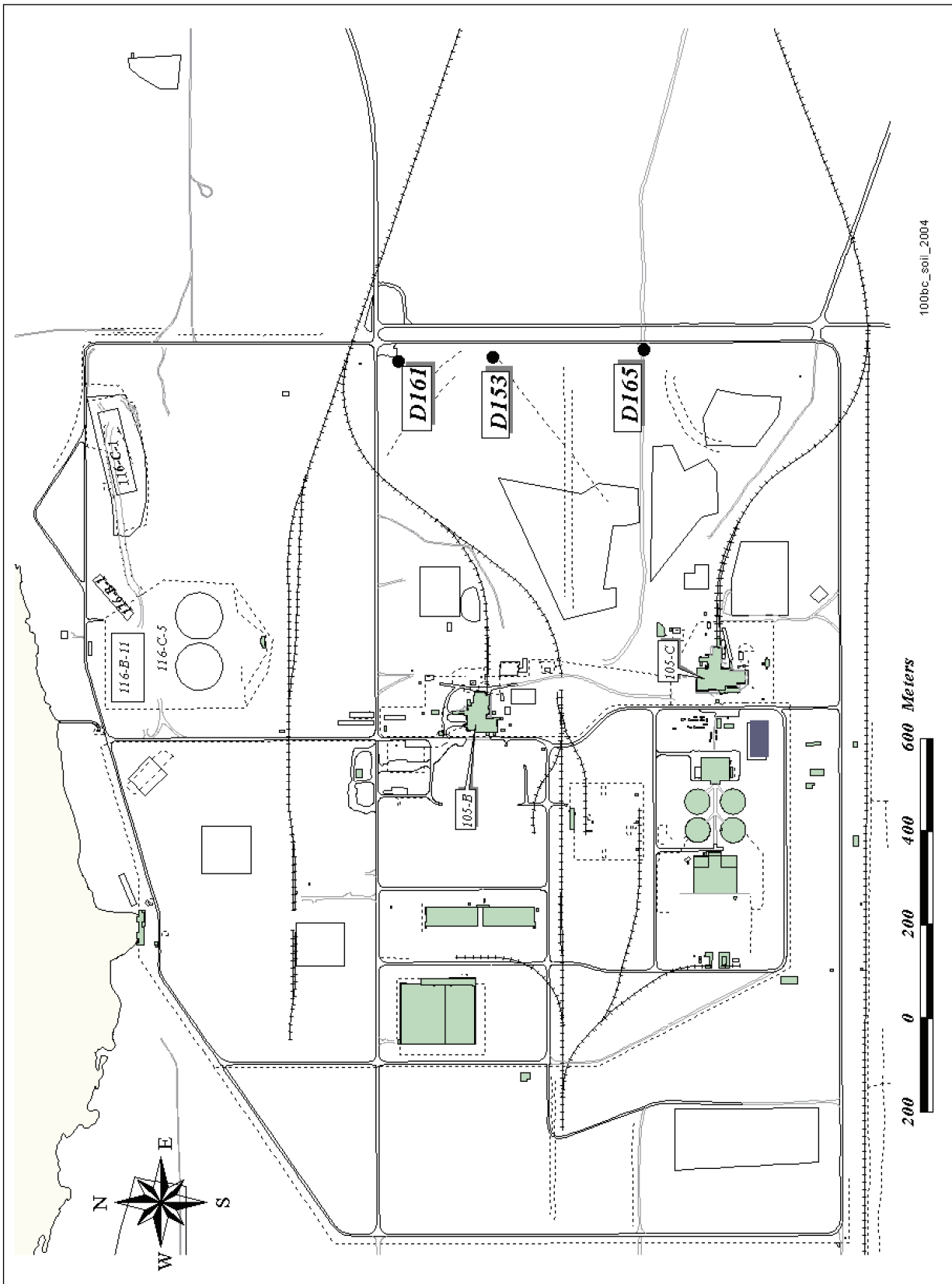




Figure 3-2. 2004 Soil Sampling Locations, 100-F Area.

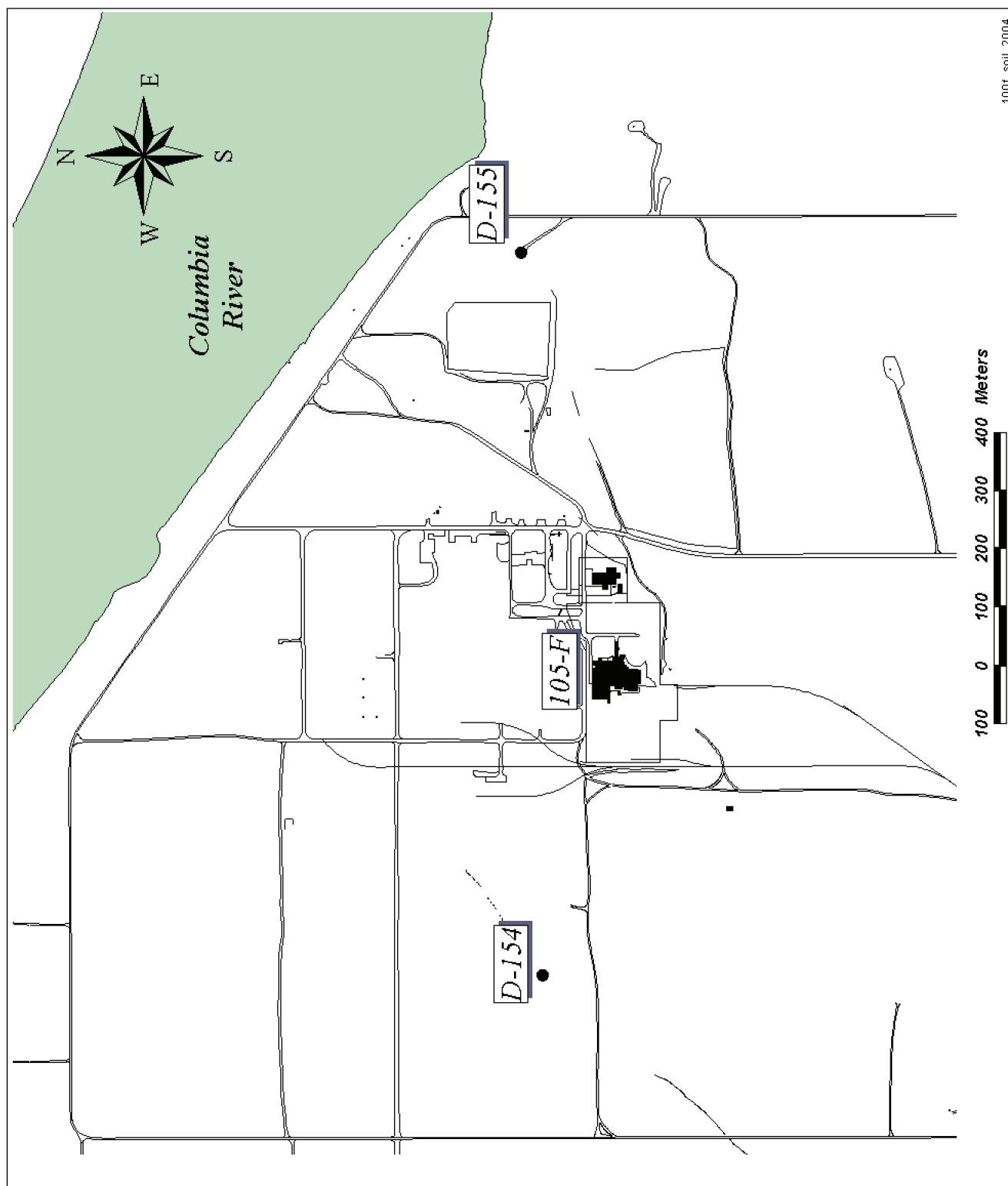


Figure 3-3. 2004 Soil Sampling Locations, 100-K Area.

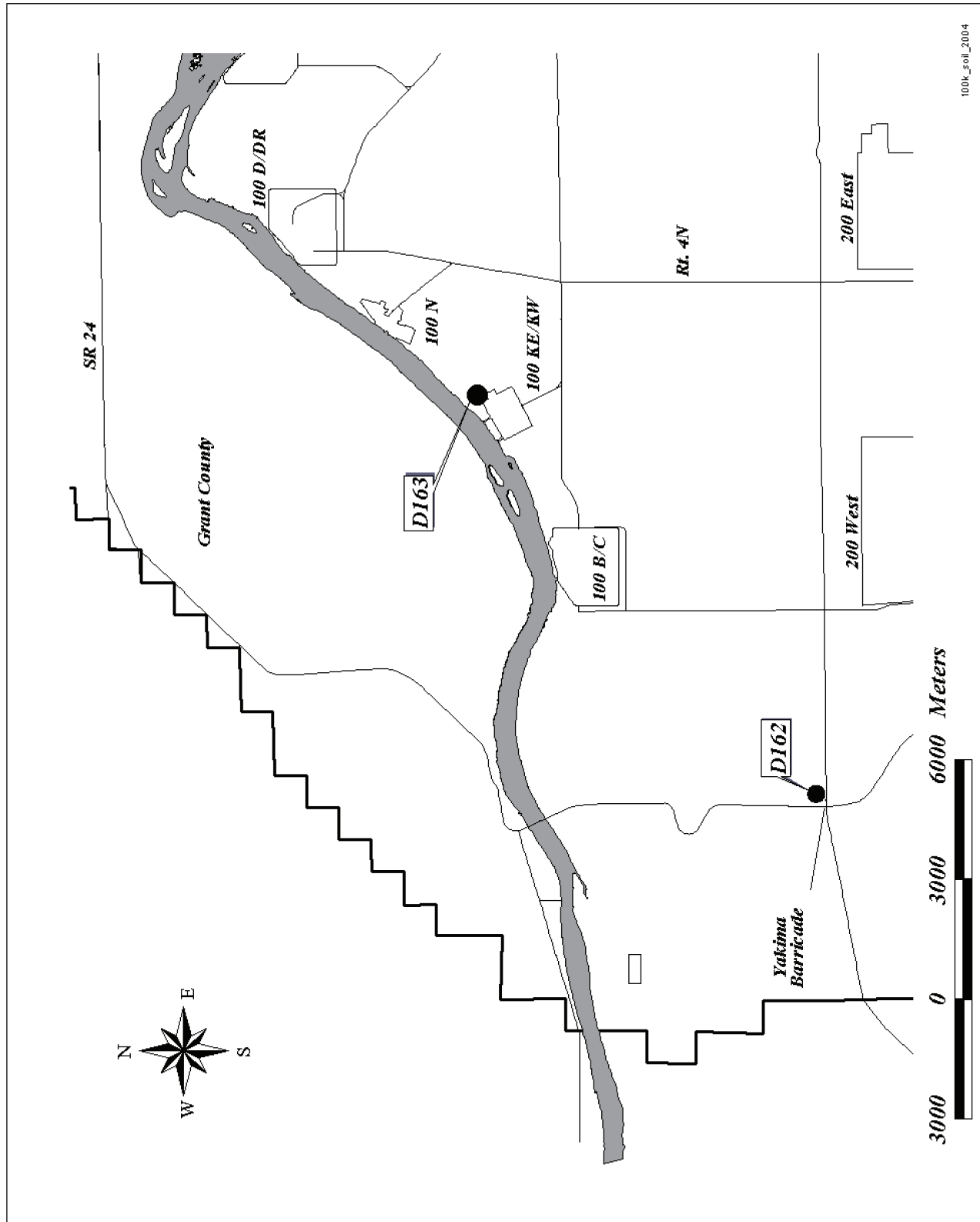
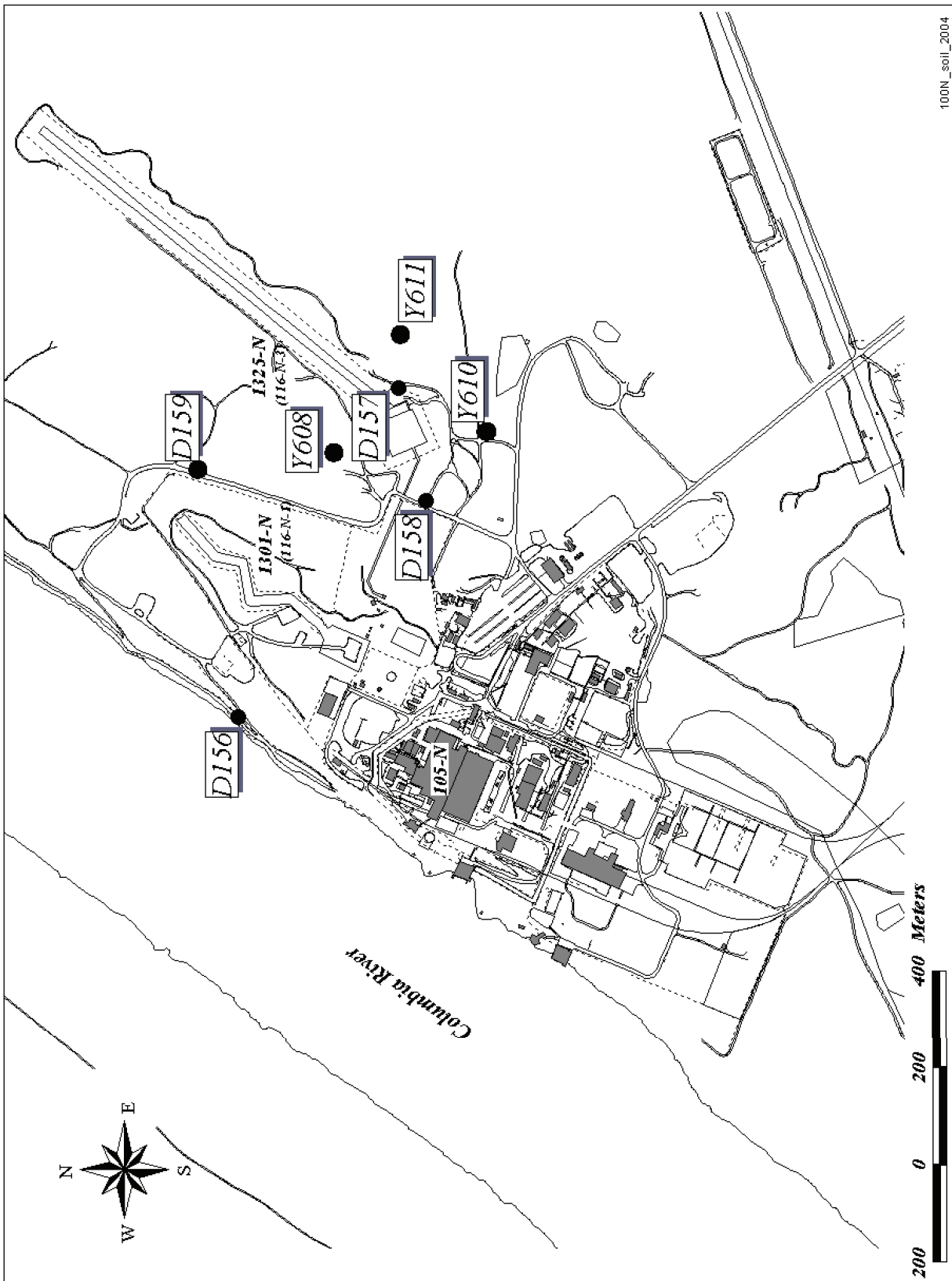


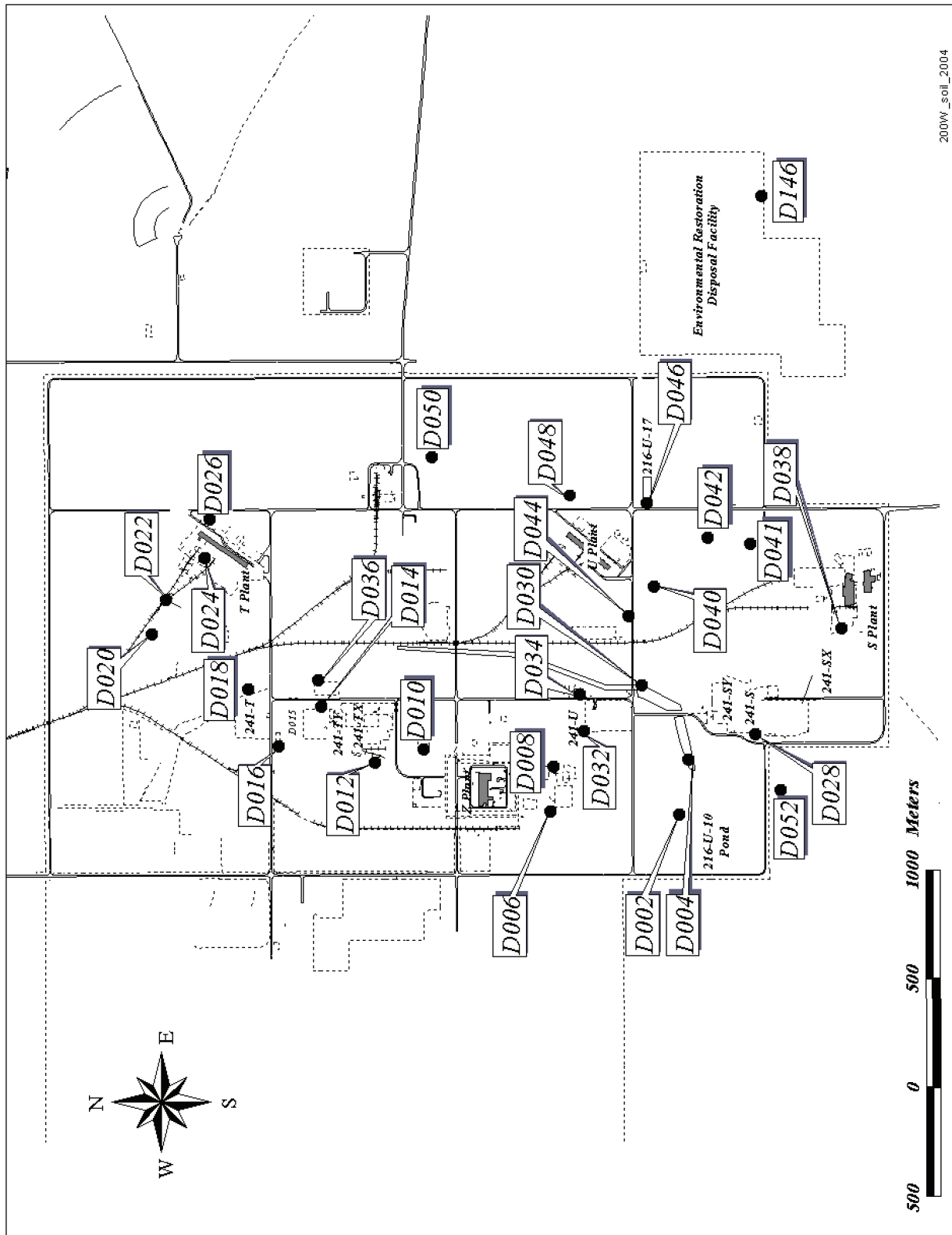
Figure 3-4. 2004 Soil Sampling Locations, 100-N Area.



100N\_soil\_2004

The map displays a complex network of roads and pathways. Key locations are marked with codes in boxes: D054, D056, D060, D062, D064, D066, D068, D070, D072, D074, D076, D078, D080, and D082. Other labels include 218-E-10, 218-E-12B, 218-E-12A, 218-E-1, 218-E-12C, 216-B-62, 216-B-12, 216-B-64, 216-B-66, 216-B-68, 216-B-70, 216-B-72, 216-B-74, 216-B-76, 216-B-78, 216-B-80, 216-B-82, 216-B-84, 216-B-86, 216-B-88, 216-B-90, 216-B-92, 216-B-94, 216-B-96, 216-B-98, 216-B-100, 216-B-102, 216-B-104, 216-B-106, 216-B-108, 216-B-110, 216-B-112, 216-B-114, 216-B-116, 216-B-118, 216-B-120, 216-B-122, 216-B-124, 216-B-126, 216-B-128, 216-B-130, 216-B-132, 216-B-134, 216-B-136, 216-B-138, 216-B-140, 216-B-142, 216-B-144, 216-B-146, 216-B-148, 216-B-150, 216-B-152, 216-B-154, 216-B-156, 216-B-158, 216-B-160, 216-B-162, 216-B-164, 216-B-166, 216-B-168, 216-B-170, 216-B-172, 216-B-174, 216-B-176, 216-B-178, 216-B-180, 216-B-182, 216-B-184, 216-B-186, 216-B-188, 216-B-190, 216-B-192, 216-B-194, 216-B-196, 216-B-198, 216-B-200, 216-B-202, 216-B-204, 216-B-206, 216-B-208, 216-B-210, 216-B-212, 216-B-214, 216-B-216, 216-B-218, 216-B-220, 216-B-222, 216-B-224, 216-B-226, 216-B-228, 216-B-230, 216-B-232, 216-B-234, 216-B-236, 216-B-238, 216-B-240, 216-B-242, 216-B-244, 216-B-246, 216-B-248, 216-B-250, 216-B-252, 216-B-254, 216-B-256, 216-B-258, 216-B-260, 216-B-262, 216-B-264, 216-B-266, 216-B-268, 216-B-270, 216-B-272, 216-B-274, 216-B-276, 216-B-278, 216-B-280, 216-B-282, 216-B-284, 216-B-286, 216-B-288, 216-B-290, 216-B-292, 216-B-294, 216-B-296, 216-B-298, 216-B-300, 216-B-302, 216-B-304, 216-B-306, 216-B-308, 216-B-310, 216-B-312, 216-B-314, 216-B-316, 216-B-318, 216-B-320, 216-B-322, 216-B-324, 216-B-326, 216-B-328, 216-B-330, 216-B-332, 216-B-334, 216-B-336, 216-B-338, 216-B-340, 216-B-342, 216-B-344, 216-B-346, 216-B-348, 216-B-350, 216-B-352, 216-B-354, 216-B-356, 216-B-358, 216-B-360, 216-B-362, 216-B-364, 216-B-366, 216-B-368, 216-B-370, 216-B-372, 216-B-374, 216-B-376, 216-B-378, 216-B-380, 216-B-382, 216-B-384, 216-B-386, 216-B-388, 216-B-390, 216-B-392, 216-B-394, 216-B-396, 216-B-398, 216-B-400, 216-B-402, 216-B-404, 216-B-406, 216-B-408, 216-B-410, 216-B-412, 216-B-414, 216-B-416, 216-B-418, 216-B-420, 216-B-422, 216-B-424, 216-B-426, 216-B-428, 216-B-430, 216-B-432, 216-B-434, 216-B-436, 216-B-438, 216-B-440, 216-B-442, 216-B-444, 216-B-446, 216-B-448, 216-B-450, 216-B-452, 216-B-454, 216-B-456, 216-B-458, 216-B-460, 216-B-462, 216-B-464, 216-B-466, 216-B-468, 216-B-470, 216-B-472, 216-B-474, 216-B-476, 216-B-478, 216-B-480, 216-B-482, 216-B-484, 216-B-486, 216-B-488, 216-B-490, 216-B-492, 216-B-494, 216-B-496, 216-B-498, 216-B-500, 216-B-502, 216-B-504, 216-B-506, 216-B-508, 216-B-510, 216-B-512, 216-B-514, 216-B-516, 216-B-518, 216-B-520, 216-B-522, 216-B-524, 216-B-526, 216-B-528, 216-B-530, 216-B-532, 216-B-534, 216-B-536, 216-B-538, 216-B-540, 216-B-542, 216-B-544, 216-B-546, 216-B-548, 216-B-550, 216-B-552, 216-B-554, 216-B-556, 216-B-558, 216-B-560, 216-B-562, 216-B-564, 216-B-566, 216-B-568, 216-B-570, 216-B-572, 216-B-574, 216-B-576, 216-B-578, 216-B-580, 216-B-582, 216-B-584, 216-B-586, 216-B-588, 216-B-590, 216-B-592, 216-B-594, 216-B-596, 216-B-598, 216-B-600, 216-B-602, 216-B-604, 216-B-606, 216-B-608, 216-B-610, 216-B-612, 216-B-614, 216-B-616, 216-B-618, 216-B-620, 216-B-622, 216-B-624, 216-B-626, 216-B-628, 216-B-630, 216-B-632, 216-B-634, 216-B-636, 216-B-638, 216-B-640, 216-B-642, 216-B-644, 216-B-646, 216-B-648, 216-B-650, 216-B-652, 216-B-654, 216-B-656, 216-B-658, 216-B-660, 216-B-662, 216-B-664, 216-B-666, 216-B-668, 216-B-670, 216-B-672, 216-B-674, 216-B-676, 216-B-678, 216-B-680, 216-B-682, 216-B-684, 216-B-686, 216-B-688, 216-B-690, 216-B-692, 216-B-694, 216-B-696, 216-B-698, 216-B-700, 216-B-702, 216-B-704, 216-B-706, 216-B-708, 216-B-710, 216-B-712, 216-B-714, 216-B-716, 216-B-718, 216-B-720, 216-B-722, 216-B-724, 216-B-726, 216-B-728, 216-B-730, 216-B-732, 216-B-734, 216-B-736, 216-B-738, 216-B-740, 216-B-742, 216-B-744, 216-B-746, 216-B-748, 216-B-750, 216-B-752, 216-B-754, 216-B-756, 216-B-758, 216-B-760, 216-B-762, 216-B-764, 216-B-766, 216-B-768, 216-B-770, 216-B-772, 216-B-774, 216-B-776, 216-B-778, 216-B-780, 216-B-782, 216-B-784, 216-B-786, 216-B-788, 216-B-790, 216-B-792, 216-B-794, 216-B-796, 216-B-798, 216-B-800, 216-B-802, 216-B-804, 216-B-806, 216-B-808, 216-B-810, 216-B-812, 216-B-814, 216-B-816, 216-B-818, 216-B-820, 216-B-822,

Figure 3-6. 2004 Soil Sampling Locations, 200 West Area.



200W\_soil\_2004

Figure 3-7. 2004 Soil Sampling Locations, 300 Area.

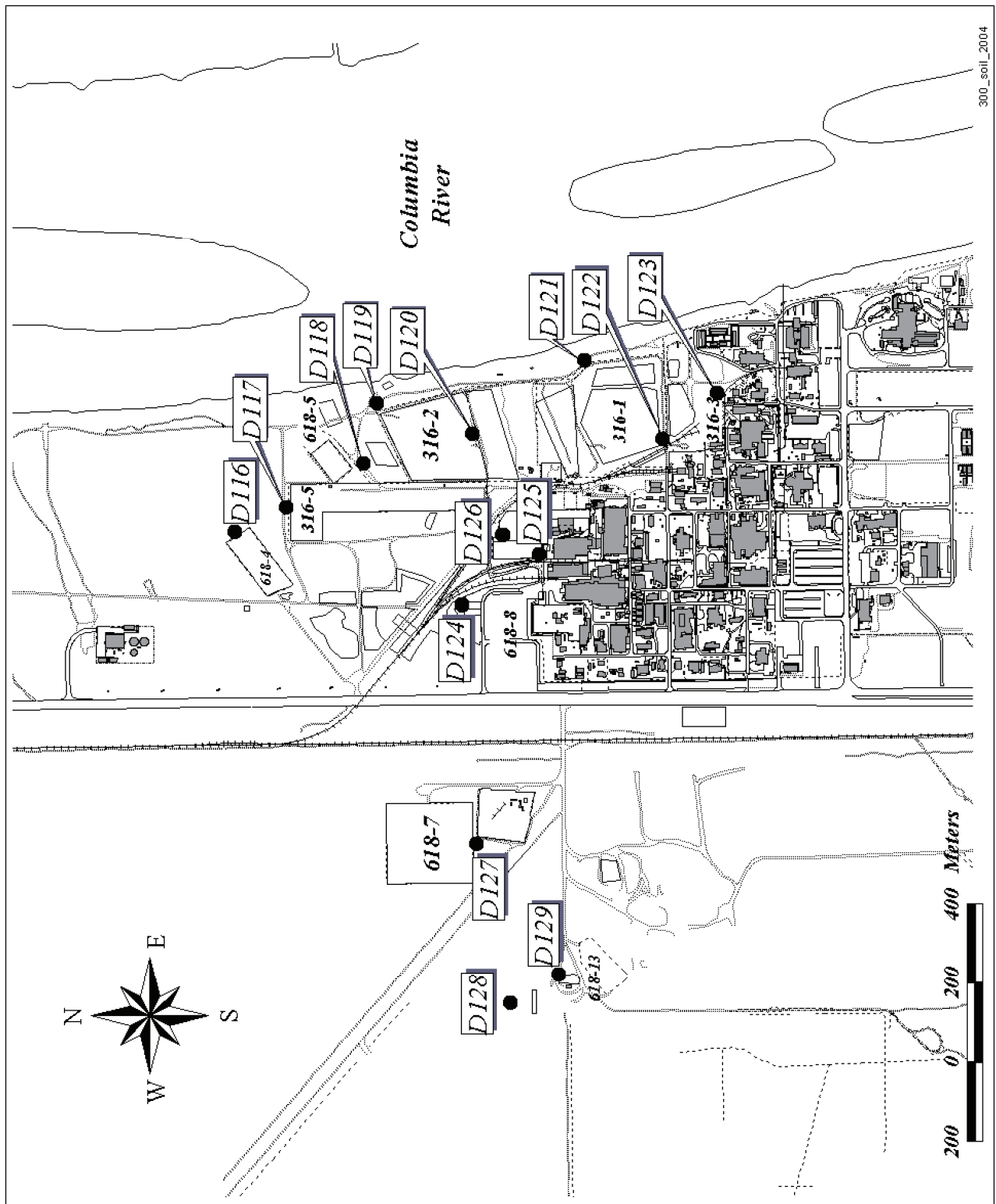


Figure 3-8. 2004 Soil Sampling Locations, 400 Area.

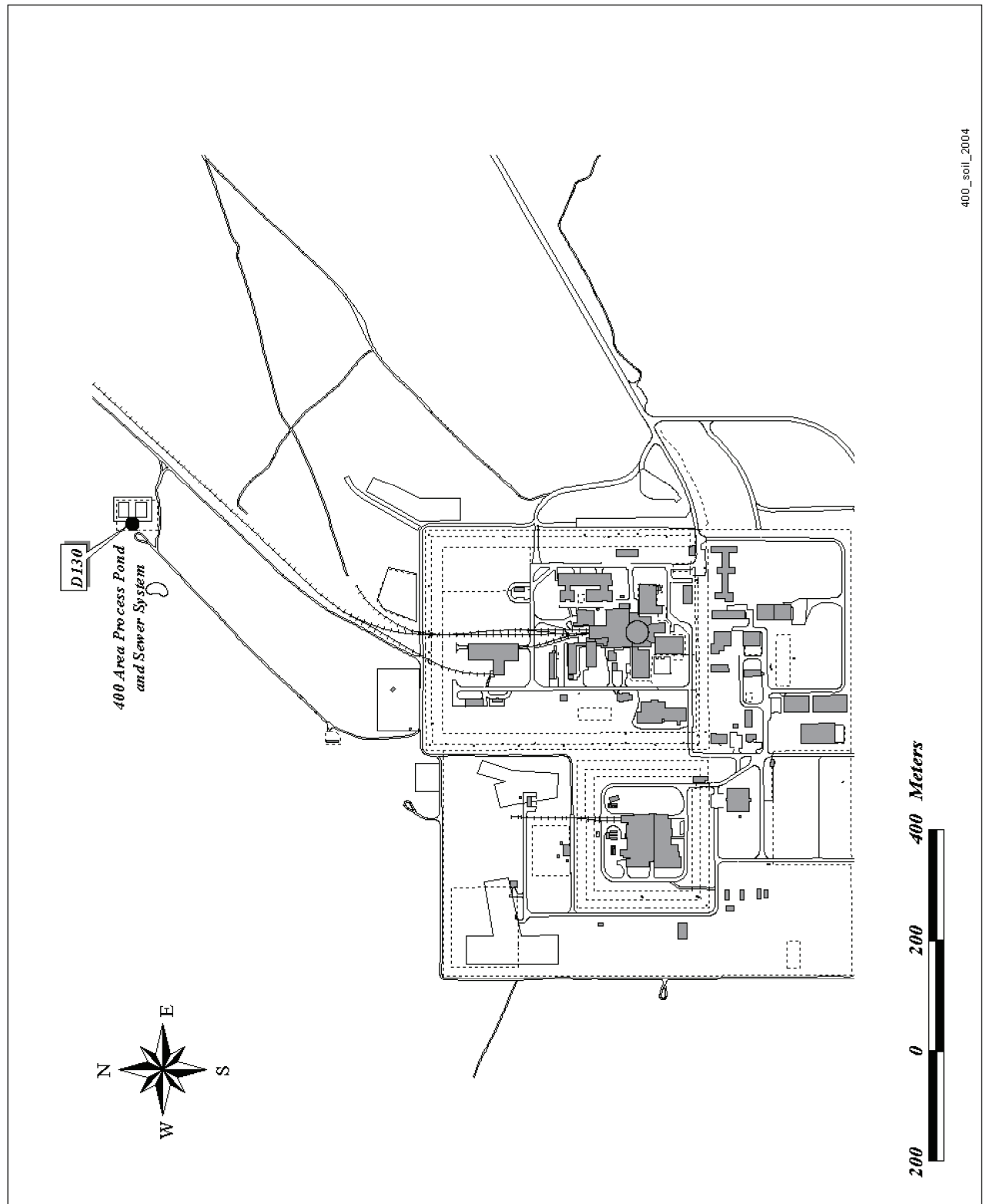


Figure 3-9. 2004 Soil Sampling Locations, 600 Area.

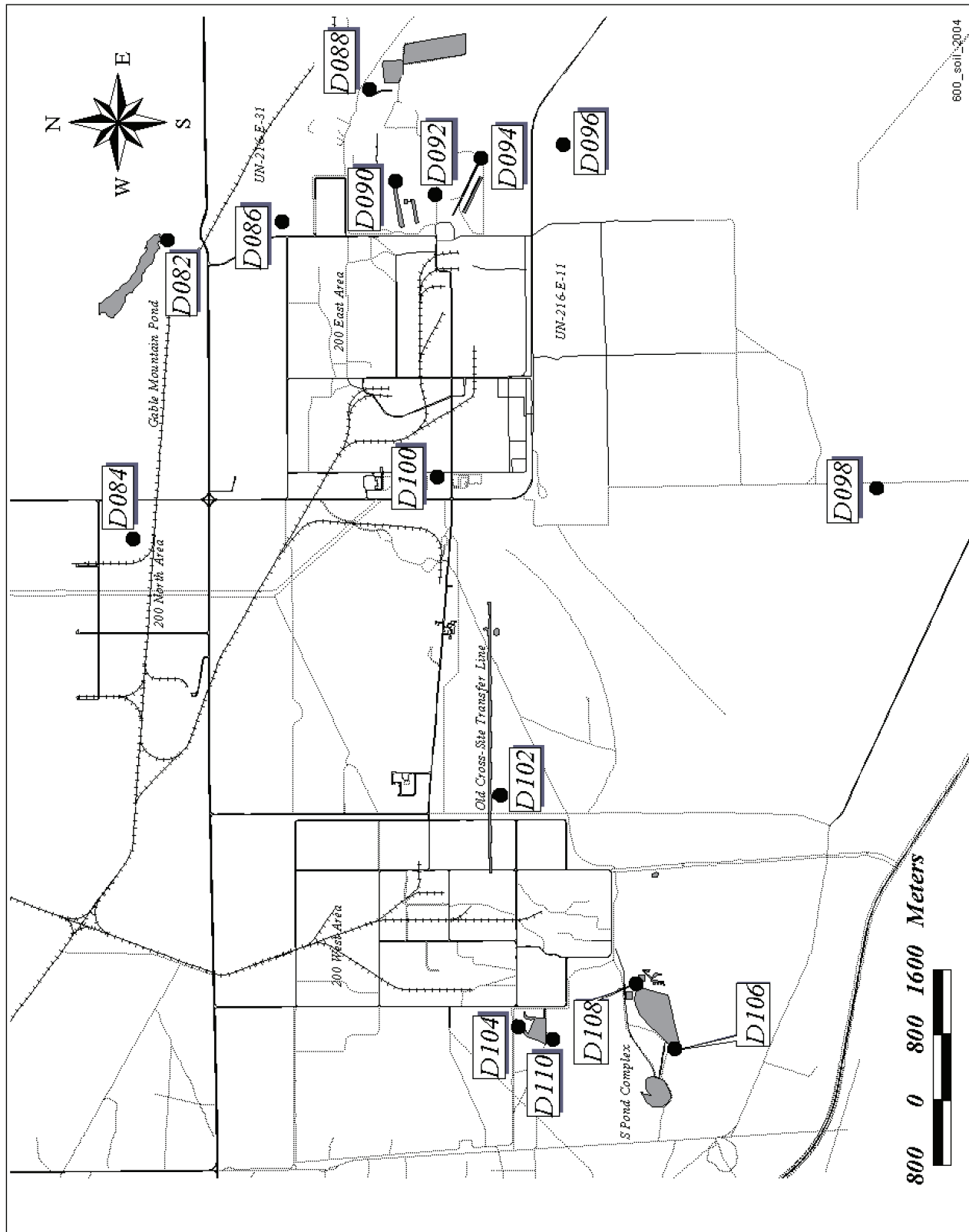




Table 3-2. Summary of Near-Facility Soil Sampling Results (pCi/g) for Selected Radionuclides, 2004.

Isotope	Number of		Mean <sup>a</sup>	Maximum <sup>b</sup>	Location	
	Detects	Samples			Area	Site ID
<sup>60</sup> Co	10	83	5.7E-02 ± 8.1E-01	3.7E+00 ± 3.4E-01	100-N	D157
<sup>134</sup> Cs	82	83	3.7E-02 ± 1.8E-02	5.8E-02 ± 2.4E-02	200 West	D040
<sup>137</sup> Cs	80	83	2.0E+00 ± 1.4E+01	6.1E+01 ± 9.7E+00	600 Area	D088
<sup>155</sup> Eu	17	83	3.5E-02 ± 4.5E-02	7.9E-02 ± 4.6E-02	600 Area	D088
<sup>239/240</sup> Pu	46	83	2.6E-01 ± 2.7E+00	1.2E+01 ± 3.1E+00	600 Area	D088
<sup>90</sup> Sr	14	83	3.9E-02 ± 7.3E-01	1.2E+00 ± 3.6E-01	200 West	D034
<sup>234</sup> U	83	83	3.0E-01 ± 1.3E+00	4.7E+00 ± 1.2E+00	300 Area	D119
<sup>235</sup> U	41	83	2.0E-02 ± 6.8E-02	2.4E-01 ± 7.7E-02	300 Area	D131
<sup>238</sup> U	83	83	3.0E-01 ± 1.4E+00	4.6E+00 ± 1.2E+00	300 Area	D119

<sup>a</sup> ± 2 standard deviations

<sup>b</sup> ± total analytical uncertainty

Table 3-3. Average Radionuclide Concentrations (pCi/g<sup>a</sup>)  
in Hanford Soils, 1995 through 2004.

<u>100 Areas</u>						
Year	<sup>60</sup> Co	<sup>90</sup> Sr	<sup>137</sup> Cs	<sup>234</sup> U	<sup>238</sup> U	<sup>239,240</sup> Pu
1995	9.4E-01 ± 9.9E+01	1.3E-01 ± 6.9E-02	5.1E-01 ± 2.4E-01	9.1E-02 ± 1.0E-02	9.7E-02 ± 2.7E-02	1.4E-02 ± 9.3E-03
1996	1.5E+00 ± 1.1E+00	2.0E-01 ± 7.6E-02	7.7E-01 ± 4.1E-01	5.7E-02 ± 8.0E-03	5.7E-01 ± 1.2E-01	4.3E-02 ± 1.6E-02
1997	2.5E+00 ± 3.0E-01	3.9E-01 ± 6.5E-01	8.9E-01 ± 8.9E-01	2.1E-01 ± 3.8E-02	2.1E-01 ± 3.4E-02	9.1E-01 ± 1.6E+00
1998	4.9E+00 ± 7.7E+00	1.2E+00 ± 1.1E+00	3.1E+00 ± 4.1E+00	2.1E-01 ± 6.0E-02	1.7E-01 ± 3.0E-02	1.5E-01 ± 1.3E-01
1999	1.6E+00 ± 2.1E+00	2.0E+00 ± 2.0E+00	8.4E-01 ± 8.1E-01	2.2E-01 ± 3.0E-02	2.0E-01 ± 3.0E-02	2.9E-02 ± 2.3E-02
2000	3.1E+00 ± 3.0E+00	8.4E-01 ± 4.5E-01	2.5E+00 ± 2.3E+00	2.2E-01 ± 8.7E-02	2.2E-01 ± 3.2E-02	5.8E-02 ± 3.3E-02
2001	4.0E-01 ± 3.4E-01	4.8E-01 ± 3.0E-01	3.9E-01 ± 1.6E-01	2.4E-01 ± 3.6E-02	2.5E-01 ± 2.7E-02	3.1E-02 ± 2.0E-02
2002	3.0E-01 ± 1.1E+00	1.5E-01 ± 4.7E-01	2.6E-01 ± 5.1E-01	1.3E-01 ± 4.7E-02	1.1E-01 ± 3.9E-02	6.1E-03 ± 6.1E-03
2003	1.8E-01 ± 2.1E-02	-8.2E-02 ± 2.4E-01	2.1E-01 ± 3.6E-02	1.4E-01 ± 4.8E-02	1.5E-01 ± 5.1E-02	1.8E-03 ± 6.3E-03
2004	3.9E-01 ± 2.0E+00	-1.3E-01 ± 5.7E-01	3.8E-01 ± 1.1E+00	1.3E-01 ± 5.9E-02	1.4E-01 ± 6.4E-02	1.1E-01 ± 6.0E-01

<u>200/600 Areas</u>						
Year	<sup>60</sup> Co	<sup>90</sup> Sr	<sup>137</sup> Cs	<sup>234</sup> U	<sup>238</sup> U	<sup>239,240</sup> Pu
1995	4.0E-03 ± 4.0E-03	4.9E-01 ± 1.8E-01	2.7E+00 ± 1.1E+00	1.2E-01 ± 1.7E-02	1.2E-01 ± 1.6E-02	7.0E-02 ± 3.0E-02
1996	3.0E-03 ± 3.0E-03	3.5E-01 ± 2.0E-01	2.0E+00 ± 7.0E-01	1.0E-01 ± 1.2E-02	1.1E-01 ± 1.2E-02	1.6E-01 ± 1.0E-01
1997	3.0E-02 ± 2.0E-02	6.7E-01 ± 2.3E-01	1.8E+00 ± 4.0E-01	2.0E-01 ± 1.4E-02	2.0E-01 ± 1.4E-02	1.0E-01 ± 7.0E-02
1998	1.9E-02 ± 6.0E-03	5.0E-01 ± 1.4E-01	1.1E+00 ± 4.0E-01	1.9E-01 ± 1.0E-02	1.9E-01 ± 1.0E-02	1.3E-01 ± 1.0E-02
1999	Not Detected	1.1E+00 ± 5.0E-01	1.4E+00 ± 5.0E-01	2.3E-01 ± 2.0E-02	2.2E-01 ± 2.0E-02	1.0E-01 ± 5.0E-02
2000	6.0E-03 ± 6.0E-03	1.1E+00 ± 2.0E-01	1.4E+00 ± 5.0E-01	2.3E-01 ± 3.0E-02	2.3E-01 ± 3.0E-02	4.1E-01 ± 4.2E-01
2001	Not Detected	5.5E-01 ± 2.3E-01	1.5E+00 ± 5.4E-01	2.2E-01 ± 1.4E-02	2.2E-01 ± 1.4E-02	1.3E-01 ± 6.2E-02
2002	Not Detected	2.7E-01 ± 6.6E-01	1.4E+00 ± 4.3E+00	1.7E-01 ± 1.0E-01	1.7E-01 ± 1.1E-01	1.2E-01 ± 7.2E-01
2003	2.4E-03 ± 1.3E-02	8.4E-02 ± 6.3E-01	1.8E+00 ± 6.3E-01	1.6E-01 ± 9.6E-02	1.7E-01 ± 1.0E-01	9.3E-02 ± 5.0E-01
2004	8.1E-04 ± 1.1E-02	1.3E-01 ± 7.8E-01	2.8E+00 ± 1.7E+01	1.7E-01 ± 1.9E-01	1.7E-01 ± 1.5E-01	3.5E-01 ± 3.2E+00

<u>300/400 Areas</u>						
Year	<sup>60</sup> Co	<sup>90</sup> Sr	<sup>137</sup> Cs	<sup>234</sup> U	<sup>238</sup> U	<sup>239,240</sup> Pu
1995	2.0E-03 ± 1.0E-03	5.0E-02 ± 2.0E-02	2.4E-01 ± 1.1E-01	2.1E+00 ± 2.0E+00	2.1E+00 ± 2.1E+00	2.6E-02 ± 2.4E-02
1996	2.0E-03 ± 6.0E-03	4.0E-02 ± 1.0E-02	1.5E-01 ± 7.0E-02	1.3E+00 ± 1.0E+00	1.2E+00 ± 1.0E+00	2.5E-02 ± 3.3E-02
1997	Not Detected	4.5E-01 ± 1.9E-01	7.0E-02 ± 3.0E-02	9.0E-01 ± 1.0E-01	9.0E-01 ± 9.0E-01	3.8E-02 ± 4.9E-02
1998	Not Detected	2.4E-01 ± 1.2E-01	9.0E-02 ± 8.0E-02	8.5E-01 ± 9.8E-01	8.2E-01 ± 9.8E-01	4.5E-02 ± 5.7E-02
1999	Not Detected	8.7E-01 ± 1.9E-01	9.0E-02 ± 3.0E-02	7.5E-01 ± 5.4E-01	7.1E-01 ± 5.3E-01	4.0E-02 ± 2.0E-02
2000	Not Detected	5.9E-01 ± 1.8E-01	1.4E-01 ± 6.0E-02	5.4E+00 ± 5.6E+00	5.4E+00 ± 5.7E+00	1.7E-01 ± 8.0E-02
2001	Not Detected	Not Detected	5.0E-02 ± 2.1E-02	9.4E-01 ± 7.1E-01	9.5E-01 ± 7.3E-01	4.1E-02 ± 2.6E-02
2002	Not Detected	2.8E-02 ± 2.9E-02	7.4E-02 ± 1.3E-01	1.5E+00 ± 6.4E+00	1.5E+00 ± 6.4E+00	2.4E-02 ± 9.9E-02
2003	Not Detected	5.6E-02 ± 7.3E-02	8.1E-02 ± 1.4E-01	1.3E+00 ± 5.1E+00	1.3E+00 ± 5.2E+00	7.5E-02 ± 3.8E-01
2004	Not Detected	Not Detected	9.2E-02 ± 1.4E-01	9.6E-01 ± 2.9E+00	9.7E-01 ± 3.0E+00	2.8E-02 ± 6.7E-02

<sup>a</sup> ± 2 standard deviations

Table 3-4. 2004 Soil Sampling Results (pCi/g  $\pm$  total analytical uncertainty). (21 sheets total)

Location	Isotope	Result $\pm$ Error	RQ*	Location	Isotope	Result $\pm$ Error	RQ*
<b>D146</b> (ERDF)	<sup>144</sup> Ce	5.5E-02 $\pm$ 1.1E-01	U	<b>D153</b> (100-B/C Remedial Action)	<sup>144</sup> Ce	-4.4E-02 $\pm$ 1.2E-01	U
	<sup>60</sup> Co	3.0E-03 $\pm$ 5.2E-03	U		<sup>60</sup> Co	3.5E-04 $\pm$ 3.5E-03	U
	<sup>134</sup> Cs	2.7E-02 $\pm$ 8.4E-03			<sup>134</sup> Cs	3.2E-02 $\pm$ 1.3E-02	
	<sup>137</sup> Cs	9.0E-04 $\pm$ 5.6E-03	U		<sup>137</sup> Cs	2.7E-01 $\pm$ 4.5E-02	
	<sup>152</sup> Eu	1.2E-03 $\pm$ 1.2E-02	U		<sup>152</sup> Eu	8.1E-04 $\pm$ 8.1E-03	U
	<sup>154</sup> Eu	4.3E-03 $\pm$ 2.9E-02	U		<sup>154</sup> Eu	-1.7E-04 $\pm$ 1.7E-03	U
	<sup>155</sup> Eu	4.8E-02 $\pm$ 3.0E-02			<sup>155</sup> Eu	4.9E-02 $\pm$ 3.4E-02	
	<sup>238</sup> Pu	2.8E-03 $\pm$ 3.9E-03	U		<sup>238</sup> Pu	5.1E-03 $\pm$ 6.1E-03	U
	<sup>239/240</sup> Pu	1.4E-03 $\pm$ 1.4E-02	U		<sup>239/240</sup> Pu	1.3E-03 $\pm$ 2.6E-03	U
	<sup>103</sup> Ru	-2.5E-04 $\pm$ 2.5E-03	U		<sup>103</sup> Ru	4.8E-03 $\pm$ 9.3E-03	U
	<sup>106</sup> Ru	5.2E-02 $\pm$ 5.3E-02	U		<sup>106</sup> Ru	7.6E-03 $\pm$ 5.0E-02	U
	<sup>125</sup> Sb	4.0E-03 $\pm$ 1.5E-02	U		<sup>125</sup> Sb	9.9E-03 $\pm$ 1.7E-02	U
	<sup>113</sup> Sn	-2.6E-03 $\pm$ 7.8E-03	U		<sup>113</sup> Sn	-1.1E-05 $\pm$ 1.1E-04	U
	<sup>90</sup> Sr	-1.7E-01 $\pm$ 2.3E-01	U		<sup>90</sup> Sr	4.5E-02 $\pm$ 2.4E-01	U
	<sup>234</sup> U	2.4E-01 $\pm$ 7.9E-02			<sup>234</sup> U	1.4E-01 $\pm$ 4.9E-02	
	<sup>235</sup> U	9.0E-03 $\pm$ 1.1E-02			<sup>235</sup> U	8.7E-03 $\pm$ 8.7E-03	
	<sup>238</sup> U	1.5E-01 $\pm$ 5.7E-02			<sup>238</sup> U	1.0E-01 $\pm$ 3.8E-02	
	<sup>65</sup> Zn	-3.7E-03 $\pm$ 1.6E-02	U		<sup>65</sup> Zn	-1.5E-02 $\pm$ 1.8E-02	U
<b>D165</b> (100-B/C Remedial Action)	<sup>144</sup> Ce	9.8E-02 $\pm$ 1.1E-01	U	<b>D154</b> (100-F Remedial Action)	<sup>144</sup> Ce	-7.8E-02 $\pm$ 1.2E-01	U
	<sup>60</sup> Co	1.6E-04 $\pm$ 1.6E-03	U		<sup>60</sup> Co	7.0E-03 $\pm$ 6.8E-03	U
	<sup>134</sup> Cs	3.1E-02 $\pm$ 9.0E-03			<sup>134</sup> Cs	3.6E-02 $\pm$ 1.2E-02	
	<sup>137</sup> Cs	1.3E-01 $\pm$ 2.3E-02			<sup>137</sup> Cs	2.9E-02 $\pm$ 9.8E-03	
	<sup>152</sup> Eu	-5.4E-03 $\pm$ 1.7E-02	U		<sup>152</sup> Eu	8.1E-02 $\pm$ 1.8E-02	
	<sup>154</sup> Eu	7.7E-04 $\pm$ 7.7E-03	U		<sup>154</sup> Eu	-2.8E-03 $\pm$ 2.1E-02	U
	<sup>155</sup> Eu	4.3E-02 $\pm$ 3.1E-02			<sup>155</sup> Eu	3.6E-02 $\pm$ 3.7E-02	U
	<sup>238</sup> Pu	-2.2E-02 $\pm$ 3.1E-02	U		<sup>238</sup> Pu	-1.4E-03 $\pm$ 4.9E-03	U
	<sup>239/240</sup> Pu	1.7E-03 $\pm$ 9.0E-03	U		<sup>239/240</sup> Pu	2.8E-03 $\pm$ 3.9E-03	U
	<sup>103</sup> Ru	-4.1E-03 $\pm$ 8.4E-03	U		<sup>103</sup> Ru	-5.2E-04 $\pm$ 5.2E-03	U
	<sup>106</sup> Ru	1.2E-02 $\pm$ 4.8E-02	U		<sup>106</sup> Ru	2.8E-02 $\pm$ 5.5E-02	U
	<sup>125</sup> Sb	-2.4E-03 $\pm$ 1.6E-02	U		<sup>125</sup> Sb	-1.8E-03 $\pm$ 1.7E-02	U
	<sup>113</sup> Sn	-1.3E-03 $\pm$ 8.2E-03	U		<sup>113</sup> Sn	-3.5E-03 $\pm$ 9.3E-03	U
	<sup>90</sup> Sr	-3.3E-01 $\pm$ 3.3E-01	U		<sup>90</sup> Sr	-4.1E-01 $\pm$ 4.1E-01	U
	<sup>234</sup> U	8.8E-02 $\pm$ 4.2E-02			<sup>234</sup> U	1.4E-01 $\pm$ 4.8E-02	
	<sup>235</sup> U	1.8E-02 $\pm$ 1.7E-02			<sup>235</sup> U	6.0E-03 $\pm$ 1.2E-02	U
	<sup>238</sup> U	1.2E-01 $\pm$ 5.0E-02			<sup>238</sup> U	2.1E-01 $\pm$ 6.3E-02	
	<sup>65</sup> Zn	-6.7E-03 $\pm$ 1.6E-02	U		<sup>65</sup> Zn	-5.1E-03 $\pm$ 2.8E-02	U

RQ = Result Qualifier. U = The analyte was analyzed for but not detected.

Table 3-4. 2004 Soil Sampling Results (pCi/g  $\pm$  total analytical uncertainty). (21 sheets total)

Location	Isotope	Result $\pm$ Error	RQ*	Location	Isotope	Result $\pm$ Error	RQ*
D155 (100-F Remedial Action)	<sup>144</sup> Ce	7.5E-02 $\pm$ 1.7E-01	U	D163 (100-KR-1 Remedial Action)	<sup>144</sup> Ce	-5.7E-02 $\pm$ 2.0E-01	U
	<sup>60</sup> Co	-2.9E-04 $\pm$ 2.9E-03	U		<sup>60</sup> Co	1.6E-02 $\pm$ 7.8E-03	
	<sup>134</sup> Cs	3.7E-02 $\pm$ 1.8E-02			<sup>134</sup> Cs	4.3E-02 $\pm$ 1.5E-02	
	<sup>137</sup> Cs	2.5E-01 $\pm$ 4.4E-02			<sup>137</sup> Cs	3.1E-01 $\pm$ 5.8E-02	
	<sup>152</sup> Eu	2.3E-01 $\pm$ 3.7E-02			<sup>152</sup> Eu	2.3E-01 $\pm$ 3.2E-02	
	<sup>154</sup> Eu	-1.5E-02 $\pm$ 3.2E-02	U		<sup>154</sup> Eu	4.3E-02 $\pm$ 5.1E-02	U
	<sup>155</sup> Eu	2.0E-02 $\pm$ 3.6E-02	U		<sup>155</sup> Eu	4.3E-02 $\pm$ 4.9E-02	U
	<sup>238</sup> Pu	-5.2E-03 $\pm$ 2.6E-02	U		<sup>238</sup> Pu	-1.0E-02 $\pm$ 4.8E-02	U
	<sup>239/240</sup> Pu	1.4E-02 $\pm$ 1.3E-02	U		<sup>239/240</sup> Pu	1.1E+00 $\pm$ 3.0E-01	
	<sup>103</sup> Ru	-1.3E-02 $\pm$ 1.6E-02	U		<sup>103</sup> Ru	4.8E-04 $\pm$ 4.7E-03	U
	<sup>106</sup> Ru	6.2E-02 $\pm$ 1.3E-01	U		<sup>106</sup> Ru	6.4E-02 $\pm$ 8.8E-02	U
	<sup>125</sup> Sb	2.8E-02 $\pm$ 2.9E-02	U		<sup>125</sup> Sb	1.7E-03 $\pm$ 1.7E-02	U
	<sup>113</sup> Sn	-7.1E-03 $\pm$ 1.5E-02	U		<sup>113</sup> Sn	9.6E-03 $\pm$ 1.5E-02	U
	<sup>90</sup> Sr	-2.7E-01 $\pm$ 3.0E-01	U		<sup>90</sup> Sr	-8.0E-02 $\pm$ 2.2E-01	U
	<sup>234</sup> U	8.9E-02 $\pm$ 3.6E-02			<sup>234</sup> U	1.3E-01 $\pm$ 5.1E-02	
	<sup>235</sup> U	8.7E-03 $\pm$ 1.0E-02			<sup>235</sup> U	5.1E-03 $\pm$ 1.0E-02	U
	<sup>238</sup> U	9.1E-02 $\pm$ 3.5E-02			<sup>238</sup> U	1.4E-01 $\pm$ 5.2E-02	
	<sup>65</sup> Zn	5.4E-02 $\pm$ 4.1E-02			<sup>65</sup> Zn	8.7E-02 $\pm$ 4.3E-02	
Y608 (100-N)	<sup>144</sup> Ce	4.9E-02 $\pm$ 1.5E-01	U	Y610 (100-N)	<sup>144</sup> Ce	-2.7E-02 $\pm$ 1.3E-01	U
	<sup>60</sup> Co	3.3E-01 $\pm$ 3.4E-02			<sup>60</sup> Co	2.8E-02 $\pm$ 1.0E-02	
	<sup>134</sup> Cs	2.8E-02 $\pm$ 1.3E-02			<sup>134</sup> Cs	4.0E-02 $\pm$ 1.4E-02	
	<sup>137</sup> Cs	3.6E-01 $\pm$ 6.7E-02			<sup>137</sup> Cs	2.2E-01 $\pm$ 3.7E-02	
	<sup>152</sup> Eu	2.5E-02 $\pm$ 3.7E-02	U		<sup>152</sup> Eu	8.9E-03 $\pm$ 2.4E-02	U
	<sup>154</sup> Eu	5.4E-03 $\pm$ 2.4E-02	U		<sup>154</sup> Eu	-7.3E-03 $\pm$ 2.1E-02	U
	<sup>155</sup> Eu	3.4E-02 $\pm$ 3.8E-02	U		<sup>155</sup> Eu	3.1E-02 $\pm$ 2.9E-02	U
	<sup>238</sup> Pu	5.8E-03 $\pm$ 7.0E-03	U		<sup>238</sup> Pu	-9.4E-03 $\pm$ 3.3E-02	U
	<sup>239/240</sup> Pu	5.8E-03 $\pm$ 7.0E-03	U		<sup>239/240</sup> Pu	5.6E-03 $\pm$ 1.1E-02	U
	<sup>103</sup> Ru	8.1E-03 $\pm$ 1.2E-02	U		<sup>103</sup> Ru	-5.4E-03 $\pm$ 1.0E-02	U
	<sup>106</sup> Ru	3.5E-02 $\pm$ 8.0E-02	U		<sup>106</sup> Ru	1.5E-02 $\pm$ 5.8E-02	U
	<sup>125</sup> Sb	-7.6E-03 $\pm$ 2.1E-02	U		<sup>125</sup> Sb	7.4E-03 $\pm$ 1.9E-02	U
	<sup>113</sup> Sn	8.7E-04 $\pm$ 8.7E-03	U		<sup>113</sup> Sn	-1.7E-03 $\pm$ 9.8E-03	U
	<sup>90</sup> Sr	-8.4E-02 $\pm$ 2.6E-01	U		<sup>90</sup> Sr	-4.0E-01 $\pm$ 4.0E-01	U
	<sup>234</sup> U	1.9E-01 $\pm$ 5.5E-02			<sup>234</sup> U	1.3E-01 $\pm$ 4.8E-02	
	<sup>235</sup> U	9.4E-03 $\pm$ 9.4E-03			<sup>235</sup> U	7.3E-03 $\pm$ 1.0E-02	U
	<sup>238</sup> U	1.7E-01 $\pm$ 5.1E-02			<sup>238</sup> U	1.3E-01 $\pm$ 4.9E-02	
	<sup>65</sup> Zn	2.2E-04 $\pm$ 2.2E-03	U		<sup>65</sup> Zn	-7.2E-03 $\pm$ 1.9E-02	U

RQ = Result Qualifier. U = The analyte was analyzed for but not detected.

Table 3-4. 2004 Soil Sampling Results (pCi/g  $\pm$  total analytical uncertainty). (21 sheets total)

Location	Isotope	Result $\pm$ Error	RQ*	Location	Isotope	Result $\pm$ Error	RQ*
Y611 (100-N)	<sup>144</sup> Ce	3.1E-02 $\pm$ 1.2E-01	U	D156 (100-NR-1 Remedial Action)	<sup>144</sup> Ce	1.2E-02 $\pm$ 1.1E-01	U
	<sup>60</sup> Co	2.2E-01 $\pm$ 2.5E-02			<sup>60</sup> Co	2.8E-02 $\pm$ 8.5E-03	
	<sup>134</sup> Cs	3.9E-02 $\pm$ 1.4E-02			<sup>134</sup> Cs	2.9E-02 $\pm$ 1.1E-02	
	<sup>137</sup> Cs	2.5E-01 $\pm$ 4.2E-02			<sup>137</sup> Cs	6.0E-02 $\pm$ 1.7E-02	
	<sup>152</sup> Eu	-1.0E-02 $\pm$ 2.1E-02	U		<sup>152</sup> Eu	-9.6E-03 $\pm$ 1.8E-02	U
	<sup>154</sup> Eu	7.2E-03 $\pm$ 2.2E-02	U		<sup>154</sup> Eu	3.1E-04 $\pm$ 3.1E-03	U
	<sup>155</sup> Eu	4.0E-02 $\pm$ 3.3E-02	U		<sup>155</sup> Eu	3.0E-02 $\pm$ 2.7E-02	U
	<sup>238</sup> Pu	1.7E-03 $\pm$ 1.7E-02	U		<sup>238</sup> Pu	1.4E-03 $\pm$ 2.8E-03	U
	<sup>239/240</sup> Pu	1.7E-03 $\pm$ 1.7E-02	U		<sup>239/240</sup> Pu	1.4E-03 $\pm$ 6.3E-03	U
	<sup>103</sup> Ru	6.0E-03 $\pm$ 1.1E-02	U		<sup>103</sup> Ru	-2.9E-03 $\pm$ 9.7E-03	U
	<sup>106</sup> Ru	-2.3E-02 $\pm$ 6.8E-02	U		<sup>106</sup> Ru	4.7E-02 $\pm$ 5.4E-02	U
	<sup>125</sup> Sb	-1.6E-02 $\pm$ 1.9E-02	U		<sup>125</sup> Sb	5.7E-05 $\pm$ 5.6E-04	U
	<sup>113</sup> Sn	-9.2E-03 $\pm$ 1.0E-02	U		<sup>113</sup> Sn	-4.0E-04 $\pm$ 4.0E-03	U
	<sup>90</sup> Sr	-1.5E-01 $\pm$ 5.0E-01	U		<sup>90</sup> Sr	5.4E-01 $\pm$ 2.3E-01	
	<sup>234</sup> U	1.2E-01 $\pm$ 4.2E-02			<sup>234</sup> U	1.4E-01 $\pm$ 5.0E-02	
	<sup>235</sup> U	1.2E-02 $\pm$ 1.2E-02			<sup>235</sup> U	1.7E-02 $\pm$ 1.5E-02	U
	<sup>238</sup> U	1.4E-01 $\pm$ 4.8E-02			<sup>238</sup> U	1.5E-01 $\pm$ 5.3E-02	
	<sup>65</sup> Zn	-2.0E-02 $\pm$ 2.1E-02	U		<sup>65</sup> Zn	-2.0E-02 $\pm$ 2.0E-02	U
D157 (100-NR-1 Remedial Action)	<sup>144</sup> Ce	4.0E-02 $\pm$ 1.5E-01	U	D158 (100-NR-1 Remedial Action)	<sup>144</sup> Ce	-7.6E-02 $\pm$ 1.3E-01	U
	<sup>60</sup> Co	3.7E+00 $\pm$ 3.4E-01			<sup>60</sup> Co	1.7E-01 $\pm$ 2.0E-02	
	<sup>134</sup> Cs	3.1E-02 $\pm$ 1.5E-02			<sup>134</sup> Cs	4.0E-02 $\pm$ 1.2E-02	
	<sup>137</sup> Cs	2.1E+00 $\pm$ 3.4E-01			<sup>137</sup> Cs	2.4E-01 $\pm$ 4.3E-02	
	<sup>152</sup> Eu	-4.7E-03 $\pm$ 2.8E-02	U		<sup>152</sup> Eu	1.1E-02 $\pm$ 2.8E-02	U
	<sup>154</sup> Eu	5.5E-02 $\pm$ 2.4E-02			<sup>154</sup> Eu	-2.4E-02 $\pm$ 2.4E-02	U
	<sup>155</sup> Eu	7.2E-03 $\pm$ 3.5E-02	U		<sup>155</sup> Eu	7.4E-02 $\pm$ 5.2E-02	
	<sup>238</sup> Pu	1.1E-02 $\pm$ 1.1E-02	U		<sup>238</sup> Pu	-9.5E-03 $\pm$ 2.8E-02	U
	<sup>239/240</sup> Pu	5.0E-02 $\pm$ 2.2E-02			<sup>239/240</sup> Pu	7.6E-03 $\pm$ 1.2E-02	U
	<sup>103</sup> Ru	7.0E-03 $\pm$ 1.6E-02	U		<sup>103</sup> Ru	2.9E-03 $\pm$ 1.1E-02	U
	<sup>106</sup> Ru	4.6E-02 $\pm$ 8.6E-02	U		<sup>106</sup> Ru	9.0E-02 $\pm$ 6.8E-02	U
	<sup>125</sup> Sb	1.6E-02 $\pm$ 2.8E-02	U		<sup>125</sup> Sb	6.8E-03 $\pm$ 1.9E-02	U
	<sup>113</sup> Sn	-1.3E-03 $\pm$ 1.3E-02	U		<sup>113</sup> Sn	-5.6E-03 $\pm$ 1.0E-02	U
	<sup>90</sup> Sr	1.2E-01 $\pm$ 2.0E-01	U		<sup>90</sup> Sr	-4.4E-01 $\pm$ 4.4E-01	U
	<sup>234</sup> U	1.4E-01 $\pm$ 5.0E-02			<sup>234</sup> U	1.1E-01 $\pm$ 3.8E-02	
	<sup>235</sup> U	1.4E-02 $\pm$ 1.2E-02			<sup>235</sup> U	5.2E-03 $\pm$ 7.3E-03	U
	<sup>238</sup> U	1.6E-01 $\pm$ 5.4E-02			<sup>238</sup> U	1.1E-01 $\pm$ 4.0E-02	
	<sup>65</sup> Zn	-6.1E-03 $\pm$ 3.1E-02	U		<sup>65</sup> Zn	2.0E-02 $\pm$ 2.1E-02	U

RQ = Result Qualifier. U = The analyte was analyzed for but not detected.

Table 3-4. 2004 Soil Sampling Results (pCi/g  $\pm$  total analytical uncertainty). (21 sheets total)

Location	Isotope	Result $\pm$ Error	RQ*	Location	Isotope	Result $\pm$ Error	RQ*
D159 (100-NR-1 Remedial Action)	<sup>144</sup> Ce	-7.4E-02 $\pm$ 1.3E-01	U	D002 (200 West)	<sup>144</sup> Ce	1.3E-01 $\pm$ 2.1E-01	U
	<sup>60</sup> Co	1.7E-01 $\pm$ 2.2E-02			<sup>60</sup> Co	-4.7E-03 $\pm$ 6.9E-03	U
	<sup>134</sup> Cs	5.4E-02 $\pm$ 1.8E-02			<sup>134</sup> Cs	4.6E-02 $\pm$ 1.6E-02	
	<sup>137</sup> Cs	3.5E-01 $\pm$ 5.9E-02			<sup>137</sup> Cs	3.6E+00 $\pm$ 6.1E-01	
	<sup>152</sup> Eu	2.2E-02 $\pm$ 2.3E-02	U		<sup>152</sup> Eu	1.1E-02 $\pm$ 4.9E-02	U
	<sup>154</sup> Eu	-2.4E-02 $\pm$ 2.4E-02	U		<sup>154</sup> Eu	-4.0E-02 $\pm$ 4.0E-02	U
	<sup>155</sup> Eu	2.7E-02 $\pm$ 3.0E-02	U		<sup>155</sup> Eu	3.9E-02 $\pm$ 4.7E-02	U
	<sup>238</sup> Pu	3.1E-02 $\pm$ 3.7E-02	U		<sup>238</sup> Pu	5.8E-02 $\pm$ 2.7E-02	
	<sup>239/240</sup> Pu	7.1E-02 $\pm$ 3.1E-02			<sup>239/240</sup> Pu	1.7E+00 $\pm$ 3.7E-01	
	<sup>103</sup> Ru	-8.9E-03 $\pm$ 1.1E-02	U		<sup>103</sup> Ru	1.4E-04 $\pm$ 1.4E-03	U
	<sup>106</sup> Ru	-1.1E-03 $\pm$ 1.1E-02	U		<sup>106</sup> Ru	-6.4E-02 $\pm$ 8.1E-02	U
	<sup>125</sup> Sb	4.9E-03 $\pm$ 2.0E-02	U		<sup>125</sup> Sb	1.3E-02 $\pm$ 3.1E-02	U
	<sup>113</sup> Sn	9.8E-04 $\pm$ 9.8E-03	U		<sup>113</sup> Sn	-1.0E-02 $\pm$ 1.6E-02	U
	<sup>90</sup> Sr	-1.6E-01 $\pm$ 2.6E-01	U		<sup>90</sup> Sr	5.6E-01 $\pm$ 3.9E-01	
	<sup>234</sup> U	1.8E-01 $\pm$ 5.6E-02			<sup>234</sup> U	2.0E-01 $\pm$ 6.6E-02	
	<sup>235</sup> U	1.1E-02 $\pm$ 1.1E-02			<sup>235</sup> U	1.8E-02 $\pm$ 1.3E-02	
	<sup>238</sup> U	1.6E-01 $\pm$ 5.1E-02			<sup>238</sup> U	1.8E-01 $\pm$ 5.9E-02	
	<sup>65</sup> Zn	2.0E-02 $\pm$ 2.3E-02	U		<sup>65</sup> Zn	2.5E-02 $\pm$ 2.0E-02	U
D004 (200 West)	<sup>144</sup> Ce	-9.0E-02 $\pm$ 1.2E-01	U	D006 (200 West)	<sup>144</sup> Ce	3.2E-02 $\pm$ 1.3E-01	U
	<sup>60</sup> Co	3.5E-03 $\pm$ 6.6E-03	U		<sup>60</sup> Co	-1.2E-03 $\pm$ 6.1E-03	U
	<sup>134</sup> Cs	3.9E-02 $\pm$ 1.5E-02			<sup>134</sup> Cs	3.5E-02 $\pm$ 1.4E-02	
	<sup>137</sup> Cs	1.3E+00 $\pm$ 2.0E-01			<sup>137</sup> Cs	4.6E-01 $\pm$ 7.4E-02	
	<sup>152</sup> Eu	1.2E-03 $\pm$ 1.2E-02	U		<sup>152</sup> Eu	2.5E-03 $\pm$ 2.2E-02	U
	<sup>154</sup> Eu	-5.3E-03 $\pm$ 2.1E-02	U		<sup>154</sup> Eu	3.8E-04 $\pm$ 3.8E-03	U
	<sup>155</sup> Eu	2.9E-02 $\pm$ 2.9E-02	U		<sup>155</sup> Eu	4.6E-02 $\pm$ 4.2E-02	U
	<sup>238</sup> Pu	4.3E-03 $\pm$ 8.6E-03	U		<sup>238</sup> Pu	-4.3E-03 $\pm$ 1.1E-02	U
	<sup>239/240</sup> Pu	5.5E-02 $\pm$ 2.5E-02			<sup>239/240</sup> Pu	1.3E-01 $\pm$ 4.4E-02	
	<sup>103</sup> Ru	1.4E-03 $\pm$ 1.1E-02	U		<sup>103</sup> Ru	-9.1E-03 $\pm$ 1.1E-02	U
	<sup>106</sup> Ru	-2.7E-02 $\pm$ 5.6E-02	U		<sup>106</sup> Ru	5.3E-02 $\pm$ 6.0E-02	U
	<sup>125</sup> Sb	-7.8E-03 $\pm$ 2.0E-02	U		<sup>125</sup> Sb	1.1E-02 $\pm$ 1.9E-02	U
	<sup>113</sup> Sn	-6.8E-04 $\pm$ 6.8E-03	U		<sup>113</sup> Sn	-2.3E-04 $\pm$ 2.3E-03	U
	<sup>90</sup> Sr	-1.4E-01 $\pm$ 2.0E-01	U		<sup>90</sup> Sr	-1.3E-01 $\pm$ 2.1E-01	U
	<sup>234</sup> U	2.4E-01 $\pm$ 7.7E-02			<sup>234</sup> U	1.5E-01 $\pm$ 5.1E-02	
	<sup>235</sup> U	1.6E-02 $\pm$ 1.3E-02			<sup>235</sup> U	1.6E-02 $\pm$ 1.3E-02	
	<sup>238</sup> U	2.1E-01 $\pm$ 6.7E-02			<sup>238</sup> U	1.7E-01 $\pm$ 5.6E-02	
	<sup>65</sup> Zn	1.8E-04 $\pm$ 1.8E-03	U		<sup>65</sup> Zn	6.9E-04 $\pm$ 6.9E-03	U

RQ = Result Qualifier. U = The analyte was analyzed for but not detected.

Table 3-4. 2004 Soil Sampling Results (pCi/g  $\pm$  total analytical uncertainty). (21 sheets total)

Location	Isotope	Result $\pm$ Error	RQ*	Location	Isotope	Result $\pm$ Error	RQ*
D008 (200 West)	<sup>144</sup> Ce	-5.8E-02 $\pm$ 1.2E-01	U	D010 (200 West)	<sup>144</sup> Ce	1.6E-02 $\pm$ 3.5E-02	U
	<sup>60</sup> Co	-3.9E-03 $\pm$ 5.9E-03	U		<sup>60</sup> Co	-5.1E-04 $\pm$ 2.5E-03	U
	<sup>134</sup> Cs	3.4E-02 $\pm$ 9.9E-03			<sup>134</sup> Cs	1.3E-02 $\pm$ 4.1E-03	
	<sup>137</sup> Cs	9.4E-02 $\pm$ 1.8E-02			<sup>137</sup> Cs	4.4E-01 $\pm$ 7.6E-02	
	<sup>152</sup> Eu	-2.5E-02 $\pm$ 2.5E-02	U		<sup>152</sup> Eu	-5.9E-03 $\pm$ 7.7E-03	U
	<sup>154</sup> Eu	-4.6E-03 $\pm$ 1.9E-02	U		<sup>154</sup> Eu	-9.2E-03 $\pm$ 9.2E-03	U
	<sup>155</sup> Eu	1.8E-02 $\pm$ 2.8E-02	U		<sup>155</sup> Eu	7.7E-03 $\pm$ 9.5E-03	U
	<sup>238</sup> Pu	-1.4E-03 $\pm$ 4.9E-03	U		<sup>238</sup> Pu	7.0E-03 $\pm$ 8.4E-03	
	<sup>239/240</sup> Pu	6.9E-03 $\pm$ 8.3E-03	U		<sup>239/240</sup> Pu	1.6E-01 $\pm$ 5.1E-02	
	<sup>103</sup> Ru	-4.4E-03 $\pm$ 9.5E-03	U		<sup>103</sup> Ru	-1.4E-03 $\pm$ 3.7E-03	U
	<sup>106</sup> Ru	-1.3E-03 $\pm$ 1.3E-02	U		<sup>106</sup> Ru	1.2E-02 $\pm$ 2.2E-02	U
	<sup>125</sup> Sb	-3.8E-03 $\pm$ 1.7E-02	U		<sup>125</sup> Sb	-1.8E-03 $\pm$ 6.4E-03	U
	<sup>113</sup> Sn	3.9E-03 $\pm$ 9.6E-03	U		<sup>113</sup> Sn	-9.2E-04 $\pm$ 3.3E-03	U
	<sup>90</sup> Sr	-3.9E-01 $\pm$ 4.3E-01	U		<sup>90</sup> Sr	-2.5E-01 $\pm$ 3.0E-01	U
	<sup>234</sup> U	1.3E-01 $\pm$ 4.2E-02			<sup>234</sup> U	1.9E-01 $\pm$ 6.5E-02	
	<sup>235</sup> U	1.3E-02 $\pm$ 1.1E-02			<sup>235</sup> U	1.1E-02 $\pm$ 1.5E-02	U
	<sup>238</sup> U	1.3E-01 $\pm$ 4.0E-02			<sup>238</sup> U	1.6E-01 $\pm$ 5.8E-02	
	<sup>65</sup> Zn	-7.8E-03 $\pm$ 2.7E-02	U		<sup>65</sup> Zn	5.1E-03 $\pm$ 7.1E-03	U
D012 (200 West)	<sup>144</sup> Ce	9.5E-02 $\pm$ 1.8E-01	U	D014 (200 West)	<sup>144</sup> Ce	-1.7E-02 $\pm$ 1.1E-01	U
	<sup>60</sup> Co	8.8E-03 $\pm$ 9.7E-03	U		<sup>60</sup> Co	1.2E-03 $\pm$ 6.6E-03	U
	<sup>134</sup> Cs	4.7E-02 $\pm$ 1.6E-02			<sup>134</sup> Cs	2.5E-02 $\pm$ 9.5E-03	
	<sup>137</sup> Cs	2.0E+00 $\pm$ 3.3E-01			<sup>137</sup> Cs	8.8E-03 $\pm$ 6.6E-03	U
	<sup>152</sup> Eu	-4.6E-03 $\pm$ 3.7E-02	U		<sup>152</sup> Eu	5.0E-03 $\pm$ 2.1E-02	U
	<sup>154</sup> Eu	-1.0E-02 $\pm$ 3.1E-02	U		<sup>154</sup> Eu	5.2E-04 $\pm$ 5.2E-03	U
	<sup>155</sup> Eu	6.2E-02 $\pm$ 5.1E-02	U		<sup>155</sup> Eu	3.4E-02 $\pm$ 2.7E-02	U
	<sup>238</sup> Pu	1.3E-02 $\pm$ 1.3E-02	U		<sup>238</sup> Pu	-8.4E-03 $\pm$ 8.4E-03	U
	<sup>239/240</sup> Pu	7.8E-02 $\pm$ 3.0E-02			<sup>239/240</sup> Pu	6.3E-03 $\pm$ 7.6E-03	
	<sup>103</sup> Ru	2.1E-02 $\pm$ 1.9E-02	U		<sup>103</sup> Ru	-7.0E-04 $\pm$ 7.0E-03	U
	<sup>106</sup> Ru	2.1E-02 $\pm$ 9.4E-02	U		<sup>106</sup> Ru	8.8E-03 $\pm$ 5.6E-02	U
	<sup>125</sup> Sb	-1.4E-03 $\pm$ 1.4E-02	U		<sup>125</sup> Sb	4.0E-03 $\pm$ 1.7E-02	U
	<sup>113</sup> Sn	4.9E-04 $\pm$ 4.9E-03	U		<sup>113</sup> Sn	-3.5E-03 $\pm$ 9.2E-03	U
	<sup>90</sup> Sr	6.6E-02 $\pm$ 4.0E-01	U		<sup>90</sup> Sr	3.2E-01 $\pm$ 3.0E-01	U
	<sup>234</sup> U	1.7E-01 $\pm$ 5.8E-02			<sup>234</sup> U	1.5E-01 $\pm$ 5.3E-02	
	<sup>235</sup> U	1.2E-02 $\pm$ 1.1E-02			<sup>235</sup> U	1.3E-02 $\pm$ 1.1E-02	
	<sup>238</sup> U	1.2E-01 $\pm$ 4.4E-02			<sup>238</sup> U	1.4E-01 $\pm$ 4.9E-02	
	<sup>65</sup> Zn	5.1E-02 $\pm$ 3.0E-02			<sup>65</sup> Zn	-1.1E-02 $\pm$ 1.8E-02	U

RQ = Result Qualifier. U = The analyte was analyzed for but not detected.

Table 3-4. 2004 Soil Sampling Results (pCi/g  $\pm$  total analytical uncertainty). (21 sheets total)

Location	Isotope	Result $\pm$ Error	RQ*	Location	Isotope	Result $\pm$ Error	RQ*
D016 (200 West)	<sup>144</sup> Ce	2.1E-02 $\pm$ 1.4E-01	U	D018 (200 West)	<sup>144</sup> Ce	-9.0E-02 $\pm$ 1.7E-01	U
	<sup>60</sup> Co	1.6E-03 $\pm$ 6.5E-03	U		<sup>60</sup> Co	-2.2E-03 $\pm$ 5.6E-03	U
	<sup>134</sup> Cs	3.7E-02 $\pm$ 1.3E-02			<sup>134</sup> Cs	3.7E-02 $\pm$ 1.3E-02	
	<sup>137</sup> Cs	1.4E+00 $\pm$ 2.2E-01			<sup>137</sup> Cs	2.5E+00 $\pm$ 4.0E-01	
	<sup>152</sup> Eu	-1.6E-02 $\pm$ 2.3E-02	U		<sup>152</sup> Eu	-2.1E-02 $\pm$ 2.2E-02	U
	<sup>154</sup> Eu	-1.5E-02 $\pm$ 2.4E-02	U		<sup>154</sup> Eu	-1.0E-02 $\pm$ 2.1E-02	U
	<sup>155</sup> Eu	7.1E-02 $\pm$ 5.0E-02			<sup>155</sup> Eu	2.5E-02 $\pm$ 3.1E-02	U
	<sup>238</sup> Pu	1.0E-02 $\pm$ 1.8E-02	U		<sup>238</sup> Pu	2.0E-03 $\pm$ 9.0E-03	U
	<sup>239/240</sup> Pu	3.6E-02 $\pm$ 2.1E-02			<sup>239/240</sup> Pu	1.2E-01 $\pm$ 4.1E-02	
	<sup>103</sup> Ru	-5.0E-03 $\pm$ 1.2E-02	U		<sup>103</sup> Ru	-2.8E-03 $\pm$ 1.2E-02	U
	<sup>106</sup> Ru	-1.6E-02 $\pm$ 6.4E-02	U		<sup>106</sup> Ru	-2.7E-02 $\pm$ 5.9E-02	U
	<sup>125</sup> Sb	3.0E-03 $\pm$ 2.2E-02	U		<sup>125</sup> Sb	1.3E-02 $\pm$ 2.2E-02	U
	<sup>113</sup> Sn	-3.7E-03 $\pm$ 1.2E-02	U		<sup>113</sup> Sn	-1.2E-02 $\pm$ 1.2E-02	U
	<sup>90</sup> Sr	-8.9E-02 $\pm$ 2.9E-01	U		<sup>90</sup> Sr	6.6E-01 $\pm$ 3.4E-01	
	<sup>234</sup> U	1.8E-01 $\pm$ 6.1E-02			<sup>234</sup> U	1.4E-01 $\pm$ 4.9E-02	
	<sup>235</sup> U	1.1E-02 $\pm$ 1.2E-02	U		<sup>235</sup> U	1.3E-02 $\pm$ 1.1E-02	
	<sup>238</sup> U	1.7E-01 $\pm$ 5.6E-02			<sup>238</sup> U	1.4E-01 $\pm$ 4.9E-02	
	<sup>65</sup> Zn	6.2E-03 $\pm$ 1.9E-02	U		<sup>65</sup> Zn	-8.0E-03 $\pm$ 1.7E-02	U
D020 (200 West)	<sup>144</sup> Ce	8.4E-03 $\pm$ 8.4E-02	U	D022 (200 West)	<sup>144</sup> Ce	-3.2E-02 $\pm$ 2.2E-01	U
	<sup>60</sup> Co	-5.7E-03 $\pm$ 9.0E-03	U		<sup>60</sup> Co	-1.6E-04 $\pm$ 1.6E-03	U
	<sup>134</sup> Cs	4.9E-02 $\pm$ 1.8E-02			<sup>134</sup> Cs	3.9E-02 $\pm$ 1.4E-02	
	<sup>137</sup> Cs	2.6E-01 $\pm$ 5.0E-02			<sup>137</sup> Cs	1.6E+00 $\pm$ 2.8E-01	
	<sup>152</sup> Eu	-5.9E-03 $\pm$ 3.9E-02	U		<sup>152</sup> Eu	1.7E-02 $\pm$ 5.6E-02	U
	<sup>154</sup> Eu	-2.4E-02 $\pm$ 2.8E-02	U		<sup>154</sup> Eu	-3.6E-02 $\pm$ 3.6E-02	U
	<sup>155</sup> Eu	1.8E-02 $\pm$ 3.9E-02	U		<sup>155</sup> Eu	6.5E-04 $\pm$ 6.5E-03	U
	<sup>238</sup> Pu	2.4E-03 $\pm$ 2.4E-02	U		<sup>238</sup> Pu	2.4E-02 $\pm$ 1.9E-02	
	<sup>239/240</sup> Pu	3.2E-02 $\pm$ 1.9E-02			<sup>239/240</sup> Pu	5.7E-02 $\pm$ 2.6E-02	
	<sup>103</sup> Ru	-5.2E-03 $\pm$ 1.3E-02	U		<sup>103</sup> Ru	-2.9E-03 $\pm$ 1.5E-02	U
	<sup>106</sup> Ru	1.7E-02 $\pm$ 8.2E-02	U		<sup>106</sup> Ru	-2.1E-02 $\pm$ 8.5E-02	U
	<sup>125</sup> Sb	1.5E-02 $\pm$ 2.5E-02	U		<sup>125</sup> Sb	3.0E-02 $\pm$ 3.1E-02	U
	<sup>113</sup> Sn	3.0E-03 $\pm$ 1.3E-02	U		<sup>113</sup> Sn	-8.1E-03 $\pm$ 1.6E-02	U
	<sup>90</sup> Sr	-1.3E-01 $\pm$ 2.3E-01	U		<sup>90</sup> Sr	-2.5E-01 $\pm$ 2.6E-01	U
	<sup>234</sup> U	1.4E-01 $\pm$ 5.2E-02			<sup>234</sup> U	1.6E-01 $\pm$ 6.1E-02	
	<sup>235</sup> U	1.9E-02 $\pm$ 1.5E-02			<sup>235</sup> U	6.3E-03 $\pm$ 8.8E-03	U
	<sup>238</sup> U	1.3E-01 $\pm$ 4.9E-02			<sup>238</sup> U	1.7E-01 $\pm$ 6.1E-02	
	<sup>65</sup> Zn	-7.0E-03 $\pm$ 2.5E-02	U		<sup>65</sup> Zn	4.2E-02 $\pm$ 2.5E-02	

RQ = Result Qualifier. U = The analyte was analyzed for but not detected.



Table 3-4. 2004 Soil Sampling Results (pCi/g  $\pm$  total analytical uncertainty). (21 sheets total)

Location	Isotope	Result $\pm$ Error	RQ*	Location	Isotope	Result $\pm$ Error	RQ*
D026 (200 West)	<sup>144</sup> Ce	-6.9E-02 $\pm$ 1.2E-01	U	D028 (200 West)	<sup>144</sup> Ce	1.1E-01 $\pm$ 1.4E-01	U
	<sup>60</sup> Co	1.6E-03 $\pm$ 6.0E-03	U		<sup>60</sup> Co	1.5E-03 $\pm$ 7.6E-03	U
	<sup>134</sup> Cs	3.2E-02 $\pm$ 1.3E-02			<sup>134</sup> Cs	3.5E-02 $\pm$ 1.0E-02	
	<sup>137</sup> Cs	9.7E-01 $\pm$ 1.6E-01			<sup>137</sup> Cs	1.1E+00 $\pm$ 1.9E-01	
	<sup>152</sup> Eu	-9.8E-03 $\pm$ 2.2E-02	U		<sup>152</sup> Eu	2.0E-03 $\pm$ 2.0E-02	U
	<sup>154</sup> Eu	-5.3E-03 $\pm$ 2.2E-02	U		<sup>154</sup> Eu	-1.2E-03 $\pm$ 1.2E-02	U
	<sup>155</sup> Eu	4.0E-02 $\pm$ 4.1E-02	U		<sup>155</sup> Eu	4.9E-02 $\pm$ 3.8E-02	U
	<sup>238</sup> Pu	7.5E-03 $\pm$ 1.1E-02	U		<sup>238</sup> Pu	5.3E-03 $\pm$ 2.9E-02	U
	<sup>239/240</sup> Pu	1.3E+00 $\pm$ 3.0E-01			<sup>239/240</sup> Pu	2.4E-02 $\pm$ 1.9E-02	
	<sup>103</sup> Ru	-7.7E-03 $\pm$ 9.8E-03	U		<sup>103</sup> Ru	-8.0E-03 $\pm$ 1.1E-02	U
	<sup>106</sup> Ru	-1.4E-03 $\pm$ 1.4E-02	U		<sup>106</sup> Ru	-9.8E-03 $\pm$ 6.7E-02	U
	<sup>125</sup> Sb	-1.0E-03 $\pm$ 1.0E-02	U		<sup>125</sup> Sb	1.1E-02 $\pm$ 2.1E-02	U
	<sup>113</sup> Sn	-2.9E-03 $\pm$ 1.0E-02	U		<sup>113</sup> Sn	-6.8E-03 $\pm$ 1.1E-02	U
	<sup>90</sup> Sr	4.9E-01 $\pm$ 2.5E-01			<sup>90</sup> Sr	1.6E-01 $\pm$ 2.4E-01	U
	<sup>234</sup> U	1.6E-01 $\pm$ 5.8E-02			<sup>234</sup> U	1.6E-01 $\pm$ 5.4E-02	
	<sup>235</sup> U	-2.4E-03 $\pm$ 4.8E-03	U		<sup>235</sup> U	2.2E-03 $\pm$ 9.9E-03	U
	<sup>238</sup> U	1.8E-01 $\pm$ 6.1E-02			<sup>238</sup> U	1.8E-01 $\pm$ 5.9E-02	
	<sup>65</sup> Zn	-4.4E-03 $\pm$ 1.7E-02	U		<sup>65</sup> Zn	2.3E-02 $\pm$ 2.1E-02	U
D030 (200 West)	<sup>144</sup> Ce	-6.5E-02 $\pm$ 2.0E-01	U	D032 (200 West)	<sup>144</sup> Ce	5.7E-03 $\pm$ 5.7E-02	U
	<sup>60</sup> Co	2.5E-03 $\pm$ 9.3E-03	U		<sup>60</sup> Co	-1.1E-03 $\pm$ 9.2E-03	U
	<sup>134</sup> Cs	3.4E-02 $\pm$ 1.2E-02			<sup>134</sup> Cs	5.4E-02 $\pm$ 2.3E-02	
	<sup>137</sup> Cs	1.0E+00 $\pm$ 1.7E-01			<sup>137</sup> Cs	1.9E+00 $\pm$ 2.9E-01	
	<sup>152</sup> Eu	-2.0E-02 $\pm$ 5.6E-02	U		<sup>152</sup> Eu	2.2E-02 $\pm$ 3.7E-02	U
	<sup>154</sup> Eu	-1.2E-02 $\pm$ 2.6E-02	U		<sup>154</sup> Eu	-3.6E-02 $\pm$ 3.6E-02	U
	<sup>155</sup> Eu	-3.5E-02 $\pm$ 4.6E-02	U		<sup>155</sup> Eu	3.3E-02 $\pm$ 3.9E-02	U
	<sup>238</sup> Pu	1.0E-02 $\pm$ 1.8E-02	U		<sup>238</sup> Pu	7.1E-03 $\pm$ 1.3E-02	U
	<sup>239/240</sup> Pu	1.8E-02 $\pm$ 1.4E-02			<sup>239/240</sup> Pu	8.4E-01 $\pm$ 2.0E-01	
	<sup>103</sup> Ru	-4.7E-03 $\pm$ 1.3E-02	U		<sup>103</sup> Ru	1.1E-02 $\pm$ 1.7E-02	U
	<sup>106</sup> Ru	-6.6E-02 $\pm$ 7.9E-02	U		<sup>106</sup> Ru	-2.6E-02 $\pm$ 9.4E-02	U
	<sup>125</sup> Sb	8.0E-03 $\pm$ 2.7E-02	U		<sup>125</sup> Sb	1.3E-02 $\pm$ 3.3E-02	U
	<sup>113</sup> Sn	1.2E-02 $\pm$ 1.4E-02	U		<sup>113</sup> Sn	-1.6E-03 $\pm$ 1.6E-02	U
	<sup>90</sup> Sr	-3.0E-02 $\pm$ 2.4E-01	U		<sup>90</sup> Sr	-1.9E-01 $\pm$ 3.4E-01	U
	<sup>234</sup> U	1.1E-01 $\pm$ 4.2E-02			<sup>234</sup> U	1.8E-01 $\pm$ 5.9E-02	
	<sup>235</sup> U	1.6E-02 $\pm$ 1.3E-02			<sup>235</sup> U	1.1E-02 $\pm$ 1.2E-02	U
	<sup>238</sup> U	1.5E-01 $\pm$ 5.4E-02			<sup>238</sup> U	1.7E-01 $\pm$ 5.8E-02	
	<sup>65</sup> Zn	1.8E-02 $\pm$ 2.3E-02	U		<sup>65</sup> Zn	-1.4E-02 $\pm$ 2.6E-02	U

RQ = Result Qualifier. U = The analyte was analyzed for but not detected.

Table 3-4. 2004 Soil Sampling Results (pCi/g  $\pm$  total analytical uncertainty). (21 sheets total)

Location	Isotope	Result $\pm$ Error	RQ*	Location	Isotope	Result $\pm$ Error	RQ*
D034 (200 West)	<sup>144</sup> Ce	-3.2E-01 $\pm$ 3.2E-01	U	D036 (200 West)	<sup>144</sup> Ce	-4.9E-02 $\pm$ 1.2E-01	U
	<sup>60</sup> Co	5.2E-03 $\pm$ 6.7E-03	U		<sup>60</sup> Co	-5.5E-03 $\pm$ 5.9E-03	U
	<sup>134</sup> Cs	3.4E-02 $\pm$ 1.2E-02			<sup>134</sup> Cs	3.5E-02 $\pm$ 1.2E-02	
	<sup>137</sup> Cs	8.8E+00 $\pm$ 1.5E+00			<sup>137</sup> Cs	1.8E+00 $\pm$ 2.9E-01	
	<sup>152</sup> Eu	-7.4E-03 $\pm$ 6.6E-02	U		<sup>152</sup> Eu	-2.7E-02 $\pm$ 2.7E-02	U
	<sup>154</sup> Eu	-2.7E-02 $\pm$ 2.7E-02	U		<sup>154</sup> Eu	-1.1E-02 $\pm$ 2.2E-02	U
	<sup>155</sup> Eu	-5.3E-03 $\pm$ 5.3E-02	U		<sup>155</sup> Eu	4.7E-02 $\pm$ 4.3E-02	U
	<sup>238</sup> Pu	-1.9E-02 $\pm$ 2.5E-02	U		<sup>238</sup> Pu	-1.2E-02 $\pm$ 3.1E-02	U
	<sup>239/240</sup> Pu	1.0E-01 $\pm$ 3.8E-02			<sup>239/240</sup> Pu	1.4E-02 $\pm$ 1.2E-02	
	<sup>103</sup> Ru	-1.1E-03 $\pm$ 1.1E-02	U		<sup>103</sup> Ru	7.0E-03 $\pm$ 8.4E-03	U
	<sup>106</sup> Ru	2.9E-02 $\pm$ 9.9E-02	U		<sup>106</sup> Ru	-1.6E-02 $\pm$ 5.7E-02	U
	<sup>125</sup> Sb	2.1E-03 $\pm$ 2.1E-02	U		<sup>125</sup> Sb	-3.7E-03 $\pm$ 2.3E-02	U
	<sup>113</sup> Sn	2.6E-03 $\pm$ 1.9E-02	U		<sup>113</sup> Sn	1.8E-03 $\pm$ 1.0E-02	U
	<sup>90</sup> Sr	1.2E+00 $\pm$ 3.6E-01			<sup>90</sup> Sr	-2.8E-01 $\pm$ 2.8E-01	U
	<sup>234</sup> U	1.4E-01 $\pm$ 4.9E-02			<sup>234</sup> U	1.2E-01 $\pm$ 4.2E-02	
	<sup>235</sup> U	1.4E-02 $\pm$ 1.2E-02	U		<sup>235</sup> U	7.1E-03 $\pm$ 8.5E-03	U
	<sup>238</sup> U	1.4E-01 $\pm$ 4.8E-02			<sup>238</sup> U	1.2E-01 $\pm$ 4.2E-02	
	<sup>65</sup> Zn	3.2E-02 $\pm$ 2.0E-02			<sup>65</sup> Zn	-4.7E-04 $\pm$ 4.7E-03	U
D038 (200 West)	<sup>144</sup> Ce	-5.0E-02 $\pm$ 1.4E-01	U	D040 (200 West)	<sup>144</sup> Ce	-1.4E-01 $\pm$ 1.8E-01	U
	<sup>60</sup> Co	-9.6E-04 $\pm$ 6.7E-03	U		<sup>60</sup> Co	5.4E-03 $\pm$ 1.1E-02	U
	<sup>134</sup> Cs	2.4E-02 $\pm$ 9.8E-03			<sup>134</sup> Cs	5.8E-02 $\pm$ 2.4E-02	
	<sup>137</sup> Cs	6.1E-01 $\pm$ 1.0E-01			<sup>137</sup> Cs	3.4E-01 $\pm$ 5.8E-02	
	<sup>152</sup> Eu	-1.7E-02 $\pm$ 2.5E-02	U		<sup>152</sup> Eu	1.9E-02 $\pm$ 3.8E-02	U
	<sup>154</sup> Eu	-1.8E-02 $\pm$ 2.2E-02	U		<sup>154</sup> Eu	1.0E-02 $\pm$ 3.4E-02	U
	<sup>155</sup> Eu	3.7E-02 $\pm$ 3.6E-02	U		<sup>155</sup> Eu	7.9E-02 $\pm$ 4.6E-02	
	<sup>238</sup> Pu	1.6E-02 $\pm$ 1.9E-02	U		<sup>238</sup> Pu	1.6E-02 $\pm$ 1.9E-02	U
	<sup>239/240</sup> Pu	6.1E-02 $\pm$ 2.8E-02			<sup>239/240</sup> Pu	9.1E-03 $\pm$ 1.1E-02	U
	<sup>103</sup> Ru	2.6E-03 $\pm$ 9.7E-03	U		<sup>103</sup> Ru	-6.9E-03 $\pm$ 1.2E-02	U
	<sup>106</sup> Ru	1.6E-02 $\pm$ 6.1E-02	U		<sup>106</sup> Ru	-1.4E-02 $\pm$ 9.6E-02	U
	<sup>125</sup> Sb	-1.1E-02 $\pm$ 1.9E-02	U		<sup>125</sup> Sb	1.5E-02 $\pm$ 3.2E-02	U
	<sup>113</sup> Sn	2.9E-03 $\pm$ 1.0E-02	U		<sup>113</sup> Sn	-3.8E-03 $\pm$ 1.5E-02	U
	<sup>90</sup> Sr	3.2E-02 $\pm$ 2.7E-01	U		<sup>90</sup> Sr	-7.1E-02 $\pm$ 2.9E-01	U
	<sup>234</sup> U	1.2E-01 $\pm$ 3.7E-02			<sup>234</sup> U	2.1E-01 $\pm$ 6.5E-02	
	<sup>235</sup> U	3.6E-03 $\pm$ 5.0E-03	U		<sup>235</sup> U	9.4E-03 $\pm$ 1.1E-02	U
	<sup>238</sup> U	1.5E-01 $\pm$ 4.4E-02			<sup>238</sup> U	2.5E-01 $\pm$ 7.5E-02	
	<sup>65</sup> Zn	4.9E-03 $\pm$ 1.9E-02	U		<sup>65</sup> Zn	3.9E-04 $\pm$ 3.9E-03	U

RQ = Result Qualifier. U = The analyte was analyzed for but not detected.

Table 3-4. 2004 Soil Sampling Results (pCi/g  $\pm$  total analytical uncertainty). (21 sheets total)

Location	Isotope	Result $\pm$ Error	RQ*	Location	Isotope	Result $\pm$ Error	RQ*
D042 (200 West)	<sup>144</sup> Ce	6.6E-03 $\pm$ 6.6E-02	U	D044 (200 West)	<sup>144</sup> Ce	3.2E-02 $\pm$ 1.8E-01	U
	<sup>60</sup> Co	-3.6E-03 $\pm$ 6.3E-03	U		<sup>60</sup> Co	-1.1E-02 $\pm$ 8.2E-03	U
	<sup>134</sup> Cs	4.5E-02 $\pm$ 1.3E-02			<sup>134</sup> Cs	3.9E-02 $\pm$ 1.3E-02	
	<sup>137</sup> Cs	5.5E-01 $\pm$ 8.9E-02			<sup>137</sup> Cs	3.3E+00 $\pm$ 6.0E-01	
	<sup>152</sup> Eu	7.5E-03 $\pm$ 2.1E-02	U		<sup>152</sup> Eu	-1.6E-02 $\pm$ 3.3E-02	U
	<sup>154</sup> Eu	-8.2E-03 $\pm$ 2.3E-02	U		<sup>154</sup> Eu	-2.0E-02 $\pm$ 2.5E-02	U
	<sup>155</sup> Eu	7.1E-02 $\pm$ 4.5E-02			<sup>155</sup> Eu	2.6E-02 $\pm$ 4.0E-02	U
	<sup>238</sup> Pu	1.6E-02 $\pm$ 3.2E-02	U		<sup>238</sup> Pu	4.5E-03 $\pm$ 3.5E-02	U
	<sup>239/240</sup> Pu	8.3E-02 $\pm$ 3.6E-02			<sup>239/240</sup> Pu	1.0E+00 $\pm$ 2.7E-01	
	<sup>103</sup> Ru	-1.9E-03 $\pm$ 7.4E-03	U		<sup>103</sup> Ru	4.7E-03 $\pm$ 1.1E-02	U
	<sup>106</sup> Ru	-1.0E-03 $\pm$ 1.0E-02	U		<sup>106</sup> Ru	-8.9E-03 $\pm$ 8.4E-02	U
	<sup>125</sup> Sb	5.7E-03 $\pm$ 1.9E-02	U		<sup>125</sup> Sb	-5.0E-03 $\pm$ 3.0E-02	U
	<sup>113</sup> Sn	-2.1E-03 $\pm$ 8.9E-03	U		<sup>113</sup> Sn	-7.1E-03 $\pm$ 1.4E-02	U
	<sup>90</sup> Sr	1.3E-01 $\pm$ 2.7E-01	U		<sup>90</sup> Sr	-1.4E-01 $\pm$ 2.4E-01	U
	<sup>234</sup> U	1.6E-01 $\pm$ 5.3E-02			<sup>234</sup> U	2.4E-01 $\pm$ 7.4E-02	
	<sup>235</sup> U	3.8E-03 $\pm$ 7.6E-03	U		<sup>235</sup> U	2.3E-02 $\pm$ 1.5E-02	
	<sup>238</sup> U	2.0E-01 $\pm$ 6.4E-02			<sup>238</sup> U	2.5E-01 $\pm$ 7.8E-02	
	<sup>65</sup> Zn	-7.6E-03 $\pm$ 1.7E-02	U		<sup>65</sup> Zn	-1.0E-02 $\pm$ 2.1E-02	U
D046 (200 West)	<sup>144</sup> Ce	-3.2E-02 $\pm$ 1.1E-01	U	D048 (200 West)	<sup>144</sup> Ce	4.9E-02 $\pm$ 1.5E-01	U
	<sup>60</sup> Co	2.9E-03 $\pm$ 5.6E-03	U		<sup>60</sup> Co	-2.9E-03 $\pm$ 7.2E-03	U
	<sup>134</sup> Cs	3.1E-02 $\pm$ 9.3E-03			<sup>134</sup> Cs	4.1E-02 $\pm$ 1.1E-02	
	<sup>137</sup> Cs	9.1E-01 $\pm$ 1.5E-01			<sup>137</sup> Cs	2.2E+00 $\pm$ 3.7E-01	
	<sup>152</sup> Eu	4.4E-03 $\pm$ 2.1E-02	U		<sup>152</sup> Eu	-2.4E-02 $\pm$ 2.7E-02	U
	<sup>154</sup> Eu	7.9E-03 $\pm$ 2.0E-02	U		<sup>154</sup> Eu	-4.4E-02 $\pm$ 4.4E-02	U
	<sup>155</sup> Eu	5.5E-02 $\pm$ 4.0E-02			<sup>155</sup> Eu	3.6E-02 $\pm$ 3.8E-02	U
	<sup>238</sup> Pu	7.1E-03 $\pm$ 4.5E-02	U		<sup>238</sup> Pu	5.1E-03 $\pm$ 4.4E-02	U
	<sup>239/240</sup> Pu	5.9E-02 $\pm$ 2.9E-02			<sup>239/240</sup> Pu	9.5E-02 $\pm$ 4.3E-02	
	<sup>103</sup> Ru	-5.6E-03 $\pm$ 7.8E-03	U		<sup>103</sup> Ru	-8.6E-03 $\pm$ 1.2E-02	U
	<sup>106</sup> Ru	2.8E-02 $\pm$ 5.2E-02	U		<sup>106</sup> Ru	-5.9E-02 $\pm$ 7.5E-02	U
	<sup>125</sup> Sb	1.0E-02 $\pm$ 1.9E-02	U		<sup>125</sup> Sb	-2.2E-03 $\pm$ 2.2E-02	U
	<sup>113</sup> Sn	2.6E-03 $\pm$ 9.1E-03	U		<sup>113</sup> Sn	1.5E-02 $\pm$ 1.4E-02	U
	<sup>90</sup> Sr	-5.8E-02 $\pm$ 2.3E-01	U		<sup>90</sup> Sr	1.5E-01 $\pm$ 3.0E-01	U
	<sup>234</sup> U	1.6E-01 $\pm$ 5.3E-02			<sup>234</sup> U	1.7E-01 $\pm$ 5.9E-02	
	<sup>235</sup> U	1.7E-02 $\pm$ 1.3E-02			<sup>235</sup> U	1.0E-02 $\pm$ 1.0E-02	
	<sup>238</sup> U	1.5E-01 $\pm$ 4.9E-02			<sup>238</sup> U	2.2E-01 $\pm$ 7.3E-02	
	<sup>65</sup> Zn	-8.7E-03 $\pm$ 1.7E-02	U		<sup>65</sup> Zn	1.0E-02 $\pm$ 2.0E-02	U

RQ = Result Qualifier. U = The analyte was analyzed for but not detected.

Table 3-4. 2004 Soil Sampling Results (pCi/g  $\pm$  total analytical uncertainty). (21 sheets total)

Location	Isotope	Result $\pm$ Error	RQ*	Location	Isotope	Result $\pm$ Error	RQ*
D050 (200 West)	<sup>144</sup> Ce	-4.4E-02 $\pm$ 1.3E-01	U	D052 (200 West)	<sup>144</sup> Ce	-1.8E-02 $\pm$ 1.7E-01	U
	<sup>60</sup> Co	2.0E-02 $\pm$ 9.1E-03			<sup>60</sup> Co	-3.0E-03 $\pm$ 6.8E-03	U
	<sup>134</sup> Cs	4.0E-02 $\pm$ 1.5E-02			<sup>134</sup> Cs	3.2E-02 $\pm$ 1.3E-02	
	<sup>137</sup> Cs	1.7E-01 $\pm$ 3.3E-02			<sup>137</sup> Cs	1.7E+00 $\pm$ 2.9E-01	
	<sup>152</sup> Eu	-1.7E-02 $\pm$ 2.4E-02	U		<sup>152</sup> Eu	-1.3E-02 $\pm$ 4.4E-02	U
	<sup>154</sup> Eu	2.1E-02 $\pm$ 2.6E-02	U		<sup>154</sup> Eu	-2.3E-02 $\pm$ 2.3E-02	U
	<sup>155</sup> Eu	2.4E-02 $\pm$ 2.8E-02	U		<sup>155</sup> Eu	5.7E-02 $\pm$ 4.8E-02	U
	<sup>238</sup> Pu	2.4E-03 $\pm$ 2.4E-03	U		<sup>238</sup> Pu	3.0E-03 $\pm$ 3.0E-02	U
	<sup>239/240</sup> Pu	2.6E-02 $\pm$ 1.8E-02			<sup>239/240</sup> Pu	1.0E-01 $\pm$ 4.5E-02	
	<sup>103</sup> Ru	-1.5E-03 $\pm$ 1.0E-02	U		<sup>103</sup> Ru	-6.4E-04 $\pm$ 6.4E-03	U
	<sup>106</sup> Ru	-4.1E-02 $\pm$ 6.3E-02	U		<sup>106</sup> Ru	2.3E-02 $\pm$ 7.0E-02	U
	<sup>125</sup> Sb	-1.1E-02 $\pm$ 2.0E-02	U		<sup>125</sup> Sb	-1.9E-03 $\pm$ 1.9E-02	U
	<sup>113</sup> Sn	-1.7E-03 $\pm$ 9.8E-03	U		<sup>113</sup> Sn	1.5E-03 $\pm$ 1.3E-02	U
	<sup>90</sup> Sr	-3.4E-01 $\pm$ 3.4E-01	U		<sup>90</sup> Sr	-1.6E-01 $\pm$ 2.6E-01	U
	<sup>234</sup> U	1.3E-01 $\pm$ 4.7E-02			<sup>234</sup> U	1.7E-01 $\pm$ 5.9E-02	
	<sup>235</sup> U	1.7E-02 $\pm$ 1.4E-02			<sup>235</sup> U	1.5E-02 $\pm$ 1.5E-02	U
	<sup>238</sup> U	1.7E-01 $\pm$ 5.8E-02			<sup>238</sup> U	1.6E-01 $\pm$ 5.6E-02	
	<sup>65</sup> Zn	2.9E-02 $\pm$ 2.3E-02	U		<sup>65</sup> Zn	1.7E-02 $\pm$ 1.9E-02	U
D054 (200 East)	<sup>144</sup> Ce	-7.3E-02 $\pm$ 1.7E-01	U	D056 (200 East)	<sup>144</sup> Ce	-9.3E-02 $\pm$ 2.7E-01	U
	<sup>60</sup> Co	-2.7E-03 $\pm$ 6.6E-03	U		<sup>60</sup> Co	9.9E-03 $\pm$ 7.6E-03	U
	<sup>134</sup> Cs	4.1E-02 $\pm$ 1.1E-02			<sup>134</sup> Cs	4.6E-02 $\pm$ 1.5E-02	
	<sup>137</sup> Cs	8.8E+00 $\pm$ 1.4E+00			<sup>137</sup> Cs	1.7E+01 $\pm$ 3.0E+00	
	<sup>152</sup> Eu	-8.3E-03 $\pm$ 3.3E-02	U		<sup>152</sup> Eu	-3.7E-02 $\pm$ 8.4E-02	U
	<sup>154</sup> Eu	-2.0E-02 $\pm$ 2.2E-02	U		<sup>154</sup> Eu	2.4E-03 $\pm$ 2.4E-02	U
	<sup>155</sup> Eu	2.8E-02 $\pm$ 4.0E-02	U		<sup>155</sup> Eu	-2.3E-03 $\pm$ 2.3E-02	U
	<sup>238</sup> Pu	3.4E-02 $\pm$ 3.7E-02	U		<sup>238</sup> Pu	-1.7E-02 $\pm$ 4.4E-02	U
	<sup>239/240</sup> Pu	3.6E-02 $\pm$ 2.6E-02			<sup>239/240</sup> Pu	2.8E-03 $\pm$ 1.7E-02	U
	<sup>103</sup> Ru	7.2E-03 $\pm$ 1.4E-02	U		<sup>103</sup> Ru	-9.7E-03 $\pm$ 2.2E-02	U
	<sup>106</sup> Ru	-5.6E-02 $\pm$ 8.1E-02	U		<sup>106</sup> Ru	-5.1E-02 $\pm$ 1.2E-01	U
	<sup>125</sup> Sb	-2.2E-02 $\pm$ 3.6E-02	U		<sup>125</sup> Sb	4.9E-02 $\pm$ 5.6E-02	U
	<sup>113</sup> Sn	-6.1E-03 $\pm$ 1.6E-02	U		<sup>113</sup> Sn	-1.1E-02 $\pm$ 2.6E-02	U
	<sup>90</sup> Sr	4.0E-01 $\pm$ 2.8E-01			<sup>90</sup> Sr	5.6E-01 $\pm$ 3.4E-01	
	<sup>234</sup> U	1.3E-01 $\pm$ 4.7E-02			<sup>234</sup> U	1.2E-01 $\pm$ 4.4E-02	
	<sup>235</sup> U	6.6E-03 $\pm$ 7.9E-03			<sup>235</sup> U	9.1E-03 $\pm$ 9.1E-03	
	<sup>238</sup> U	1.4E-01 $\pm$ 4.9E-02			<sup>238</sup> U	1.5E-01 $\pm$ 5.3E-02	
	<sup>65</sup> Zn	-7.5E-03 $\pm$ 1.8E-02	U		<sup>65</sup> Zn	2.2E-02 $\pm$ 2.0E-02	U

RQ = Result Qualifier. U = The analyte was analyzed for but not detected.

Table 3-4. 2004 Soil Sampling Results (pCi/g  $\pm$  total analytical uncertainty). (21 sheets total)

Location	Isotope	Result $\pm$ Error	RQ*	Location	Isotope	Result $\pm$ Error	RQ*
D058 (200 East)	<sup>144</sup> Ce	-8.1E-02 $\pm$ 2.5E-01	U	D060 (200 East)	<sup>144</sup> Ce	5.0E-02 $\pm$ 1.3E-01	U
	<sup>60</sup> Co	-2.6E-03 $\pm$ 6.5E-03	U		<sup>60</sup> Co	-2.9E-05 $\pm$ 2.9E-04	U
	<sup>134</sup> Cs	3.1E-02 $\pm$ 9.7E-03			<sup>134</sup> Cs	4.1E-02 $\pm$ 1.1E-02	
	<sup>137</sup> Cs	1.1E+01 $\pm$ 1.9E+00			<sup>137</sup> Cs	7.8E-01 $\pm$ 1.3E-01	
	<sup>152</sup> Eu	-4.7E-02 $\pm$ 6.9E-02	U		<sup>152</sup> Eu	-2.1E-02 $\pm$ 2.1E-02	U
	<sup>154</sup> Eu	-6.0E-03 $\pm$ 2.1E-02	U		<sup>154</sup> Eu	3.2E-03 $\pm$ 2.3E-02	U
	<sup>155</sup> Eu	-3.2E-02 $\pm$ 5.7E-02	U		<sup>155</sup> Eu	4.2E-02 $\pm$ 3.8E-02	U
	<sup>238</sup> Pu	-2.4E-03 $\pm$ 2.4E-02	U		<sup>238</sup> Pu	3.4E-02 $\pm$ 4.4E-02	U
	<sup>239/240</sup> Pu	2.7E-02 $\pm$ 2.3E-02	U		<sup>239/240</sup> Pu	1.1E-02 $\pm$ 1.3E-02	U
	<sup>103</sup> Ru	-8.7E-03 $\pm$ 1.7E-02	U		<sup>103</sup> Ru	-3.5E-03 $\pm$ 8.0E-03	U
	<sup>106</sup> Ru	-1.5E-02 $\pm$ 9.9E-02	U		<sup>106</sup> Ru	3.2E-02 $\pm$ 5.5E-02	U
	<sup>125</sup> Sb	-1.8E-02 $\pm$ 4.5E-02	U		<sup>125</sup> Sb	-9.6E-04 $\pm$ 9.6E-03	U
	<sup>113</sup> Sn	-2.0E-02 $\pm$ 2.1E-02	U		<sup>113</sup> Sn	-1.2E-03 $\pm$ 9.4E-03	U
	<sup>90</sup> Sr	1.1E+00 $\pm$ 3.3E-01			<sup>90</sup> Sr	-2.7E-01 $\pm$ 2.7E-01	U
	<sup>234</sup> U	2.0E-01 $\pm$ 6.6E-02			<sup>234</sup> U	1.3E-01 $\pm$ 4.7E-02	
	<sup>235</sup> U	9.1E-03 $\pm$ 1.1E-02	U		<sup>235</sup> U	8.8E-03 $\pm$ 1.2E-02	U
	<sup>238</sup> U	1.9E-01 $\pm$ 6.3E-02			<sup>238</sup> U	1.2E-01 $\pm$ 4.4E-02	
	<sup>65</sup> Zn	6.8E-03 $\pm$ 1.9E-02	U		<sup>65</sup> Zn	-1.8E-02 $\pm$ 1.8E-02	U
D062 (200 East)	<sup>144</sup> Ce	1.0E-01 $\pm$ 1.1E-01	U	D064 (200 East)	<sup>144</sup> Ce	7.2E-02 $\pm$ 1.5E-01	U
	<sup>60</sup> Co	-1.4E-03 $\pm$ 5.8E-03	U		<sup>60</sup> Co	6.0E-03 $\pm$ 7.2E-03	U
	<sup>134</sup> Cs	3.6E-02 $\pm$ 9.6E-03			<sup>134</sup> Cs	3.3E-02 $\pm$ 1.2E-02	
	<sup>137</sup> Cs	1.0E+00 $\pm$ 1.6E-01			<sup>137</sup> Cs	1.6E+00 $\pm$ 3.0E-01	
	<sup>152</sup> Eu	-8.2E-03 $\pm$ 2.0E-02	U		<sup>152</sup> Eu	-2.8E-02 $\pm$ 2.8E-02	U
	<sup>154</sup> Eu	-2.3E-02 $\pm$ 2.3E-02	U		<sup>154</sup> Eu	4.6E-04 $\pm$ 4.6E-03	U
	<sup>155</sup> Eu	4.5E-02 $\pm$ 3.1E-02	U		<sup>155</sup> Eu	3.6E-02 $\pm$ 3.5E-02	U
	<sup>238</sup> Pu	2.8E-02 $\pm$ 5.3E-02	U		<sup>238</sup> Pu	-2.0E-03 $\pm$ 2.0E-02	U
	<sup>239/240</sup> Pu	2.5E-02 $\pm$ 2.4E-02	U		<sup>239/240</sup> Pu	6.1E-03 $\pm$ 1.5E-02	U
	<sup>103</sup> Ru	-3.1E-03 $\pm$ 7.6E-03	U		<sup>103</sup> Ru	-8.1E-03 $\pm$ 9.7E-03	U
	<sup>106</sup> Ru	9.3E-05 $\pm$ 9.3E-04	U		<sup>106</sup> Ru	2.3E-02 $\pm$ 7.0E-02	U
	<sup>125</sup> Sb	2.4E-02 $\pm$ 1.8E-02	U		<sup>125</sup> Sb	2.0E-02 $\pm$ 2.4E-02	U
	<sup>113</sup> Sn	-9.1E-03 $\pm$ 9.1E-03	U		<sup>113</sup> Sn	-1.2E-02 $\pm$ 1.2E-02	U
	<sup>90</sup> Sr	3.4E-01 $\pm$ 2.8E-01	U		<sup>90</sup> Sr	5.0E-01 $\pm$ 2.0E-01	
	<sup>234</sup> U	1.4E-01 $\pm$ 5.0E-02			<sup>234</sup> U	1.3E-01 $\pm$ 4.5E-02	
	<sup>235</sup> U	1.4E-02 $\pm$ 1.2E-02			<sup>235</sup> U	8.4E-03 $\pm$ 8.4E-03	
	<sup>238</sup> U	1.1E-01 $\pm$ 4.2E-02			<sup>238</sup> U	1.3E-01 $\pm$ 4.5E-02	
	<sup>65</sup> Zn	9.0E-04 $\pm$ 9.0E-03	U		<sup>65</sup> Zn	6.1E-03 $\pm$ 1.9E-02	U

RQ = Result Qualifier. U = The analyte was analyzed for but not detected.

Table 3-4. 2004 Soil Sampling Results (pCi/g  $\pm$  total analytical uncertainty). (21 sheets total)

Location	Isotope	Result $\pm$ Error	RQ*	Location	Isotope	Result $\pm$ Error	RQ*
D066 (200 East)	<sup>144</sup> Ce	9.4E-03 $\pm$ 9.4E-02	U	D068 (200 East)	<sup>144</sup> Ce	-1.5E-02 $\pm$ 1.2E-01	U
	<sup>60</sup> Co	1.9E-03 $\pm$ 6.5E-03	U		<sup>60</sup> Co	4.1E-03 $\pm$ 6.7E-03	U
	<sup>134</sup> Cs	3.1E-02 $\pm$ 1.1E-02			<sup>134</sup> Cs	3.4E-02 $\pm$ 1.3E-02	
	<sup>137</sup> Cs	3.3E+00 $\pm$ 5.3E-01			<sup>137</sup> Cs	9.6E-02 $\pm$ 1.9E-02	
	<sup>152</sup> Eu	-9.4E-03 $\pm$ 2.9E-02	U		<sup>152</sup> Eu	-5.8E-03 $\pm$ 2.3E-02	U
	<sup>154</sup> Eu	2.2E-02 $\pm$ 2.3E-02	U		<sup>154</sup> Eu	-1.6E-02 $\pm$ 2.2E-02	U
	<sup>155</sup> Eu	6.2E-02 $\pm$ 4.5E-02			<sup>155</sup> Eu	3.1E-02 $\pm$ 3.5E-02	U
	<sup>238</sup> Pu	-3.3E-02 $\pm$ 3.3E-02	U		<sup>238</sup> Pu	-1.7E-02 $\pm$ 3.7E-02	U
	<sup>239/240</sup> Pu	1.0E-02 $\pm$ 1.5E-02	U		<sup>239/240</sup> Pu	8.3E-03 $\pm$ 1.0E-02	U
	<sup>103</sup> Ru	-1.0E-02 $\pm$ 1.0E-02	U		<sup>103</sup> Ru	2.7E-03 $\pm$ 7.9E-03	U
	<sup>106</sup> Ru	-4.4E-02 $\pm$ 6.9E-02	U		<sup>106</sup> Ru	4.6E-02 $\pm$ 5.9E-02	U
	<sup>125</sup> Sb	5.6E-03 $\pm$ 2.5E-02	U		<sup>125</sup> Sb	1.3E-02 $\pm$ 1.8E-02	U
	<sup>113</sup> Sn	-3.3E-04 $\pm$ 3.3E-03	U		<sup>113</sup> Sn	-8.5E-03 $\pm$ 8.5E-03	U
	<sup>90</sup> Sr	2.2E-01 $\pm$ 2.1E-01	U		<sup>90</sup> Sr	-1.1E-01 $\pm$ 1.9E-01	U
	<sup>234</sup> U	1.6E-01 $\pm$ 5.3E-02			<sup>234</sup> U	1.7E-01 $\pm$ 5.6E-02	
	<sup>235</sup> U	2.3E-02 $\pm$ 1.5E-02			<sup>235</sup> U	1.2E-02 $\pm$ 1.0E-02	
	<sup>238</sup> U	1.5E-01 $\pm$ 4.9E-02			<sup>238</sup> U	1.6E-01 $\pm$ 5.3E-02	
	<sup>65</sup> Zn	-3.8E-03 $\pm$ 1.8E-02	U		<sup>65</sup> Zn	2.8E-02 $\pm$ 1.9E-02	U
D070 (200 East)	<sup>144</sup> Ce	-9.7E-02 $\pm$ 1.3E-01	U	D072 (200 East)	<sup>144</sup> Ce	6.8E-02 $\pm$ 9.6E-02	U
	<sup>60</sup> Co	4.1E-03 $\pm$ 6.1E-03	U		<sup>60</sup> Co	-7.1E-04 $\pm$ 4.8E-03	U
	<sup>134</sup> Cs	2.4E-02 $\pm$ 1.5E-02			<sup>134</sup> Cs	4.1E-02 $\pm$ 1.2E-02	
	<sup>137</sup> Cs	3.1E-01 $\pm$ 5.6E-02			<sup>137</sup> Cs	1.6E-01 $\pm$ 2.8E-02	
	<sup>152</sup> Eu	-6.8E-03 $\pm$ 3.9E-02	U		<sup>152</sup> Eu	6.8E-03 $\pm$ 1.6E-02	U
	<sup>154</sup> Eu	-3.8E-03 $\pm$ 2.4E-02	U		<sup>154</sup> Eu	1.1E-02 $\pm$ 1.9E-02	U
	<sup>155</sup> Eu	-1.7E-02 $\pm$ 3.6E-02	U		<sup>155</sup> Eu	2.6E-02 $\pm$ 2.7E-02	U
	<sup>238</sup> Pu	-5.5E-03 $\pm$ 3.2E-02	U		<sup>238</sup> Pu	4.7E-02 $\pm$ 3.9E-02	U
	<sup>239/240</sup> Pu	1.8E-03 $\pm$ 8.1E-03	U		<sup>239/240</sup> Pu	1.1E-02 $\pm$ 1.4E-02	U
	<sup>103</sup> Ru	-1.6E-03 $\pm$ 7.8E-03	U		<sup>103</sup> Ru	-1.4E-03 $\pm$ 6.0E-03	U
	<sup>106</sup> Ru	3.9E-02 $\pm$ 5.8E-02	U		<sup>106</sup> Ru	9.1E-03 $\pm$ 4.5E-02	U
	<sup>125</sup> Sb	6.3E-03 $\pm$ 2.0E-02	U		<sup>125</sup> Sb	5.4E-03 $\pm$ 1.5E-02	U
	<sup>113</sup> Sn	-4.1E-03 $\pm$ 1.1E-02	U		<sup>113</sup> Sn	6.1E-03 $\pm$ 7.0E-03	U
	<sup>90</sup> Sr	-6.2E-02 $\pm$ 1.7E-01	U		<sup>90</sup> Sr	4.6E-01 $\pm$ 2.3E-01	
	<sup>234</sup> U	1.3E-01 $\pm$ 4.4E-02			<sup>234</sup> U	1.2E-01 $\pm$ 4.6E-02	
	<sup>235</sup> U	1.1E-02 $\pm$ 1.2E-02	U		<sup>235</sup> U	9.0E-03 $\pm$ 1.3E-02	U
	<sup>238</sup> U	1.5E-01 $\pm$ 4.9E-02			<sup>238</sup> U	1.6E-01 $\pm$ 5.4E-02	
	<sup>65</sup> Zn	8.3E-03 $\pm$ 1.7E-02	U		<sup>65</sup> Zn	-2.1E-04 $\pm$ 2.1E-03	U

RQ = Result Qualifier. U = The analyte was analyzed for but not detected.

Table 3-4. 2004 Soil Sampling Results (pCi/g  $\pm$  total analytical uncertainty). (21 sheets total)

Location	Isotope	Result $\pm$ Error	RQ*	Location	Isotope	Result $\pm$ Error	RQ*
D074 (200 East)	<sup>144</sup> Ce	8.2E-03 $\pm$ 8.2E-02	U	D076 (200 East)	<sup>144</sup> Ce	-5.6E-02 $\pm$ 1.3E-01	U
	<sup>60</sup> Co	-2.0E-03 $\pm$ 8.8E-03	U		<sup>60</sup> Co	-4.6E-04 $\pm$ 4.7E-03	U
	<sup>134</sup> Cs	5.7E-02 $\pm$ 2.0E-02			<sup>134</sup> Cs	3.7E-02 $\pm$ 1.3E-02	
	<sup>137</sup> Cs	3.0E-01 $\pm$ 5.3E-02			<sup>137</sup> Cs	6.6E-01 $\pm$ 1.1E-01	
	<sup>152</sup> Eu	1.9E-02 $\pm$ 3.0E-02	U		<sup>152</sup> Eu	-5.6E-04 $\pm$ 5.6E-03	U
	<sup>154</sup> Eu	-4.8E-04 $\pm$ 4.8E-03	U		<sup>154</sup> Eu	-2.2E-02 $\pm$ 2.4E-02	U
	<sup>155</sup> Eu	4.3E-02 $\pm$ 3.3E-02	U		<sup>155</sup> Eu	5.2E-02 $\pm$ 3.7E-02	
	<sup>238</sup> Pu	1.9E-03 $\pm$ 1.9E-02	U		<sup>238</sup> Pu	1.7E-03 $\pm$ 1.7E-03	U
	<sup>239/240</sup> Pu	3.8E-03 $\pm$ 1.2E-02	U		<sup>239/240</sup> Pu	2.8E-02 $\pm$ 1.5E-02	
	<sup>103</sup> Ru	5.1E-03 $\pm$ 1.1E-02	U		<sup>103</sup> Ru	-5.0E-03 $\pm$ 8.3E-03	U
	<sup>106</sup> Ru	-8.9E-02 $\pm$ 8.9E-02	U		<sup>106</sup> Ru	-9.4E-03 $\pm$ 6.3E-02	U
	<sup>125</sup> Sb	-5.5E-03 $\pm$ 2.6E-02	U		<sup>125</sup> Sb	-3.0E-03 $\pm$ 2.1E-02	U
	<sup>113</sup> Sn	9.0E-03 $\pm$ 1.2E-02	U		<sup>113</sup> Sn	-6.5E-03 $\pm$ 9.5E-03	U
	<sup>90</sup> Sr	5.2E-02 $\pm$ 1.9E-01	U		<sup>90</sup> Sr	7.9E-01 $\pm$ 2.5E-01	
	<sup>234</sup> U	1.4E-01 $\pm$ 4.8E-02			<sup>234</sup> U	1.4E-01 $\pm$ 4.9E-02	
	<sup>235</sup> U	2.0E-02 $\pm$ 1.3E-02			<sup>235</sup> U	1.1E-02 $\pm$ 1.0E-02	
	<sup>238</sup> U	1.2E-01 $\pm$ 4.2E-02			<sup>238</sup> U	1.4E-01 $\pm$ 4.9E-02	
	<sup>65</sup> Zn	-2.7E-02 $\pm$ 2.7E-02	U		<sup>65</sup> Zn	2.0E-02 $\pm$ 2.1E-02	U
D078 (200 East)	<sup>144</sup> Ce	2.2E-02 $\pm$ 1.2E-01	U	D080 (200 East)	<sup>144</sup> Ce	5.9E-02 $\pm$ 1.2E-01	U
	<sup>60</sup> Co	-4.5E-04 $\pm$ 4.5E-03	U		<sup>60</sup> Co	-1.0E-03 $\pm$ 5.9E-03	U
	<sup>134</sup> Cs	4.0E-02 $\pm$ 1.4E-02			<sup>134</sup> Cs	4.2E-02 $\pm$ 1.1E-02	
	<sup>137</sup> Cs	1.2E+00 $\pm$ 1.9E-01			<sup>137</sup> Cs	1.3E-01 $\pm$ 2.3E-02	
	<sup>152</sup> Eu	-7.9E-03 $\pm$ 2.0E-02	U		<sup>152</sup> Eu	4.7E-03 $\pm$ 1.9E-02	U
	<sup>154</sup> Eu	-3.2E-03 $\pm$ 1.9E-02	U		<sup>154</sup> Eu	9.9E-03 $\pm$ 2.1E-02	U
	<sup>155</sup> Eu	2.1E-02 $\pm$ 2.8E-02	U		<sup>155</sup> Eu	3.0E-02 $\pm$ 3.1E-02	U
	<sup>238</sup> Pu	8.0E-03 $\pm$ 7.4E-03			<sup>238</sup> Pu	-6.8E-03 $\pm$ 6.8E-03	U
	<sup>239/240</sup> Pu	4.0E-02 $\pm$ 1.8E-02			<sup>239/240</sup> Pu	3.4E-03 $\pm$ 6.8E-03	U
	<sup>103</sup> Ru	3.0E-03 $\pm$ 7.4E-03	U		<sup>103</sup> Ru	3.9E-03 $\pm$ 7.0E-03	U
	<sup>106</sup> Ru	2.7E-02 $\pm$ 5.4E-02	U		<sup>106</sup> Ru	-2.2E-02 $\pm$ 5.3E-02	U
	<sup>125</sup> Sb	-2.5E-02 $\pm$ 2.5E-02	U		<sup>125</sup> Sb	-6.6E-03 $\pm$ 1.7E-02	U
	<sup>113</sup> Sn	-9.7E-03 $\pm$ 9.7E-03	U		<sup>113</sup> Sn	-5.2E-03 $\pm$ 8.7E-03	U
	<sup>90</sup> Sr	-2.8E-02 $\pm$ 1.7E-01	U		<sup>90</sup> Sr	2.3E-02 $\pm$ 2.1E-01	U
	<sup>234</sup> U	1.5E-01 $\pm$ 5.3E-02			<sup>234</sup> U	1.1E-01 $\pm$ 4.1E-02	
	<sup>235</sup> U	6.4E-03 $\pm$ 7.7E-03			<sup>235</sup> U	1.1E-02 $\pm$ 1.2E-02	U
	<sup>238</sup> U	1.5E-01 $\pm$ 5.1E-02			<sup>238</sup> U	1.7E-01 $\pm$ 5.6E-02	
	<sup>65</sup> Zn	-1.4E-03 $\pm$ 1.4E-02	U		<sup>65</sup> Zn	-2.4E-02 $\pm$ 2.4E-02	U

RQ = Result Qualifier. U = The analyte was analyzed for but not detected.

Table 3-4. 2004 Soil Sampling Results (pCi/g  $\pm$  total analytical uncertainty). (21 sheets total)

Location	Isotope	Result $\pm$ Error	RQ*	Location	Isotope	Result $\pm$ Error	RQ*
D082 (600 Area)	<sup>144</sup> Ce	-1.2E-01 $\pm$ 1.2E-01	U	D084 (600 Area)	<sup>144</sup> Ce	6.0E-03 $\pm$ 6.0E-02	U
	<sup>60</sup> Co	-8.2E-04 $\pm$ 5.9E-03	U		<sup>60</sup> Co	-1.0E-02 $\pm$ 1.0E-02	U
	<sup>134</sup> Cs	4.7E-02 $\pm$ 1.3E-02			<sup>134</sup> Cs	5.2E-02 $\pm$ 1.7E-02	
	<sup>137</sup> Cs	1.6E-02 $\pm$ 9.9E-03			<sup>137</sup> Cs	3.2E-01 $\pm$ 6.0E-02	
	<sup>152</sup> Eu	-1.4E-02 $\pm$ 2.0E-02	U		<sup>152</sup> Eu	-2.6E-03 $\pm$ 2.6E-02	U
	<sup>154</sup> Eu	-1.0E-02 $\pm$ 2.3E-02	U		<sup>154</sup> Eu	-1.1E-02 $\pm$ 2.5E-02	U
	<sup>155</sup> Eu	3.1E-02 $\pm$ 3.8E-02	U		<sup>155</sup> Eu	3.1E-02 $\pm$ 3.4E-02	U
	<sup>238</sup> Pu	2.9E-02 $\pm$ 3.5E-02	U		<sup>238</sup> Pu	8.3E-03 $\pm$ 2.2E-02	U
	<sup>239/240</sup> Pu	9.8E-03 $\pm$ 1.1E-02	U		<sup>239/240</sup> Pu	1.0E-02 $\pm$ 1.1E-02	U
	<sup>103</sup> Ru	-2.6E-03 $\pm$ 7.3E-03	U		<sup>103</sup> Ru	-3.7E-03 $\pm$ 8.4E-03	U
	<sup>106</sup> Ru	2.4E-02 $\pm$ 5.4E-02	U		<sup>106</sup> Ru	-3.6E-03 $\pm$ 3.6E-02	U
	<sup>125</sup> Sb	-1.4E-02 $\pm$ 1.8E-02	U		<sup>125</sup> Sb	9.3E-03 $\pm$ 2.1E-02	U
	<sup>113</sup> Sn	4.0E-03 $\pm$ 8.8E-03	U		<sup>113</sup> Sn	3.3E-03 $\pm$ 1.0E-02	U
	<sup>90</sup> Sr	-2.1E-01 $\pm$ 2.1E-01	U		<sup>90</sup> Sr	1.1E+00 $\pm$ 2.5E-01	
	<sup>234</sup> U	1.4E-01 $\pm$ 4.8E-02			<sup>234</sup> U	1.3E-01 $\pm$ 4.8E-02	
	<sup>235</sup> U	1.2E-02 $\pm$ 1.0E-02			<sup>235</sup> U	2.5E-02 $\pm$ 1.7E-02	
	<sup>238</sup> U	1.7E-01 $\pm$ 5.6E-02			<sup>238</sup> U	1.4E-01 $\pm$ 5.0E-02	
	<sup>65</sup> Zn	4.5E-03 $\pm$ 1.7E-02	U		<sup>65</sup> Zn	-9.1E-03 $\pm$ 2.1E-02	U
D086 (600 Area)	<sup>144</sup> Ce	-2.9E-02 $\pm$ 1.4E-01	U	D088 (600 Area)	<sup>144</sup> Ce	1.9E-01 $\pm$ 3.5E-01	U
	<sup>60</sup> Co	-7.0E-03 $\pm$ 7.9E-03	U		<sup>60</sup> Co	1.2E-02 $\pm$ 9.5E-03	U
	<sup>134</sup> Cs	3.1E-02 $\pm$ 1.3E-02			<sup>134</sup> Cs	5.3E-02 $\pm$ 2.1E-02	
	<sup>137</sup> Cs	5.6E-01 $\pm$ 9.4E-02			<sup>137</sup> Cs	6.1E+01 $\pm$ 9.7E+00	
	<sup>152</sup> Eu	-6.9E-03 $\pm$ 2.8E-02	U		<sup>152</sup> Eu	-5.1E-02 $\pm$ 8.8E-02	U
	<sup>154</sup> Eu	-4.6E-03 $\pm$ 2.9E-02	U		<sup>154</sup> Eu	7.3E-02 $\pm$ 2.4E-02	
	<sup>155</sup> Eu	3.1E-02 $\pm$ 3.5E-02	U		<sup>155</sup> Eu	9.9E-02 $\pm$ 9.9E-02	U
	<sup>238</sup> Pu	-1.6E-02 $\pm$ 2.9E-02	U		<sup>238</sup> Pu	7.7E-01 $\pm$ 2.2E-01	
	<sup>239/240</sup> Pu	1.0E-02 $\pm$ 9.3E-03			<sup>239/240</sup> Pu	1.2E+01 $\pm$ 3.1E+00	
	<sup>103</sup> Ru	6.5E-03 $\pm$ 9.0E-03	U		<sup>103</sup> Ru	-1.7E-02 $\pm$ 3.6E-02	U
	<sup>106</sup> Ru	-4.5E-02 $\pm$ 7.4E-02	U		<sup>106</sup> Ru	-3.6E-02 $\pm$ 1.9E-01	U
	<sup>125</sup> Sb	-5.4E-04 $\pm$ 5.4E-03	U		<sup>125</sup> Sb	9.6E-02 $\pm$ 9.9E-02	U
	<sup>113</sup> Sn	-4.2E-03 $\pm$ 1.1E-02	U		<sup>113</sup> Sn	2.9E-02 $\pm$ 4.3E-02	U
	<sup>90</sup> Sr	6.3E-02 $\pm$ 2.0E-01	U		<sup>90</sup> Sr	2.2E-01 $\pm$ 2.1E-01	U
	<sup>234</sup> U	1.2E-01 $\pm$ 4.4E-02			<sup>234</sup> U	8.4E-01 $\pm$ 2.3E-01	
	<sup>235</sup> U	1.3E-02 $\pm$ 1.3E-02	U		<sup>235</sup> U	5.5E-02 $\pm$ 2.6E-02	
	<sup>238</sup> U	1.1E-01 $\pm$ 4.1E-02			<sup>238</sup> U	6.8E-01 $\pm$ 1.9E-01	
	<sup>65</sup> Zn	2.3E-02 $\pm$ 2.2E-02	U		<sup>65</sup> Zn	-2.0E-02 $\pm$ 2.5E-02	U

RQ = Result Qualifier. U = The analyte was analyzed for but not detected.



Table 3-4. 2004 Soil Sampling Results (pCi/g  $\pm$  total analytical uncertainty). (21 sheets total)

Location	Isotope	Result $\pm$ Error	RQ*	Location	Isotope	Result $\pm$ Error	RQ*
D090 (600 Area)	<sup>144</sup> Ce	1.2E-01 $\pm$ 1.7E-01	U	D092 (600 Area)	<sup>144</sup> Ce	-6.8E-02 $\pm$ 1.7E-01	U
	<sup>60</sup> Co	1.3E-02 $\pm$ 1.3E-02			<sup>60</sup> Co	5.0E-03 $\pm$ 1.0E-02	U
	<sup>134</sup> Cs	4.0E-02 $\pm$ 1.4E-02			<sup>134</sup> Cs	5.0E-02 $\pm$ 1.9E-02	
	<sup>137</sup> Cs	5.1E-01 $\pm$ 8.9E-02			<sup>137</sup> Cs	1.4E+00 $\pm$ 2.1E-01	
	<sup>152</sup> Eu	5.3E-03 $\pm$ 4.4E-02	U		<sup>152</sup> Eu	-1.5E-02 $\pm$ 3.7E-02	U
	<sup>154</sup> Eu	-1.9E-02 $\pm$ 2.5E-02	U		<sup>154</sup> Eu	-1.6E-02 $\pm$ 3.6E-02	U
	<sup>155</sup> Eu	3.2E-02 $\pm$ 4.0E-02	U		<sup>155</sup> Eu	4.5E-02 $\pm$ 3.8E-02	U
	<sup>238</sup> Pu	1.4E-02 $\pm$ 3.9E-02	U		<sup>238</sup> Pu	-1.4E-02 $\pm$ 4.1E-02	U
	<sup>239/240</sup> Pu	2.3E-02 $\pm$ 1.6E-02			<sup>239/240</sup> Pu	7.9E-02 $\pm$ 3.4E-02	
	<sup>103</sup> Ru	-3.8E-03 $\pm$ 8.6E-03	U		<sup>103</sup> Ru	5.1E-03 $\pm$ 1.3E-02	U
	<sup>106</sup> Ru	-6.9E-03 $\pm$ 6.3E-02	U		<sup>106</sup> Ru	3.1E-02 $\pm$ 9.3E-02	U
	<sup>125</sup> Sb	7.1E-03 $\pm$ 2.2E-02	U		<sup>125</sup> Sb	1.3E-02 $\pm$ 3.2E-02	U
	<sup>113</sup> Sn	-8.0E-04 $\pm$ 8.0E-03	U		<sup>113</sup> Sn	-3.4E-03 $\pm$ 1.5E-02	U
	<sup>90</sup> Sr	2.6E-01 $\pm$ 2.3E-01	U		<sup>90</sup> Sr	5.5E-01 $\pm$ 2.5E-01	
	<sup>234</sup> U	1.3E-01 $\pm$ 4.7E-02			<sup>234</sup> U	1.8E-01 $\pm$ 5.9E-02	
	<sup>235</sup> U	1.5E-02 $\pm$ 1.2E-02			<sup>235</sup> U	6.7E-03 $\pm$ 8.0E-03	
	<sup>238</sup> U	1.8E-01 $\pm$ 5.9E-02			<sup>238</sup> U	1.4E-01 $\pm$ 4.9E-02	
	<sup>65</sup> Zn	2.8E-02 $\pm$ 1.9E-02	U		<sup>65</sup> Zn	9.3E-03 $\pm$ 2.6E-02	U
D094 (600 Area)	<sup>144</sup> Ce	2.5E-02 $\pm$ 1.5E-01	U	D096 (600 Area)	<sup>144</sup> Ce	9.3E-02 $\pm$ 1.4E-01	U
	<sup>60</sup> Co	3.2E-03 $\pm$ 5.7E-03	U		<sup>60</sup> Co	1.7E-03 $\pm$ 7.2E-03	U
	<sup>134</sup> Cs	2.9E-02 $\pm$ 1.1E-02			<sup>134</sup> Cs	4.7E-02 $\pm$ 1.5E-02	
	<sup>137</sup> Cs	1.2E-01 $\pm$ 2.6E-02			<sup>137</sup> Cs	2.3E-01 $\pm$ 4.1E-02	
	<sup>152</sup> Eu	3.8E-02 $\pm$ 3.9E-02			<sup>152</sup> Eu	-8.6E-03 $\pm$ 2.4E-02	U
	<sup>154</sup> Eu	-1.3E-02 $\pm$ 2.0E-02	U		<sup>154</sup> Eu	-2.4E-02 $\pm$ 2.4E-02	U
	<sup>155</sup> Eu	1.4E-02 $\pm$ 3.6E-02	U		<sup>155</sup> Eu	3.6E-02 $\pm$ 3.5E-02	U
	<sup>238</sup> Pu	2.1E-03 $\pm$ 2.1E-03	U		<sup>238</sup> Pu	1.0E-02 $\pm$ 3.5E-02	U
	<sup>239/240</sup> Pu	1.0E-02 $\pm$ 1.1E-02	U		<sup>239/240</sup> Pu	2.1E-03 $\pm$ 1.1E-02	U
	<sup>103</sup> Ru	2.4E-03 $\pm$ 7.5E-03	U		<sup>103</sup> Ru	-7.9E-04 $\pm$ 7.9E-03	U
	<sup>106</sup> Ru	-3.0E-02 $\pm$ 5.9E-02	U		<sup>106</sup> Ru	1.7E-03 $\pm$ 1.7E-02	U
	<sup>125</sup> Sb	1.2E-02 $\pm$ 1.9E-02	U		<sup>125</sup> Sb	6.1E-03 $\pm$ 1.9E-02	U
	<sup>113</sup> Sn	-9.9E-03 $\pm$ 9.9E-03	U		<sup>113</sup> Sn	3.3E-03 $\pm$ 1.1E-02	U
	<sup>90</sup> Sr	-3.6E-01 $\pm$ 3.6E-01	U		<sup>90</sup> Sr	-1.2E-01 $\pm$ 2.2E-01	U
	<sup>234</sup> U	1.9E-01 $\pm$ 6.1E-02			<sup>234</sup> U	1.8E-01 $\pm$ 5.8E-02	
	<sup>235</sup> U	1.4E-02 $\pm$ 1.0E-02			<sup>235</sup> U	9.3E-03 $\pm$ 8.6E-03	
	<sup>238</sup> U	2.0E-01 $\pm$ 6.2E-02			<sup>238</sup> U	1.5E-01 $\pm$ 4.9E-02	
	<sup>65</sup> Zn	2.6E-02 $\pm$ 1.8E-02	U		<sup>65</sup> Zn	1.9E-02 $\pm$ 1.9E-02	U

RQ = Result Qualifier. U = The analyte was analyzed for but not detected.

Table 3-4. 2004 Soil Sampling Results (pCi/g  $\pm$  total analytical uncertainty). (21 sheets total)

Location	Isotope	Result $\pm$ Error	RQ*	Location	Isotope	Result $\pm$ Error	RQ*
D098 (600 Area)	<sup>144</sup> Ce	-5.6E-03 $\pm$ 5.6E-02	U	D100 (600 Area)	<sup>144</sup> Ce	-8.2E-02 $\pm$ 1.2E-01	U
	<sup>60</sup> Co	3.4E-03 $\pm$ 7.6E-03	U		<sup>60</sup> Co	1.5E-03 $\pm$ 5.8E-03	U
	<sup>134</sup> Cs	3.7E-02 $\pm$ 1.4E-02			<sup>134</sup> Cs	4.6E-02 $\pm$ 1.3E-02	
	<sup>137</sup> Cs	7.1E-02 $\pm$ 2.0E-02			<sup>137</sup> Cs	1.6E-02 $\pm$ 8.4E-03	
	<sup>152</sup> Eu	-2.1E-02 $\pm$ 2.7E-02	U		<sup>152</sup> Eu	2.6E-03 $\pm$ 2.0E-02	U
	<sup>154</sup> Eu	-1.4E-02 $\pm$ 2.5E-02	U		<sup>154</sup> Eu	-3.5E-03 $\pm$ 2.0E-02	U
	<sup>155</sup> Eu	7.8E-02 $\pm$ 4.7E-02			<sup>155</sup> Eu	5.2E-02 $\pm$ 2.7E-02	
	<sup>238</sup> Pu	2.6E-02 $\pm$ 3.6E-02	U		<sup>238</sup> Pu	-6.4E-03 $\pm$ 3.3E-02	U
	<sup>239/240</sup> Pu	2.2E-02 $\pm$ 1.6E-02			<sup>239/240</sup> Pu	1.3E-02 $\pm$ 1.1E-02	
	<sup>103</sup> Ru	-3.5E-03 $\pm$ 7.7E-03	U		<sup>103</sup> Ru	4.8E-03 $\pm$ 6.3E-03	U
	<sup>106</sup> Ru	-1.2E-02 $\pm$ 6.3E-02	U		<sup>106</sup> Ru	3.1E-03 $\pm$ 3.1E-02	U
	<sup>125</sup> Sb	-2.1E-03 $\pm$ 2.0E-02	U		<sup>125</sup> Sb	-3.6E-03 $\pm$ 1.6E-02	U
	<sup>113</sup> Sn	3.7E-03 $\pm$ 9.3E-03	U		<sup>113</sup> Sn	-3.9E-03 $\pm$ 7.7E-03	U
	<sup>90</sup> Sr	-2.1E-01 $\pm$ 2.4E-01	U		<sup>90</sup> Sr	-3.6E-01 $\pm$ 3.6E-01	U
	<sup>234</sup> U	1.5E-01 $\pm$ 4.9E-02			<sup>234</sup> U	1.3E-01 $\pm$ 4.4E-02	
	<sup>235</sup> U	1.6E-02 $\pm$ 1.2E-02			<sup>235</sup> U	7.3E-03 $\pm$ 7.3E-03	
	<sup>238</sup> U	1.6E-01 $\pm$ 5.3E-02			<sup>238</sup> U	1.3E-01 $\pm$ 4.4E-02	
	<sup>65</sup> Zn	2.5E-02 $\pm$ 2.2E-02	U		<sup>65</sup> Zn	-1.3E-02 $\pm$ 1.6E-02	U
D102 (600 Area)	<sup>144</sup> Ce	4.4E-02 $\pm$ 1.3E-01	U	D104 (600 Area)	<sup>144</sup> Ce	-1.4E-02 $\pm$ 1.3E-01	U
	<sup>60</sup> Co	4.1E-03 $\pm$ 6.4E-03	U		<sup>60</sup> Co	-2.8E-03 $\pm$ 6.7E-03	U
	<sup>134</sup> Cs	3.6E-02 $\pm$ 9.9E-03			<sup>134</sup> Cs	4.7E-02 $\pm$ 1.3E-02	
	<sup>137</sup> Cs	1.9E+00 $\pm$ 3.0E-01			<sup>137</sup> Cs	2.9E-01 $\pm$ 4.8E-02	
	<sup>152</sup> Eu	5.7E-03 $\pm$ 2.5E-02	U		<sup>152</sup> Eu	-1.8E-02 $\pm$ 2.4E-02	U
	<sup>154</sup> Eu	1.8E-02 $\pm$ 2.3E-02	U		<sup>154</sup> Eu	-1.3E-02 $\pm$ 2.1E-02	U
	<sup>155</sup> Eu	5.4E-02 $\pm$ 4.1E-02			<sup>155</sup> Eu	5.0E-02 $\pm$ 4.2E-02	
	<sup>238</sup> Pu	5.0E-02 $\pm$ 4.3E-02	U		<sup>238</sup> Pu	1.6E-02 $\pm$ 2.9E-02	U
	<sup>239/240</sup> Pu	9.2E-02 $\pm$ 4.0E-02			<sup>239/240</sup> Pu	1.6E-02 $\pm$ 1.2E-02	
	<sup>103</sup> Ru	5.9E-03 $\pm$ 8.9E-03	U		<sup>103</sup> Ru	8.1E-04 $\pm$ 7.5E-03	U
	<sup>106</sup> Ru	-1.4E-02 $\pm$ 6.1E-02	U		<sup>106</sup> Ru	2.9E-02 $\pm$ 5.8E-02	U
	<sup>125</sup> Sb	1.9E-02 $\pm$ 2.3E-02	U		<sup>125</sup> Sb	-2.6E-03 $\pm$ 1.9E-02	U
	<sup>113</sup> Sn	-4.7E-03 $\pm$ 1.1E-02	U		<sup>113</sup> Sn	-9.0E-03 $\pm$ 9.3E-03	U
	<sup>90</sup> Sr	-7.0E-02 $\pm$ 2.2E-01	U		<sup>90</sup> Sr	-1.5E-01 $\pm$ 1.8E-01	U
	<sup>234</sup> U	2.8E-01 $\pm$ 8.7E-02			<sup>234</sup> U	1.3E-01 $\pm$ 4.7E-02	
	<sup>235</sup> U	1.8E-02 $\pm$ 1.3E-02			<sup>235</sup> U	4.4E-03 $\pm$ 6.2E-03	U
	<sup>238</sup> U	2.6E-01 $\pm$ 8.1E-02			<sup>238</sup> U	1.2E-01 $\pm$ 4.4E-02	
	<sup>65</sup> Zn	-5.5E-03 $\pm$ 2.7E-02	U		<sup>65</sup> Zn	-4.8E-03 $\pm$ 1.8E-02	U

RQ = Result Qualifier. U = The analyte was analyzed for but not detected.

Table 3-4. 2004 Soil Sampling Results (pCi/g  $\pm$  total analytical uncertainty). (21 sheets total)

Location	Isotope	Result $\pm$ Error	RQ*	Location	Isotope	Result $\pm$ Error	RQ*
<b>D106</b> (600 Area)	<sup>144</sup> Ce	3.1E-02 $\pm$ 1.4E-01	U	<b>D108</b> (600 Area)	<sup>144</sup> Ce	-1.7E-01 $\pm$ 1.7E-01	U
	<sup>60</sup> Co	-2.3E-03 $\pm$ 7.3E-03	U		<sup>60</sup> Co	-3.4E-03 $\pm$ 7.7E-03	U
	<sup>134</sup> Cs	3.0E-02 $\pm$ 1.2E-02			<sup>134</sup> Cs	4.2E-02 $\pm$ 1.3E-02	
	<sup>137</sup> Cs	9.6E-01 $\pm$ 1.6E-01			<sup>137</sup> Cs	1.0E+00 $\pm$ 1.7E-01	
	<sup>152</sup> Eu	-2.9E-02 $\pm$ 3.3E-02	U		<sup>152</sup> Eu	-6.0E-04 $\pm$ 6.0E-03	U
	<sup>154</sup> Eu	-1.1E-02 $\pm$ 2.4E-02	U		<sup>154</sup> Eu	-2.5E-02 $\pm$ 2.5E-02	U
	<sup>155</sup> Eu	4.6E-02 $\pm$ 3.3E-02	U		<sup>155</sup> Eu	4.6E-02 $\pm$ 4.0E-02	U
	<sup>238</sup> Pu	2.7E-01 $\pm$ 9.2E-02			<sup>238</sup> Pu	2.1E-03 $\pm$ 2.1E-02	U
	<sup>239/240</sup> Pu	7.3E-01 $\pm$ 2.0E-01			<sup>239/240</sup> Pu	7.2E-02 $\pm$ 3.2E-02	
	<sup>103</sup> Ru	-2.7E-03 $\pm$ 8.6E-03	U		<sup>103</sup> Ru	1.8E-03 $\pm$ 8.7E-03	U
	<sup>106</sup> Ru	5.5E-02 $\pm$ 7.0E-02	U		<sup>106</sup> Ru	-3.9E-02 $\pm$ 6.9E-02	U
	<sup>125</sup> Sb	-5.5E-03 $\pm$ 2.2E-02	U		<sup>125</sup> Sb	-9.0E-03 $\pm$ 2.3E-02	U
	<sup>113</sup> Sn	1.4E-03 $\pm$ 1.0E-02	U		<sup>113</sup> Sn	-5.5E-03 $\pm$ 1.1E-02	U
	<sup>90</sup> Sr	3.6E-01 $\pm$ 2.2E-01	U		<sup>90</sup> Sr	8.8E-01 $\pm$ 3.1E-01	
	<sup>234</sup> U	1.3E-01 $\pm$ 4.4E-02			<sup>234</sup> U	1.4E-01 $\pm$ 4.8E-02	
	<sup>235</sup> U	7.3E-03 $\pm$ 7.3E-03			<sup>235</sup> U	9.2E-03 $\pm$ 8.6E-03	
	<sup>238</sup> U	1.4E-01 $\pm$ 4.8E-02			<sup>238</sup> U	1.4E-01 $\pm$ 4.8E-02	
	<sup>65</sup> Zn	-9.3E-03 $\pm$ 2.0E-02	U		<sup>65</sup> Zn	2.9E-02 $\pm$ 2.2E-02	U
<b>D110</b> (600 Area)	<sup>144</sup> Ce	-5.4E-02 $\pm$ 1.7E-01	U	<b>D112</b> (600 Area)	<sup>144</sup> Ce	3.5E-02 $\pm$ 1.1E-01	U
	<sup>60</sup> Co	6.0E-03 $\pm$ 7.7E-03	U		<sup>60</sup> Co	-7.1E-04 $\pm$ 5.8E-03	U
	<sup>134</sup> Cs	3.0E-02 $\pm$ 1.1E-02			<sup>134</sup> Cs	3.2E-02 $\pm$ 1.1E-02	
	<sup>137</sup> Cs	1.4E-01 $\pm$ 2.9E-02			<sup>137</sup> Cs	9.1E-02 $\pm$ 2.0E-02	
	<sup>152</sup> Eu	4.5E-03 $\pm$ 4.3E-02	U		<sup>152</sup> Eu	-2.9E-02 $\pm$ 2.9E-02	U
	<sup>154</sup> Eu	-3.1E-02 $\pm$ 3.1E-02	U		<sup>154</sup> Eu	-1.2E-02 $\pm$ 1.9E-02	U
	<sup>155</sup> Eu	-2.8E-03 $\pm$ 2.8E-02	U		<sup>155</sup> Eu	2.7E-02 $\pm$ 2.7E-02	U
	<sup>238</sup> Pu	-1.6E-02 $\pm$ 4.0E-02	U		<sup>238</sup> Pu	1.2E-02 $\pm$ 3.5E-02	U
	<sup>239/240</sup> Pu	4.5E-03 $\pm$ 9.0E-03	U		<sup>239/240</sup> Pu	-6.1E-03 $\pm$ 1.2E-02	U
	<sup>103</sup> Ru	4.2E-03 $\pm$ 8.0E-03	U		<sup>103</sup> Ru	7.8E-04 $\pm$ 6.0E-03	U
	<sup>106</sup> Ru	1.4E-02 $\pm$ 6.3E-02	U		<sup>106</sup> Ru	3.4E-03 $\pm$ 3.4E-02	U
	<sup>125</sup> Sb	-5.8E-03 $\pm$ 2.1E-02	U		<sup>125</sup> Sb	2.6E-03 $\pm$ 1.6E-02	U
	<sup>113</sup> Sn	-3.0E-04 $\pm$ 3.0E-03	U		<sup>113</sup> Sn	7.8E-04 $\pm$ 7.5E-03	U
	<sup>90</sup> Sr	2.5E-01 $\pm$ 2.5E-01	U		<sup>90</sup> Sr	-3.1E-01 $\pm$ 3.1E-01	U
	<sup>234</sup> U	1.4E-01 $\pm$ 4.8E-02			<sup>234</sup> U	9.9E-02 $\pm$ 3.7E-02	
	<sup>235</sup> U	9.2E-03 $\pm$ 8.6E-03			<sup>235</sup> U	9.3E-03 $\pm$ 1.0E-02	U
	<sup>238</sup> U	1.4E-01 $\pm$ 4.8E-02			<sup>238</sup> U	1.4E-01 $\pm$ 4.8E-02	
	<sup>65</sup> Zn	2.0E-02 $\pm$ 1.9E-02	U		<sup>65</sup> Zn	-1.2E-02 $\pm$ 1.6E-02	U

RQ = Result Qualifier. U = The analyte was analyzed for but not detected.

Table 3-4. 2004 Soil Sampling Results (pCi/g  $\pm$  total analytical uncertainty). (21 sheets total)

Location	Isotope	Result $\pm$ Error	RQ*	Location	Isotope	Result $\pm$ Error	RQ*
D114 (600 Area)	<sup>144</sup> Ce	5.0E-02 $\pm$ 1.7E-01	U	D116 (300 Area)	<sup>144</sup> Ce	-3.9E-02 $\pm$ 1.0E-01	U
	<sup>60</sup> Co	-4.4E-04 $\pm$ 4.4E-03	U		<sup>60</sup> Co	3.5E-03 $\pm$ 5.6E-03	U
	<sup>134</sup> Cs	5.4E-02 $\pm$ 1.8E-02			<sup>134</sup> Cs	2.6E-02 $\pm$ 1.1E-02	
	<sup>137</sup> Cs	2.0E-01 $\pm$ 3.8E-02			<sup>137</sup> Cs	2.4E-02 $\pm$ 8.9E-03	
	<sup>152</sup> Eu	2.3E-02 $\pm$ 4.2E-02	U		<sup>152</sup> Eu	-3.7E-03 $\pm$ 1.7E-02	U
	<sup>154</sup> Eu	-2.2E-02 $\pm$ 2.2E-02	U		<sup>154</sup> Eu	-2.2E-02 $\pm$ 2.2E-02	U
	<sup>155</sup> Eu	3.0E-02 $\pm$ 3.6E-02	U		<sup>155</sup> Eu	3.8E-02 $\pm$ 3.5E-02	U
	<sup>238</sup> Pu	1.0E-02 $\pm$ 2.9E-02	U		<sup>238</sup> Pu	-5.0E-03 $\pm$ 3.9E-02	U
	<sup>239/240</sup> Pu	5.0E-02 $\pm$ 2.3E-02			<sup>239/240</sup> Pu	2.0E-02 $\pm$ 1.5E-02	
	<sup>103</sup> Ru	-5.8E-03 $\pm$ 8.0E-03	U		<sup>103</sup> Ru	-4.4E-03 $\pm$ 5.7E-03	U
	<sup>106</sup> Ru	-1.9E-02 $\pm$ 6.2E-02	U		<sup>106</sup> Ru	-2.9E-02 $\pm$ 4.6E-02	U
	<sup>125</sup> Sb	-2.1E-04 $\pm$ 2.1E-03	U		<sup>125</sup> Sb	1.2E-03 $\pm$ 1.2E-02	U
	<sup>113</sup> Sn	2.0E-03 $\pm$ 1.0E-02	U		<sup>113</sup> Sn	-1.9E-03 $\pm$ 7.6E-03	U
	<sup>90</sup> Sr	5.4E-02 $\pm$ 2.4E-01	U		<sup>90</sup> Sr	-1.6E-01 $\pm$ 2.1E-01	U
	<sup>234</sup> U	1.7E-01 $\pm$ 5.4E-02			<sup>234</sup> U	2.7E-01 $\pm$ 9.7E-02	
	<sup>235</sup> U	2.5E-02 $\pm$ 1.5E-02			<sup>235</sup> U	5.0E-02 $\pm$ 3.3E-02	
	<sup>238</sup> U	1.9E-01 $\pm$ 6.1E-02			<sup>238</sup> U	2.5E-01 $\pm$ 9.0E-02	
	<sup>65</sup> Zn	1.8E-02 $\pm$ 1.9E-02	U		<sup>65</sup> Zn	-1.1E-02 $\pm$ 1.6E-02	U
D117 (300 Area)	<sup>144</sup> Ce	-1.7E-02 $\pm$ 1.1E-01	U	D119 (300 Area)	<sup>144</sup> Ce	-1.6E-02 $\pm$ 1.2E-01	U
	<sup>60</sup> Co	4.0E-04 $\pm$ 4.0E-03	U		<sup>60</sup> Co	-2.3E-03 $\pm$ 6.8E-03	U
	<sup>134</sup> Cs	2.7E-02 $\pm$ 9.9E-03			<sup>134</sup> Cs	2.7E-02 $\pm$ 1.3E-02	
	<sup>137</sup> Cs	2.3E-01 $\pm$ 4.0E-02			<sup>137</sup> Cs	1.5E-01 $\pm$ 3.0E-02	
	<sup>152</sup> Eu	-1.4E-02 $\pm$ 1.8E-02	U		<sup>152</sup> Eu	-2.1E-02 $\pm$ 2.5E-02	U
	<sup>154</sup> Eu	-1.3E-03 $\pm$ 1.3E-02	U		<sup>154</sup> Eu	6.1E-03 $\pm$ 2.2E-02	U
	<sup>155</sup> Eu	4.7E-02 $\pm$ 4.4E-02			<sup>155</sup> Eu	5.0E-02 $\pm$ 4.1E-02	U
	<sup>238</sup> Pu	1.7E-02 $\pm$ 3.9E-02	U		<sup>238</sup> Pu	9.5E-03 $\pm$ 3.6E-02	U
	<sup>239/240</sup> Pu	3.4E-02 $\pm$ 2.3E-02			<sup>239/240</sup> Pu	8.5E-02 $\pm$ 3.6E-02	
	<sup>103</sup> Ru	6.0E-03 $\pm$ 6.0E-03	U		<sup>103</sup> Ru	-4.1E-03 $\pm$ 6.9E-03	U
	<sup>106</sup> Ru	3.0E-02 $\pm$ 5.4E-02	U		<sup>106</sup> Ru	3.5E-02 $\pm$ 5.9E-02	U
	<sup>125</sup> Sb	-4.8E-03 $\pm$ 1.6E-02	U		<sup>125</sup> Sb	5.2E-03 $\pm$ 1.8E-02	U
	<sup>113</sup> Sn	-7.3E-04 $\pm$ 7.3E-03	U		<sup>113</sup> Sn	-3.7E-04 $\pm$ 3.7E-03	U
	<sup>90</sup> Sr	4.2E-02 $\pm$ 2.6E-01	U		<sup>90</sup> Sr	-5.7E-03 $\pm$ 5.7E-02	U
	<sup>234</sup> U	8.0E-01 $\pm$ 2.2E-01			<sup>234</sup> U	4.7E+00 $\pm$ 1.2E+00	
	<sup>235</sup> U	6.5E-02 $\pm$ 3.1E-02			<sup>235</sup> U	2.0E-01 $\pm$ 6.8E-02	
	<sup>238</sup> U	7.1E-01 $\pm$ 2.0E-01			<sup>238</sup> U	4.6E+00 $\pm$ 1.2E+00	
	<sup>65</sup> Zn	-1.6E-02 $\pm$ 1.7E-02	U		<sup>65</sup> Zn	8.5E-03 $\pm$ 1.7E-02	U

RQ = Result Qualifier. U = The analyte was analyzed for but not detected.

Table 3-4. 2004 Soil Sampling Results (pCi/g  $\pm$  total analytical uncertainty). (21 sheets total)

Location	Isotope	Result $\pm$ Error	RQ*	Location	Isotope	Result $\pm$ Error	RQ*
D121 (300 Area)	<sup>144</sup> Ce	-3.1E-02 $\pm$ 1.2E-01	U	D123 (300 Area)	<sup>144</sup> Ce	3.4E-02 $\pm$ 1.5E-01	U
	<sup>60</sup> Co	1.3E-03 $\pm$ 7.5E-03	U		<sup>60</sup> Co	-8.9E-04 $\pm$ 6.5E-03	U
	<sup>134</sup> Cs	3.1E-02 $\pm$ 1.1E-02			<sup>134</sup> Cs	3.2E-02 $\pm$ 1.4E-02	
	<sup>137</sup> Cs	1.7E-01 $\pm$ 3.0E-02			<sup>137</sup> Cs	2.6E-02 $\pm$ 1.1E-02	
	<sup>152</sup> Eu	-1.1E-03 $\pm$ 1.1E-02	U		<sup>152</sup> Eu	1.3E-02 $\pm$ 4.0E-02	U
	<sup>154</sup> Eu	-4.0E-02 $\pm$ 4.0E-02	U		<sup>154</sup> Eu	-8.7E-03 $\pm$ 2.2E-02	U
	<sup>155</sup> Eu	5.5E-02 $\pm$ 3.7E-02			<sup>155</sup> Eu	3.1E-04 $\pm$ 3.1E-03	U
	<sup>238</sup> Pu	2.3E-03 $\pm$ 2.3E-03	U		<sup>238</sup> Pu	4.4E-03 $\pm$ 2.8E-02	U
	<sup>239/240</sup> Pu	4.2E-02 $\pm$ 2.4E-02			<sup>239/240</sup> Pu	1.5E-02 $\pm$ 1.6E-02	U
	<sup>103</sup> Ru	1.2E-03 $\pm$ 7.2E-03	U		<sup>103</sup> Ru	-2.6E-03 $\pm$ 7.2E-03	U
	<sup>106</sup> Ru	1.9E-02 $\pm$ 6.0E-02	U		<sup>106</sup> Ru	1.2E-03 $\pm$ 1.2E-02	U
	<sup>125</sup> Sb	4.1E-03 $\pm$ 2.2E-02	U		<sup>125</sup> Sb	1.1E-02 $\pm$ 2.0E-02	U
	<sup>113</sup> Sn	-3.7E-03 $\pm$ 8.8E-03	U		<sup>113</sup> Sn	-7.3E-03 $\pm$ 9.6E-03	U
	<sup>90</sup> Sr	-1.5E-01 $\pm$ 1.8E-01	U		<sup>90</sup> Sr	-2.5E-01 $\pm$ 2.5E-01	U
	<sup>234</sup> U	1.2E+00 $\pm$ 3.1E-01			<sup>234</sup> U	1.8E-01 $\pm$ 5.9E-02	
	<sup>235</sup> U	5.6E-02 $\pm$ 2.6E-02			<sup>235</sup> U	1.8E-02 $\pm$ 1.4E-02	
	<sup>238</sup> U	1.4E+00 $\pm$ 3.6E-01			<sup>238</sup> U	1.8E-01 $\pm$ 5.8E-02	
	<sup>65</sup> Zn	4.0E-02 $\pm$ 2.1E-02			<sup>65</sup> Zn	2.6E-02 $\pm$ 2.9E-02	U
D124 (300 Area)	<sup>144</sup> Ce	-3.0E-02 $\pm$ 1.2E-01	U	D125 (300 Area)	<sup>144</sup> Ce	-4.3E-02 $\pm$ 1.3E-01	U
	<sup>60</sup> Co	-3.0E-03 $\pm$ 7.4E-03	U		<sup>60</sup> Co	1.7E-03 $\pm$ 6.5E-03	U
	<sup>134</sup> Cs	3.2E-02 $\pm$ 9.9E-03			<sup>134</sup> Cs	2.9E-02 $\pm$ 1.0E-02	
	<sup>137</sup> Cs	4.3E-02 $\pm$ 1.3E-02			<sup>137</sup> Cs	1.6E-01 $\pm$ 3.9E-02	
	<sup>152</sup> Eu	-2.2E-02 $\pm$ 2.6E-02	U		<sup>152</sup> Eu	6.5E-04 $\pm$ 6.5E-03	U
	<sup>154</sup> Eu	8.8E-03 $\pm$ 2.8E-02	U		<sup>154</sup> Eu	1.3E-02 $\pm$ 2.3E-02	U
	<sup>155</sup> Eu	3.6E-02 $\pm$ 3.2E-02	U		<sup>155</sup> Eu	4.0E-02 $\pm$ 3.6E-02	U
	<sup>238</sup> Pu	-1.1E-02 $\pm$ 4.1E-02	U		<sup>238</sup> Pu	1.2E-02 $\pm$ 1.9E-02	U
	<sup>239/240</sup> Pu	2.2E-03 $\pm$ 2.2E-02	U		<sup>239/240</sup> Pu	8.3E-03 $\pm$ 8.3E-03	
	<sup>103</sup> Ru	3.2E-03 $\pm$ 6.9E-03	U		<sup>103</sup> Ru	3.2E-03 $\pm$ 5.9E-03	U
	<sup>106</sup> Ru	9.8E-04 $\pm$ 9.8E-03	U		<sup>106</sup> Ru	1.4E-02 $\pm$ 5.6E-02	U
	<sup>125</sup> Sb	5.5E-03 $\pm$ 1.8E-02	U		<sup>125</sup> Sb	1.1E-02 $\pm$ 1.7E-02	U
	<sup>113</sup> Sn	1.3E-02 $\pm$ 7.9E-03	U		<sup>113</sup> Sn	3.8E-04 $\pm$ 3.8E-03	U
	<sup>90</sup> Sr	-1.5E-01 $\pm$ 2.3E-01	U		<sup>90</sup> Sr	-2.7E-01 $\pm$ 2.7E-01	U
	<sup>234</sup> U	2.1E-01 $\pm$ 6.9E-02			<sup>234</sup> U	8.1E-01 $\pm$ 2.2E-01	
	<sup>235</sup> U	1.2E-02 $\pm$ 1.3E-02	U		<sup>235</sup> U	5.9E-02 $\pm$ 2.6E-02	
	<sup>238</sup> U	2.1E-01 $\pm$ 6.9E-02			<sup>238</sup> U	6.7E-01 $\pm$ 1.8E-01	
	<sup>65</sup> Zn	1.3E-02 $\pm$ 2.1E-02	U		<sup>65</sup> Zn	1.3E-02 $\pm$ 1.8E-02	U

RQ = Result Qualifier. U = The analyte was analyzed for but not detected.

Table 3-4. 2004 Soil Sampling Results (pCi/g  $\pm$  total analytical uncertainty). (21 sheets total)

Location	Isotope	Result $\pm$ Error	RQ*	Location	Isotope	Result $\pm$ Error	RQ*
D126 (300 Area)	<sup>144</sup> Ce	-2.8E-02 $\pm$ 9.8E-02	U	D127 (300 Area)	<sup>144</sup> Ce	-7.3E-02 $\pm$ 1.0E-01	U
	<sup>60</sup> Co	9.1E-04 $\pm$ 5.0E-03	U		<sup>60</sup> Co	1.3E-03 $\pm$ 5.8E-03	U
	<sup>134</sup> Cs	2.3E-02 $\pm$ 1.1E-02			<sup>134</sup> Cs	2.5E-02 $\pm$ 1.1E-02	
	<sup>137</sup> Cs	1.6E-02 $\pm$ 1.0E-02			<sup>137</sup> Cs	9.4E-02 $\pm$ 1.8E-02	
	<sup>152</sup> Eu	-8.2E-04 $\pm$ 8.2E-03	U		<sup>152</sup> Eu	-1.8E-02 $\pm$ 1.8E-02	U
	<sup>154</sup> Eu	1.3E-02 $\pm$ 1.5E-02	U		<sup>154</sup> Eu	6.3E-03 $\pm$ 2.0E-02	U
	<sup>155</sup> Eu	4.5E-02 $\pm$ 3.3E-02			<sup>155</sup> Eu	2.6E-02 $\pm$ 3.0E-02	U
	<sup>238</sup> Pu	7.6E-03 $\pm$ 1.4E-02	U		<sup>238</sup> Pu	-6.8E-03 $\pm$ 3.8E-02	U
	<sup>239/240</sup> Pu	7.6E-03 $\pm$ 7.6E-03			<sup>239/240</sup> Pu	2.3E-03 $\pm$ 8.1E-03	U
	<sup>103</sup> Ru	2.3E-04 $\pm$ 2.3E-03	U		<sup>103</sup> Ru	1.5E-03 $\pm$ 5.7E-03	U
	<sup>106</sup> Ru	6.7E-03 $\pm$ 4.6E-02	U		<sup>106</sup> Ru	-2.1E-02 $\pm$ 5.0E-02	U
	<sup>125</sup> Sb	9.3E-03 $\pm$ 1.5E-02	U		<sup>125</sup> Sb	7.8E-03 $\pm$ 1.5E-02	U
	<sup>113</sup> Sn	-8.2E-03 $\pm$ 8.2E-03	U		<sup>113</sup> Sn	-1.1E-02 $\pm$ 1.1E-02	U
	<sup>90</sup> Sr	2.8E-01 $\pm$ 2.5E-01	U		<sup>90</sup> Sr	-2.7E-01 $\pm$ 2.7E-01	U
	<sup>234</sup> U	1.9E-01 $\pm$ 6.1E-02			<sup>234</sup> U	1.4E-01 $\pm$ 5.0E-02	
	<sup>235</sup> U	3.7E-02 $\pm$ 1.9E-02			<sup>235</sup> U	8.6E-03 $\pm$ 8.6E-03	
	<sup>238</sup> U	1.8E-01 $\pm$ 5.8E-02			<sup>238</sup> U	1.5E-01 $\pm$ 5.3E-02	
	<sup>65</sup> Zn	-1.5E-02 $\pm$ 1.5E-02	U		<sup>65</sup> Zn	7.2E-03 $\pm$ 2.1E-02	U
D128 (300 Area)	<sup>144</sup> Ce	6.4E-03 $\pm$ 6.4E-02	U	D129 (300 Area)	<sup>144</sup> Ce	3.1E-02 $\pm$ 1.2E-01	U
	<sup>60</sup> Co	-1.8E-03 $\pm$ 5.8E-03	U		<sup>60</sup> Co	-6.5E-03 $\pm$ 6.7E-03	U
	<sup>134</sup> Cs	3.0E-02 $\pm$ 9.3E-03			<sup>134</sup> Cs	3.9E-02 $\pm$ 1.1E-02	
	<sup>137</sup> Cs	1.4E-01 $\pm$ 2.5E-02			<sup>137</sup> Cs	1.0E-01 $\pm$ 1.9E-02	
	<sup>152</sup> Eu	3.9E-03 $\pm$ 1.7E-02	U		<sup>152</sup> Eu	-1.2E-02 $\pm$ 2.3E-02	U
	<sup>154</sup> Eu	-5.9E-05 $\pm$ 5.9E-04	U		<sup>154</sup> Eu	-4.1E-02 $\pm$ 4.1E-02	U
	<sup>155</sup> Eu	4.2E-02 $\pm$ 3.5E-02			<sup>155</sup> Eu	2.5E-02 $\pm$ 2.9E-02	U
	<sup>238</sup> Pu	-7.6E-03 $\pm$ 2.2E-02	U		<sup>238</sup> Pu	8.7E-03 $\pm$ 3.1E-02	U
	<sup>239/240</sup> Pu	1.2E-01 $\pm$ 4.3E-02			<sup>239/240</sup> Pu	6.5E-03 $\pm$ 1.2E-02	U
	<sup>103</sup> Ru	-1.3E-03 $\pm$ 5.2E-03	U		<sup>103</sup> Ru	2.3E-03 $\pm$ 6.2E-03	U
	<sup>106</sup> Ru	-1.1E-02 $\pm$ 4.3E-02	U		<sup>106</sup> Ru	3.3E-03 $\pm$ 3.3E-02	U
	<sup>125</sup> Sb	5.9E-03 $\pm$ 1.5E-02	U		<sup>125</sup> Sb	9.1E-03 $\pm$ 1.8E-02	U
	<sup>113</sup> Sn	1.4E-03 $\pm$ 7.0E-03	U		<sup>113</sup> Sn	-2.4E-03 $\pm$ 9.4E-03	U
	<sup>90</sup> Sr	-2.6E-01 $\pm$ 2.6E-01	U		<sup>90</sup> Sr	-2.7E-01 $\pm$ 2.7E-01	U
	<sup>234</sup> U	1.6E-01 $\pm$ 5.4E-02			<sup>234</sup> U	3.2E-01 $\pm$ 9.3E-02	
	<sup>235</sup> U	2.0E-02 $\pm$ 1.5E-02			<sup>235</sup> U	2.4E-02 $\pm$ 1.6E-02	
	<sup>238</sup> U	1.8E-01 $\pm$ 5.8E-02			<sup>238</sup> U	3.9E-01 $\pm$ 1.1E-01	
	<sup>65</sup> Zn	-1.1E-02 $\pm$ 1.5E-02	U		<sup>65</sup> Zn	6.5E-03 $\pm$ 1.8E-02	U

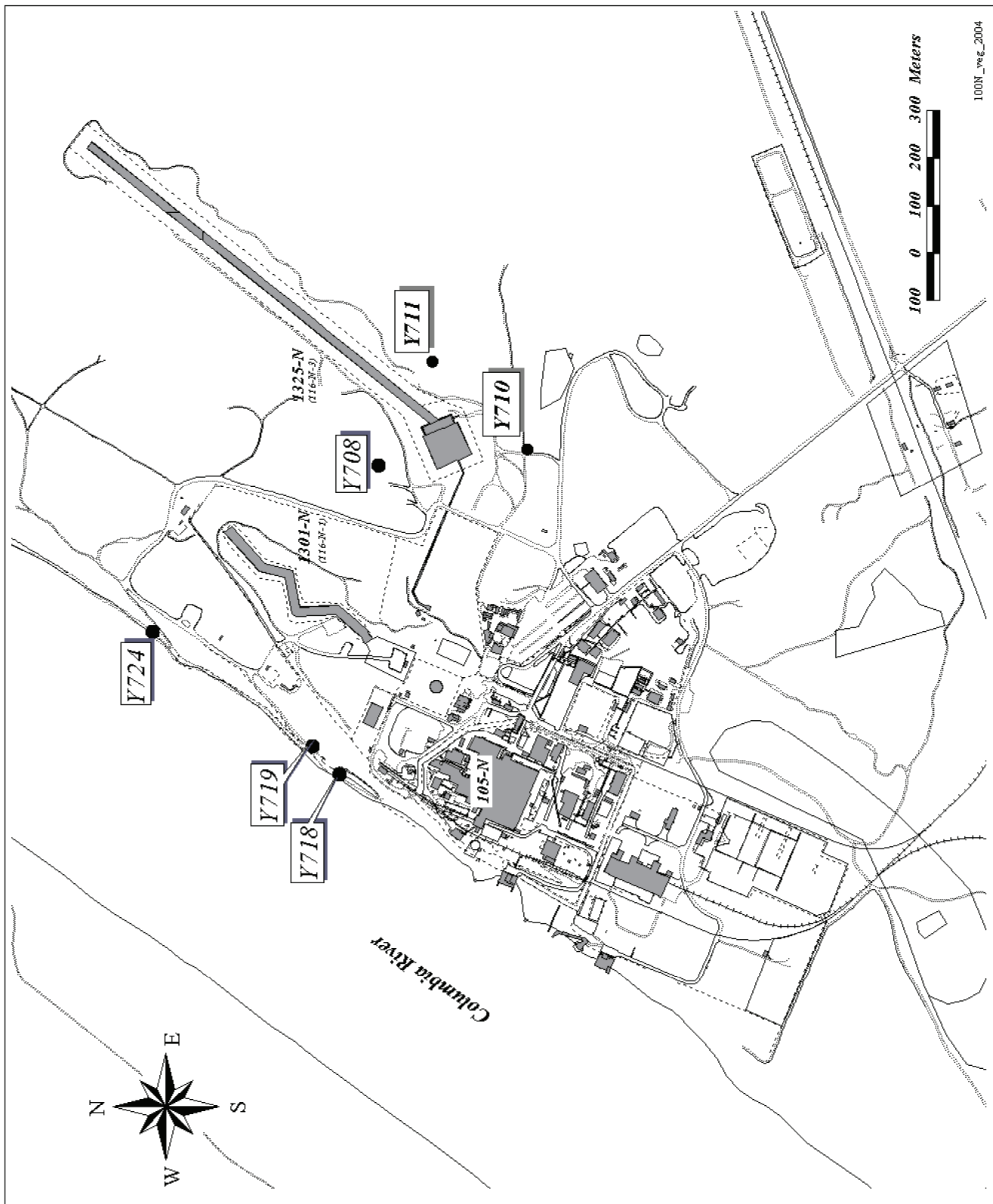
RQ = Result Qualifier. U = The analyte was analyzed for but not detected.

Table 3-4. 2004 Soil Sampling Results (pCi/g  $\pm$  total analytical uncertainty). (21 sheets total)

Location	Isotope	Result $\pm$ Error	RQ*	Location	Isotope	Result $\pm$ Error	RQ*
D130 (400 Area)	<sup>144</sup> Ce	-5.8E-02 $\pm$ 1.2E-01	U	D131 (Duplicate of D119, 300 Area)	<sup>144</sup> Ce	-1.3E-02 $\pm$ 1.0E-01	U
	<sup>60</sup> Co	2.0E-03 $\pm$ 7.6E-03	U		<sup>60</sup> Co	-2.3E-03 $\pm$ 5.3E-03	U
	<sup>134</sup> Cs	3.8E-02 $\pm$ 1.4E-02			<sup>134</sup> Cs	3.3E-02 $\pm$ 1.0E-02	
	<sup>137</sup> Cs	1.3E-02 $\pm$ 1.0E-02			<sup>137</sup> Cs	1.2E-01 $\pm$ 2.2E-02	
	<sup>152</sup> Eu	-2.6E-02 $\pm$ 2.6E-02	U		<sup>152</sup> Eu	1.1E-02 $\pm$ 1.9E-02	U
	<sup>154</sup> Eu	-1.9E-02 $\pm$ 2.5E-02	U		<sup>154</sup> Eu	-8.9E-03 $\pm$ 1.8E-02	U
	<sup>155</sup> Eu	3.6E-02 $\pm$ 3.7E-02	U		<sup>155</sup> Eu	2.7E-02 $\pm$ 2.9E-02	U
	<sup>238</sup> Pu	1.1E-02 $\pm$ 2.1E-02	U		<sup>238</sup> Pu	-1.4E-02 $\pm$ 4.1E-02	U
	<sup>239/240</sup> Pu	2.1E-03 $\pm$ 7.3E-03	U		<sup>239/240</sup> Pu	3.6E-02 $\pm$ 2.2E-02	
	<sup>103</sup> Ru	6.3E-04 $\pm$ 6.3E-03	U		<sup>103</sup> Ru	-2.6E-03 $\pm$ 5.3E-03	U
	<sup>106</sup> Ru	-2.3E-02 $\pm$ 6.1E-02	U		<sup>106</sup> Ru	7.2E-04 $\pm$ 7.2E-03	U
	<sup>125</sup> Sb	-1.7E-03 $\pm$ 1.7E-02	U		<sup>125</sup> Sb	3.8E-03 $\pm$ 1.5E-02	U
	<sup>113</sup> Sn	-1.7E-03 $\pm$ 8.8E-03	U		<sup>113</sup> Sn	-8.0E-03 $\pm$ 8.0E-03	U
	<sup>90</sup> Sr	-3.1E-01 $\pm$ 3.1E-01	U		<sup>90</sup> Sr	-2.9E-01 $\pm$ 2.9E-01	U
	<sup>234</sup> U	1.4E-01 $\pm$ 4.9E-02			<sup>234</sup> U	4.1E+00 $\pm$ 1.1E+00	
	<sup>235</sup> U	1.0E-02 $\pm$ 9.3E-03			<sup>235</sup> U	2.4E-01 $\pm$ 7.7E-02	
	<sup>238</sup> U	1.0E-01 $\pm$ 3.7E-02			<sup>238</sup> U	4.4E+00 $\pm$ 1.1E+00	
	<sup>65</sup> Zn	5.5E-02 $\pm$ 2.2E-02			<sup>65</sup> Zn	-1.6E-02 $\pm$ 1.6E-02	U
D140 (Duplicate of D123, 300 Area)	<sup>144</sup> Ce	-1.2E-02 $\pm$ 2.7E-02	U				
	<sup>60</sup> Co	-2.1E-03 $\pm$ 2.4E-03	U				
	<sup>134</sup> Cs	1.0E-02 $\pm$ 4.3E-03					
	<sup>137</sup> Cs	4.1E-03 $\pm$ 2.5E-03					
	<sup>152</sup> Eu	-2.4E-03 $\pm$ 9.4E-03	U				
	<sup>154</sup> Eu	-7.2E-03 $\pm$ 7.2E-03	U				
	<sup>155</sup> Eu	7.4E-04 $\pm$ 7.3E-03	U				
	<sup>238</sup> Pu	2.5E-03 $\pm$ 2.5E-03	U				
	<sup>239/240</sup> Pu	1.5E-02 $\pm$ 1.3E-02					
	<sup>103</sup> Ru	-8.3E-06 $\pm$ 8.3E-05	U				
	<sup>106</sup> Ru	-1.5E-02 $\pm$ 1.5E-02	U				
	<sup>125</sup> Sb	1.6E-04 $\pm$ 1.6E-03	U				
	<sup>113</sup> Sn	-1.1E-03 $\pm$ 2.1E-03	U				
	<sup>90</sup> Sr	-3.0E-01 $\pm$ 3.0E-01	U				
	<sup>234</sup> U	2.5E-01 $\pm$ 7.8E-02					
	<sup>235</sup> U	1.2E-02 $\pm$ 1.0E-02					
	<sup>238</sup> U	2.3E-01 $\pm$ 7.1E-02					
	<sup>65</sup> Zn	2.6E-03 $\pm$ 5.2E-03	U				

RQ = Result Qualifier. U = The analyte was analyzed for but not detected.

Figure 3-10. 2004 Vegetation Sampling Locations, 100 N Area.





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200w\_veg\_2004

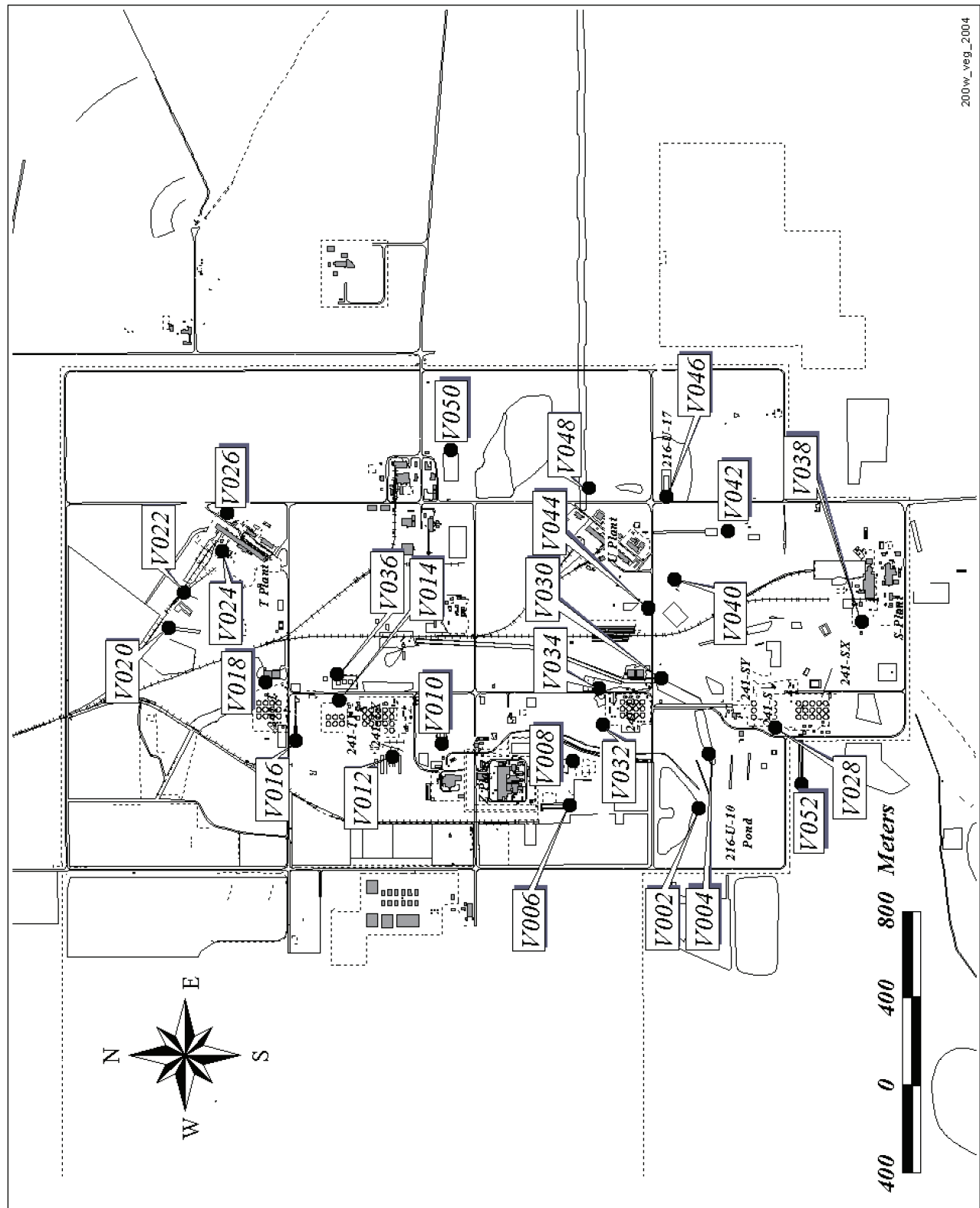


Figure 3-13. 2004 Vegetation Sampling Locations, 300 Area.

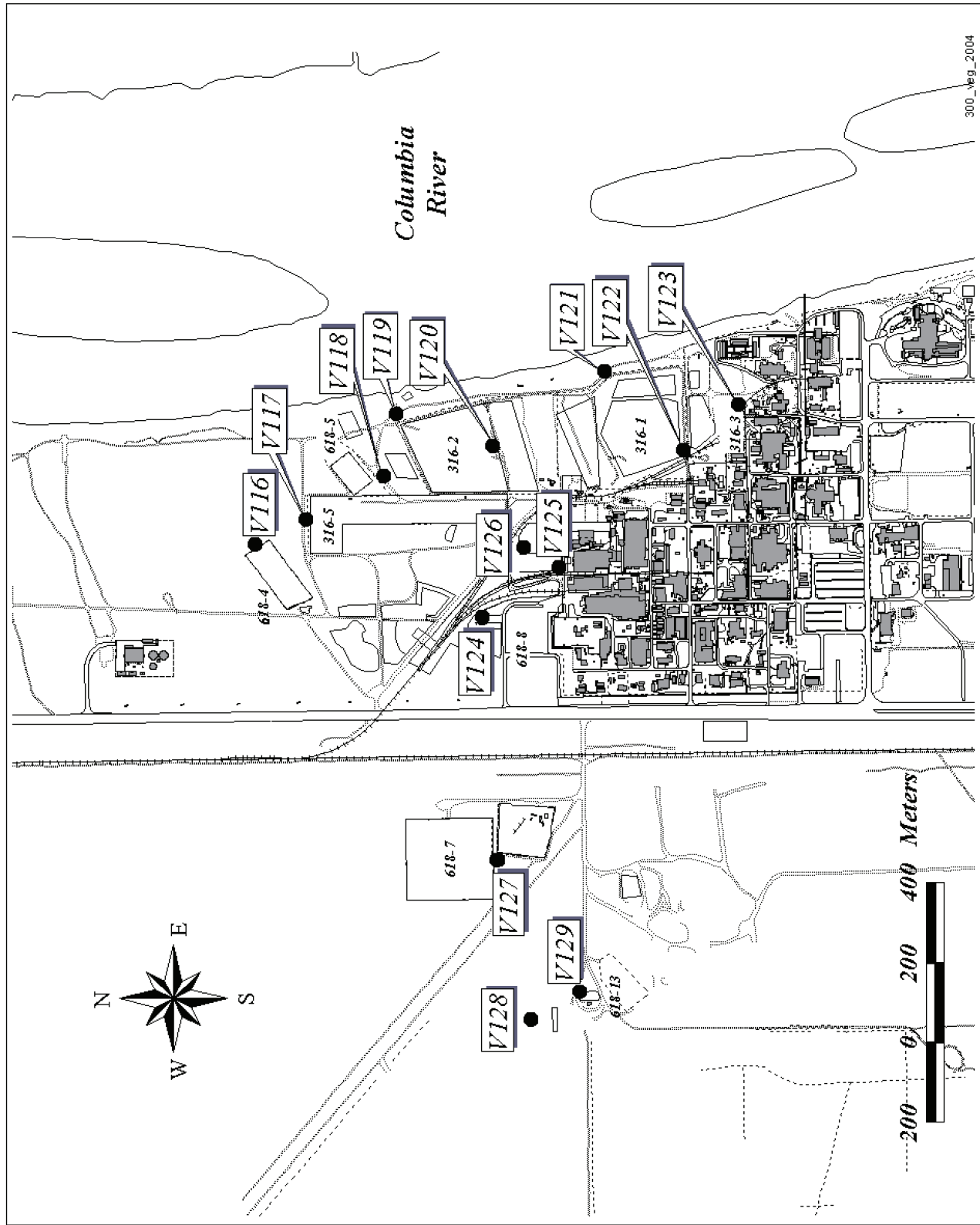


Figure 3-14. 2004 Vegetation Sampling Locations, 400 Area.

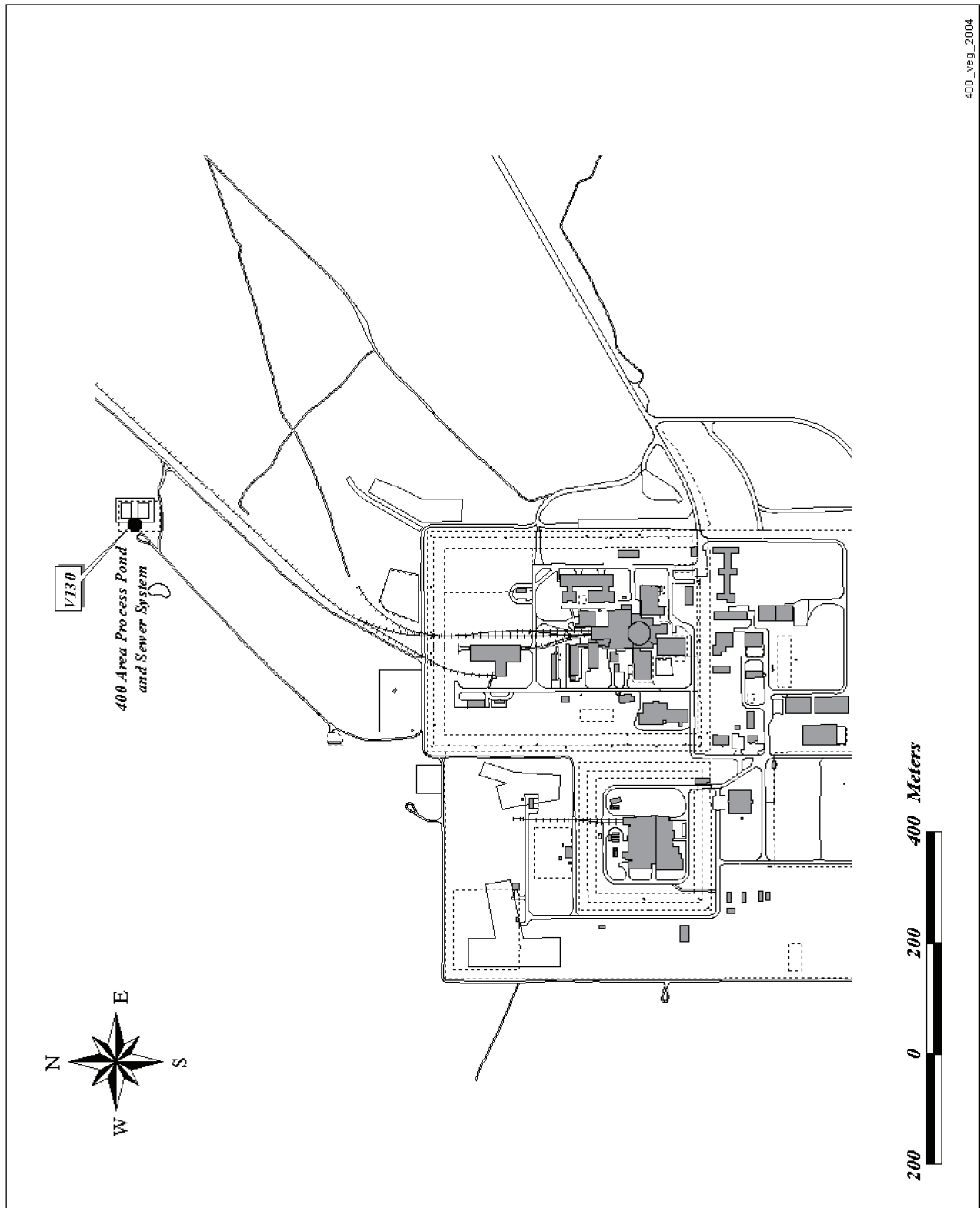


Figure 3-15. 2004 Vegetation Sampling Locations, 600 Area.

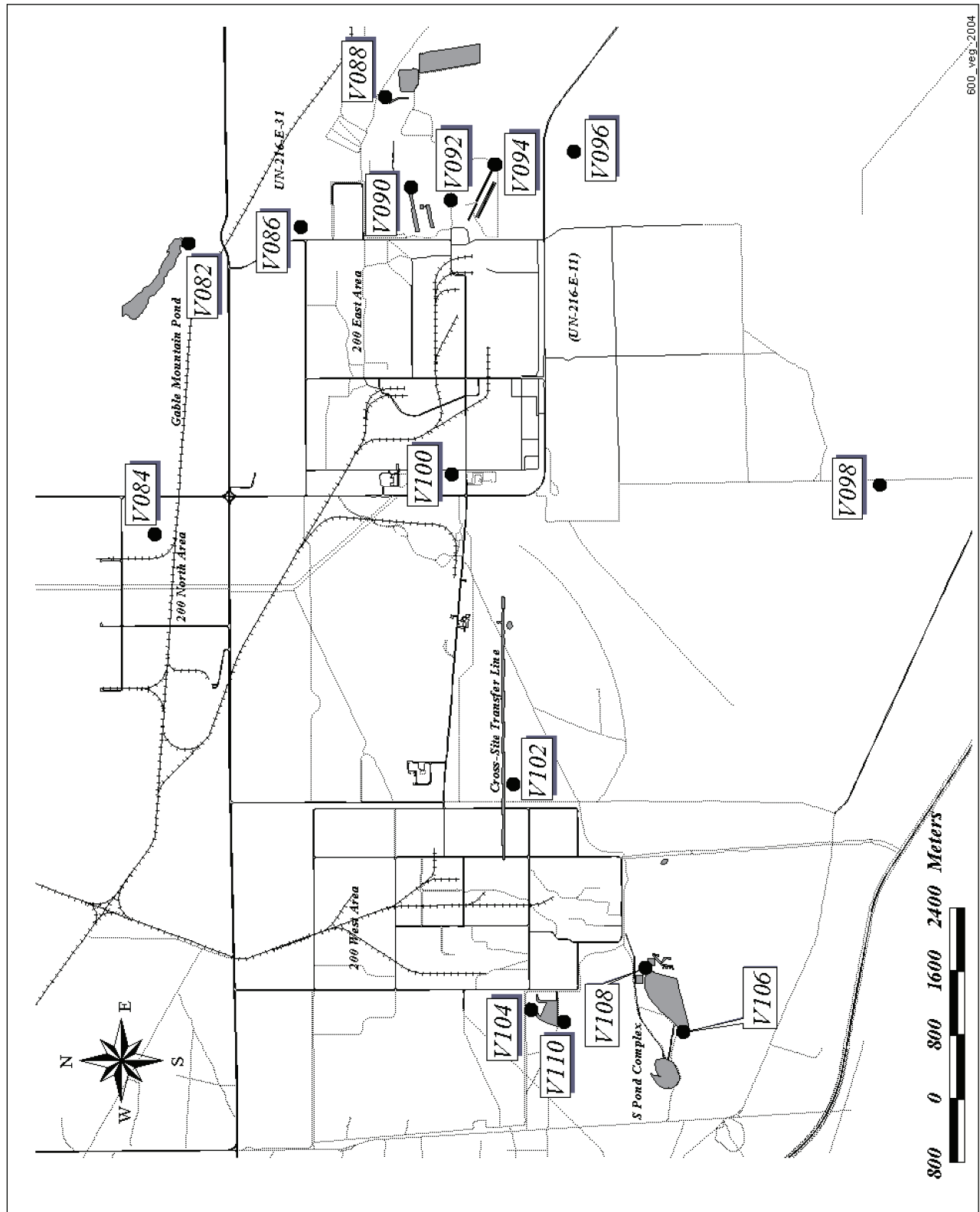


Table 3-5. Summary of Near-Facility Vegetation Sampling Results (pCi/g) for Selected Radionuclides, 2004.

Isotope	Number of		Mean <sup>a</sup>	Maximum <sup>b</sup>	Location	
	Detects	Samples			Area	Site ID
<sup>137</sup> Cs	10	69	3.3E-02 ± 1.3E-01	3.3E-01 ± 9.6E-02	200 East	V056
<sup>239/240</sup> Pu	6	69	2.4E-03 ± 9.0E-03	2.9E-02 ± 1.4E-02	200 West	V044
<sup>90</sup> Sr	20	69	1.1E+00 ± 1.8E+01	6.8E+01 ± 8.2E+00	100-N	Y719
<sup>234</sup> U	48	69	1.4E-02 ± 4.5E-02	1.8E-01 ± 5.4E-02	300 Area	V119
<sup>235</sup> U	16	69	4.1E-03 ± 7.6E-03	3.0E-02 ± 2.3E-02	300 Area	V131
<sup>238</sup> U	49	69	1.1E-02 ± 3.7E-02	1.5E-01 ± 4.5E-02	300 Area	V119

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<sup>a</sup>± 2 standard deviations

<sup>b</sup>± total analytical uncertainty

Table 3-6. Average Radionuclide Concentrations (pCi/g<sup>a</sup>) in Hanford Vegetation, 1995 through 2004.

<u>100-N Area</u>						
Year	<sup>60</sup> Co	<sup>90</sup> Sr	<sup>137</sup> Cs	<sup>234</sup> U	<sup>238</sup> U	<sup>239,240</sup> Pu
1995	3.0E-02 ± 5.1E-02	5.4E+00 ± 4.8E+00	8.1E-02 ± 4.4E-02	1.1E-02 ± 6.6E-03	9.2E-03 ± 4.8E-03	3.3E-03 ± 1.6E-03
1996	2.4E+00 ± 4.5E+00	2.3E+02 ± 4.4E+02	2.3E+02 ± 2.0E+02	2.6E-02 ± 3.2E-02	2.2E-02 ± 1.7E-01	-5.1E-03 ± 0.0E+00
1997	4.2E-01 ± 5.0E-02	3.6E+00 ± 5.3E+00	1.6E-01 ± 7.7E-02	1.3E-02 ± 2.9E-03	9.7E-03 ± 4.7E-03	Not Detected
1998	6.2E-01 ± 6.5E-01	1.2E+01 ± 6.0E+00	3.8E+01 ± 6.5E+01	1.4E-02 ± 6.0E-03	8.7E-03 ± 4.4E-03	4.2E-03 ± 2.3E-03
1999	6.1E-01 ± 5.9E-01	9.1E+01 ± 1.0E+02	2.5E+02 ± 2.5E+02	2.8E-02 ± 1.0E-03	2.1E-02 ± 7.0E-03	2.2E-02 ± 1.0E-02
2000	4.8E-02 ± 3.2E-02	5.7E+00 ± 8.7E+00	2.0E-01 ± 1.2E-01	3.3E-02 ± 2.7E-02	2.4E-02 ± 1.8E-02	9.1E-03 ± 8.3E-03
2001	8.9E-01 ± 1.3E+00	3.5E+00 ± 3.4E+00	3.8E-01 ± 2.2E-01	9.8E-03 ± 2.4E-03	9.2E-03 ± 2.9E-03	2.4E-02 ± 2.5E-02
2002	3.7E-03 ± 3.7E-02	5.4E+00 ± 1.8E+01	2.4E-03 ± 8.4E-03	9.8E-03 ± 4.5E-03	5.1E-03 ± 2.9E-03	1.9E-03 ± 5.3E-03
2003	6.6E-02 ± 6.8E-02	1.4E+01 ± 4.5E+01	1.5E-01 ± 1.5E-01	6.8E-03 ± 2.1E-03	4.6E-03 ± 2.9E-03	-2.8E-04 ± 7.0E-03
2004	1.5E-02 ± 1.8E-01	1.1E+01 ± 5.1E+01	4.5E-02 ± 8.7E-02	9.3E-03 ± 7.8E-03	4.8E-03 ± 2.7E-03	Not Detected
<u>200/600 Areas</u>						
Year	<sup>60</sup> Co	<sup>90</sup> Sr	<sup>137</sup> Cs	<sup>234</sup> U	<sup>238</sup> U	<sup>239,240</sup> Pu
1995	1.4E-02 ± 2.1E-02	1.4E-02 ± 2.1E-02	1.6E-01 ± 1.4E-01	1.1E-02 ± 6.3E-03	7.9E-03 ± 4.4E-03	4.9E-03 ± 2.9E-03
1996	2.6E-02 ± 2.4E-02	3.7E-01 ± 1.8E-01	6.9E-02 ± 3.0E-02	5.0E-03 ± 1.0E-03	5.0E-03 ± 1.0E-03	4.1E-03 ± 3.1E-03
1997	Not Detected	2.9E+00 ± 2.5E+00	1.3E-01 ± 6.0E-02	1.5E-02 ± 2.4E-03	1.1E-02 ± 2.1E-03	6.6E-03 ± 1.0E-04
1998	Not Detected	3.3E-01 ± 1.3E-01	2.1E-01 ± 9.0E-02	1.6E-02 ± 3.0E-03	9.7E-03 ± 1.3E-03	1.8E-02 ± 8.0E-03
1999	Not Detected	7.9E-01 ± 3.8E-01	1.3E-01 ± 4.0E-02	3.3E-02 ± 6.0E-03	2.3E-02 ± 4.0E-03	1.4E-02 ± 4.0E-03
2000	Not Detected	1.3E+00 ± 8.0E-01	1.6E-01 ± 6.0E-02	2.0E-02 ± 3.0E-02	1.4E-02 ± 2.0E-03	3.3E-02 ± 2.8E-02
2001	Not Detected	1.0E+00 ± 6.2E-01	1.7E-01 ± 6.5E-02	1.9E-02 ± 2.8E-03	1.8E-02 ± 2.6E-03	2.1E-02 ± 7.1E-03
2002	3.2E-04 ± 1.8E-03	3.2E-01 ± 1.1E+00	8.9E-02 ± 4.2E-01	1.6E-02 ± 1.6E-02	1.4E-02 ± 1.5E-02	8.8E-03 ± 2.4E-02
2003	1.6E-02 ± 2.1E-01	1.5E+00 ± 1.0E+01	2.7E-01 ± 2.0E+00	1.0E-02 ± 9.7E-03	8.4E-03 ± 9.0E-03	2.7E-03 ± 7.9E-03
2004	Not Detected	2.2E-01 ± 8.8E+00	4.2E-02 ± 1.4E-01	9.7E-03 ± 1.0E-02	8.2E-03 ± 9.3E-03	2.9E-03 ± 1.0E-02
<u>300/400 Areas</u>						
Year	<sup>60</sup> Co	<sup>90</sup> Sr	<sup>137</sup> Cs	<sup>234</sup> U	<sup>238</sup> U	<sup>239,240</sup> Pu
1995	4.0E-02 ± 3.0E-02	5.1E-02 ± 2.4E-02	Not Detected	5.6E-02 ± 4.1E-02	5.6E-02 ± 4.1E-02	3.5E-04 ± 1.9E-04
1996	7.1E-03 ± 2.0E-02	6.3E-02 ± 2.5E-02	1.6E-02 ± 1.6E-02	4.9E-02 ± 3.9E-02	4.7E-02 ± 3.8E-02	3.8E-04 ± 1.9E-04
1997	Not Detected	6.6E-01 ± 3.9E-01	Not Detected	6.9E-02 ± 4.8E-02	6.2E-02 ± 4.5E-02	4.4E-04 ± 2.9E-04
1998	Not Detected	1.0E-01 ± 6.0E-02	Not Detected	4.6E-02 ± 3.3E-02	4.4E-02 ± 3.6E-02	8.4E-03 ± 4.5E-03
1999	Not Detected	4.5E-01 ± 7.0E-02	Not Detected	9.4E-02 ± 5.3E-02	8.9E-01 ± 5.9E-02	7.1E-03 ± 3.2E-03
2000	Not Detected	2.1E-01 ± 3.0E-02	Not Detected	1.8E-02 ± 1.9E-02	1.7E-02 ± 1.9E-02	9.1E-03 ± 2.4E-03
2001	Not Detected	2.6E-01 ± 1.1E-01	Not Detected	9.8E-02 ± 8.0E-02	1.1E-01 ± 8.8E-02	5.8E-03 ± 1.5E-03
2002	Not Detected	2.1E-01 ± 4.7E-01	1.1E-02 ± 7.9E-02	3.2E-02 ± 5.5E-02	2.9E-02 ± 5.8E-02	-3.6E-04 ± 7.2E-04
2003	5.0E-03 ± 3.8E-02	-8.2E-02 ± 2.0E-01	-9.4E-03 ± 4.4E-02	4.3E-02 ± 1.1E-01	3.6E-02 ± 1.9E-01	1.7E-03 ± 1.7E-02
2004	Not Detected	Not Detected	Not Detected	3.3E-01 ± 8.8E-02	2.5E-02 ± 7.3E-02	Not Detected

(a) ± 2 standard deviations

Table 3-7. 2004 Vegetation Sampling Results (pCi/g  $\pm$  total analytical uncertainty).  
(18 sheets total)

Location	Isotope	Result $\pm$ Error	RQ*	Location	Isotope	Result $\pm$ Error	RQ*
Y708 (100-N)	<sup>144</sup> Ce	1.7E-01 $\pm$ 4.9E-01	U	Y710 (100-N)	<sup>144</sup> Ce	4.4E-02 $\pm$ 4.4E-01	U
	<sup>60</sup> Co	-1.7E-03 $\pm$ 1.7E-02	U		<sup>60</sup> Co	2.1E-02 $\pm$ 3.5E-02	U
	<sup>134</sup> Cs	-2.2E-02 $\pm$ 3.8E-02	U		<sup>134</sup> Cs	2.3E-02 $\pm$ 3.5E-02	U
	<sup>137</sup> Cs	2.5E-02 $\pm$ 3.9E-02	U		<sup>137</sup> Cs	9.5E-03 $\pm$ 3.3E-02	U
	<sup>152</sup> Eu	4.1E-02 $\pm$ 1.1E-01	U		<sup>152</sup> Eu	5.6E-02 $\pm$ 1.0E-01	U
	<sup>154</sup> Eu	-1.5E-02 $\pm$ 1.0E-01	U		<sup>154</sup> Eu	-3.9E-02 $\pm$ 9.7E-02	U
	<sup>155</sup> Eu	3.4E-03 $\pm$ 3.4E-02	U		<sup>155</sup> Eu	-8.6E-02 $\pm$ 1.2E-01	U
	<sup>238</sup> Pu	8.5E-04 $\pm$ 8.5E-03	U		<sup>238</sup> Pu	8.0E-04 $\pm$ 8.0E-03	U
	<sup>239/240</sup> Pu	-8.5E-04 $\pm$ 1.7E-03	U		<sup>239/240</sup> Pu	8.0E-04 $\pm$ 1.6E-03	U
	<sup>103</sup> Ru	-3.6E-02 $\pm$ 4.1E-02	U		<sup>103</sup> Ru	-4.5E-03 $\pm$ 4.0E-02	U
	<sup>106</sup> Ru	-1.5E-01 $\pm$ 3.2E-01	U		<sup>106</sup> Ru	-6.3E-02 $\pm$ 3.1E-01	U
	<sup>125</sup> Sb	2.5E-02 $\pm$ 1.0E-01	U		<sup>125</sup> Sb	3.4E-02 $\pm$ 9.6E-02	U
	<sup>113</sup> Sn	-2.5E-02 $\pm$ 5.0E-02	U		<sup>113</sup> Sn	1.3E-02 $\pm$ 4.6E-02	U
	<sup>90</sup> Sr	2.3E-02 $\pm$ 1.3E-01			<sup>90</sup> Sr	-2.0E-02 $\pm$ 1.3E-01	U
	<sup>234</sup> U	5.8E-03 $\pm$ 6.4E-03	U		<sup>234</sup> U	1.3E-02 $\pm$ 8.2E-03	
	<sup>235</sup> U	1.0E-03 $\pm$ 2.0E-03	U		<sup>235</sup> U	4.7E-03 $\pm$ 4.4E-03	
	<sup>238</sup> U	6.7E-03 $\pm$ 6.0E-03	U		<sup>238</sup> U	6.1E-03 $\pm$ 4.9E-03	
	<sup>65</sup> Zn	1.3E-03 $\pm$ 1.3E-02	U		<sup>65</sup> Zn	3.9E-02 $\pm$ 9.2E-02	U
Y711 (100-N)	<sup>144</sup> Ce	6.5E-02 $\pm$ 4.7E-01	U	Y718 (N Springs Shoreline)	<sup>144</sup> Ce	-1.5E-01 $\pm$ 1.2E+00	U
	<sup>60</sup> Co	1.8E-01 $\pm$ 4.6E-02			<sup>60</sup> Co	-7.2E-02 $\pm$ 9.1E-02	U
	<sup>134</sup> Cs	5.8E-03 $\pm$ 3.3E-02	U		<sup>134</sup> Cs	-4.9E-02 $\pm$ 9.9E-02	U
	<sup>137</sup> Cs	1.3E-01 $\pm$ 6.7E-02			<sup>137</sup> Cs	2.6E-02 $\pm$ 1.1E-01	U
	<sup>152</sup> Eu	-1.9E-02 $\pm$ 1.0E-01	U		<sup>152</sup> Eu	2.1E-02 $\pm$ 2.1E-01	U
	<sup>154</sup> Eu	1.7E-02 $\pm$ 9.7E-02	U		<sup>154</sup> Eu	6.7E-02 $\pm$ 2.8E-01	U
	<sup>155</sup> Eu	8.4E-02 $\pm$ 1.2E-01	U		<sup>155</sup> Eu	-1.0E-02 $\pm$ 1.0E-01	U
	<sup>238</sup> Pu	-1.9E-02 $\pm$ 1.9E-02	U		<sup>238</sup> Pu	4.6E-03 $\pm$ 6.9E-03	U
	<sup>239/240</sup> Pu	3.2E-03 $\pm$ 6.4E-03	U		<sup>239/240</sup> Pu	1.8E-03 $\pm$ 2.5E-03	U
	<sup>103</sup> Ru	2.4E-02 $\pm$ 3.9E-02	U		<sup>103</sup> Ru	3.3E-02 $\pm$ 1.1E-01	U
	<sup>106</sup> Ru	5.2E-02 $\pm$ 3.0E-01	U		<sup>106</sup> Ru	-1.6E-01 $\pm$ 8.8E-01	U
	<sup>125</sup> Sb	-1.2E-02 $\pm$ 9.5E-02	U		<sup>125</sup> Sb	3.0E-01 $\pm$ 2.7E-01	U
	<sup>113</sup> Sn	-1.2E-02 $\pm$ 5.1E-02	U		<sup>113</sup> Sn	-1.4E-02 $\pm$ 1.2E-01	U
	<sup>90</sup> Sr	-1.9E-01 $\pm$ 1.9E-01	U		<sup>90</sup> Sr	-4.8E-02 $\pm$ 1.2E-01	U
	<sup>234</sup> U	5.0E-03 $\pm$ 7.5E-03	U		<sup>234</sup> U	7.9E-03 $\pm$ 6.2E-03	
	<sup>235</sup> U	1.1E-03 $\pm$ 3.8E-03	U		<sup>235</sup> U	1.9E-03 $\pm$ 4.7E-03	U
	<sup>238</sup> U	5.0E-03 $\pm$ 4.7E-03			<sup>238</sup> U	3.5E-03 $\pm$ 4.2E-03	U
	<sup>65</sup> Zn	3.4E-02 $\pm$ 8.9E-02	U		<sup>65</sup> Zn	-2.6E-01 $\pm$ 2.6E-01	U

RQ = Result Qualifier. U = The analyte was analyzed for but not detected.



Table 3-7. 2004 Vegetation Sampling Results (pCi/g  $\pm$  total analytical uncertainty).  
(18 sheets total)

Location	Isotope	Result $\pm$ Error	RQ*	Location	Isotope	Result $\pm$ Error	RQ*
Y719 (N Springs Shoreline)	<sup>144</sup> Ce	-3.9E-01 $\pm$ 9.1E-01	U	Y724 (N Springs Shoreline)	<sup>144</sup> Ce	4.7E-01 $\pm$ 1.0E+00	U
	<sup>60</sup> Co	9.3E-03 $\pm$ 7.4E-02	U		<sup>60</sup> Co	-4.7E-02 $\pm$ 7.1E-02	U
	<sup>134</sup> Cs	4.2E-02 $\pm$ 6.8E-02	U		<sup>134</sup> Cs	9.8E-03 $\pm$ 7.8E-02	U
	<sup>137</sup> Cs	5.2E-02 $\pm$ 7.2E-02	U		<sup>137</sup> Cs	3.0E-02 $\pm$ 6.8E-02	U
	<sup>152</sup> Eu	-1.9E-02 $\pm$ 1.8E-01	U		<sup>152</sup> Eu	-1.2E-01 $\pm$ 2.0E-01	U
	<sup>154</sup> Eu	1.2E-01 $\pm$ 2.0E-01	U		<sup>154</sup> Eu	8.5E-02 $\pm$ 1.9E-01	U
	<sup>155</sup> Eu	1.2E-01 $\pm$ 2.6E-01	U		<sup>155</sup> Eu	-2.1E-01 $\pm$ 2.5E-01	U
	<sup>238</sup> Pu	1.6E-03 $\pm$ 3.2E-03	U		<sup>238</sup> Pu	-8.5E-04 $\pm$ 3.0E-03	U
	<sup>239/240</sup> Pu	8.3E-04 $\pm$ 8.3E-03	U		<sup>239/240</sup> Pu	8.4E-04 $\pm$ 8.4E-03	U
	<sup>103</sup> Ru	-7.1E-02 $\pm$ 7.3E-02	U		<sup>103</sup> Ru	-2.4E-02 $\pm$ 7.4E-02	U
	<sup>106</sup> Ru	-2.5E-01 $\pm$ 6.1E-01	U		<sup>106</sup> Ru	9.1E-02 $\pm$ 6.1E-01	U
	<sup>125</sup> Sb	6.9E-02 $\pm$ 1.7E-01	U		<sup>125</sup> Sb	3.3E-02 $\pm$ 1.8E-01	U
	<sup>113</sup> Sn	-1.7E-02 $\pm$ 8.3E-02	U		<sup>113</sup> Sn	-3.9E-02 $\pm$ 8.8E-02	U
	<sup>90</sup> Sr	6.8E+01 $\pm$ 8.2E+00			<sup>90</sup> Sr	1.8E-01 $\pm$ 1.3E-01	
	<sup>234</sup> U	8.3E-03 $\pm$ 5.9E-03			<sup>234</sup> U	1.6E-02 $\pm$ 8.8E-03	
	<sup>235</sup> U	3.0E-03 $\pm$ 3.6E-03			<sup>235</sup> U	4.0E-03 $\pm$ 4.8E-03	U
	<sup>238</sup> U	4.6E-03 $\pm$ 5.5E-03	U		<sup>238</sup> U	2.8E-03 $\pm$ 3.4E-03	
	<sup>65</sup> Zn	-3.2E-01 $\pm$ 3.2E-01	U		<sup>65</sup> Zn	-2.3E-02 $\pm$ 1.5E-01	U
V002 (200 West)	<sup>144</sup> Ce	-3.5E-01 $\pm$ 3.8E-01	U	V004 (200 West)	<sup>144</sup> Ce	1.9E-01 $\pm$ 5.6E-01	U
	<sup>60</sup> Co	3.8E-02 $\pm$ 2.8E-02	U		<sup>60</sup> Co	-1.9E-02 $\pm$ 4.4E-02	U
	<sup>134</sup> Cs	6.7E-03 $\pm$ 2.9E-02	U		<sup>134</sup> Cs	2.6E-02 $\pm$ 4.3E-02	U
	<sup>137</sup> Cs	-7.0E-03 $\pm$ 2.7E-02	U		<sup>137</sup> Cs	3.9E-02 $\pm$ 4.1E-02	U
	<sup>152</sup> Eu	1.2E-02 $\pm$ 7.8E-02	U		<sup>152</sup> Eu	-6.3E-02 $\pm$ 1.3E-01	U
	<sup>154</sup> Eu	1.1E-02 $\pm$ 8.2E-02	U		<sup>154</sup> Eu	-9.1E-02 $\pm$ 1.3E-01	U
	<sup>155</sup> Eu	-7.2E-02 $\pm$ 1.0E-01	U		<sup>155</sup> Eu	-9.5E-02 $\pm$ 1.5E-01	U
	<sup>238</sup> Pu	-1.6E-03 $\pm$ 3.8E-03	U		<sup>238</sup> Pu	1.8E-03 $\pm$ 2.5E-03	U
	<sup>239/240</sup> Pu	5.8E-03 $\pm$ 4.5E-03			<sup>239/240</sup> Pu	9.1E-04 $\pm$ 1.8E-03	U
	<sup>103</sup> Ru	-1.9E-02 $\pm$ 3.1E-02	U		<sup>103</sup> Ru	1.3E-02 $\pm$ 4.1E-02	U
	<sup>106</sup> Ru	-5.5E-02 $\pm$ 2.5E-01	U		<sup>106</sup> Ru	-3.0E-02 $\pm$ 3.0E-01	U
	<sup>125</sup> Sb	-3.4E-02 $\pm$ 7.8E-02	U		<sup>125</sup> Sb	3.7E-04 $\pm$ 3.7E-03	U
	<sup>113</sup> Sn	-2.8E-02 $\pm$ 3.6E-02	U		<sup>113</sup> Sn	-4.3E-02 $\pm$ 5.0E-02	U
	<sup>90</sup> Sr	1.3E-01 $\pm$ 1.6E-01	U		<sup>90</sup> Sr	1.6E+00 $\pm$ 3.2E-01	
	<sup>234</sup> U	7.7E-03 $\pm$ 6.5E-03	U		<sup>234</sup> U	9.8E-04 $\pm$ 5.2E-03	U
	<sup>235</sup> U	2.8E-03 $\pm$ 4.2E-03	U		<sup>235</sup> U	2.1E-03 $\pm$ 2.9E-03	U
	<sup>238</sup> U	2.6E-03 $\pm$ 4.7E-03	U		<sup>238</sup> U	4.9E-03 $\pm$ 4.6E-03	
	<sup>65</sup> Zn	-8.7E-02 $\pm$ 8.7E-02	U		<sup>65</sup> Zn	-6.6E-02 $\pm$ 1.0E-01	U

RQ = Result Qualifier. U = The analyte was analyzed for but not detected.

Table 3-7. 2004 Vegetation Sampling Results (pCi/g  $\pm$  total analytical uncertainty).  
(18 sheets total)

Location	Isotope	Result $\pm$ Error	RQ*	Location	Isotope	Result $\pm$ Error	RQ*
V006 (200 West)	<sup>144</sup> Ce	-2.8E-02 $\pm$ 2.8E-01	U	V008 (200 West)	<sup>144</sup> Ce	-3.1E-01 $\pm$ 9.5E-01	U
	<sup>60</sup> Co	1.8E-02 $\pm$ 3.4E-02	U		<sup>60</sup> Co	-4.4E-02 $\pm$ 7.9E-02	U
	<sup>134</sup> Cs	1.5E-02 $\pm$ 3.5E-02	U		<sup>134</sup> Cs	-2.3E-03 $\pm$ 2.3E-02	U
	<sup>137</sup> Cs	-3.6E-02 $\pm$ 3.6E-02	U		<sup>137</sup> Cs	-9.3E-03 $\pm$ 8.6E-02	U
	<sup>152</sup> Eu	2.4E-02 $\pm$ 1.0E-01	U		<sup>152</sup> Eu	9.3E-02 $\pm$ 2.1E-01	U
	<sup>154</sup> Eu	3.9E-02 $\pm$ 1.0E-01	U		<sup>154</sup> Eu	2.7E-01 $\pm$ 2.7E-01	U
	<sup>155</sup> Eu	-5.7E-02 $\pm$ 1.2E-01	U		<sup>155</sup> Eu	-3.2E-02 $\pm$ 2.3E-01	U
	<sup>238</sup> Pu	8.4E-04 $\pm$ 3.8E-03	U		<sup>238</sup> Pu	1.2E-02 $\pm$ 1.7E-02	U
	<sup>239/240</sup> Pu	8.4E-04 $\pm$ 8.4E-03	U		<sup>239/240</sup> Pu	4.2E-03 $\pm$ 5.9E-03	U
	<sup>103</sup> Ru	-2.5E-02 $\pm$ 3.9E-02	U		<sup>103</sup> Ru	-5.2E-02 $\pm$ 9.1E-02	U
	<sup>106</sup> Ru	-2.1E-01 $\pm$ 3.1E-01	U		<sup>106</sup> Ru	2.2E-02 $\pm$ 2.2E-01	U
	<sup>125</sup> Sb	2.8E-02 $\pm$ 9.4E-02	U		<sup>125</sup> Sb	-7.2E-03 $\pm$ 7.2E-02	U
	<sup>113</sup> Sn	-2.9E-02 $\pm$ 4.9E-02	U		<sup>113</sup> Sn	1.9E-02 $\pm$ 1.0E-01	U
	<sup>90</sup> Sr	-2.5E+01 $\pm$ 2.5E+01	U		<sup>90</sup> Sr	8.4E-01 $\pm$ 1.7E-01	
	<sup>234</sup> U	1.1E-02 $\pm$ 9.0E-03	U		<sup>234</sup> U	8.7E-03 $\pm$ 5.9E-03	
	<sup>235</sup> U	9.4E-04 $\pm$ 9.4E-03	U		<sup>235</sup> U	3.8E-03 $\pm$ 3.8E-03	
	<sup>238</sup> U	1.8E-02 $\pm$ 9.4E-03			<sup>238</sup> U	4.3E-03 $\pm$ 4.0E-03	
	<sup>65</sup> Zn	-5.9E-03 $\pm$ 5.9E-02	U		<sup>65</sup> Zn	-2.1E-01 $\pm$ 2.1E-01	U
V010 (200 West)	<sup>144</sup> Ce	2.1E-01 $\pm$ 7.4E-01	U	V012 (200 West)	<sup>144</sup> Ce	7.7E-02 $\pm$ 5.7E-01	U
	<sup>60</sup> Co	-2.3E-02 $\pm$ 5.8E-02	U		<sup>60</sup> Co	7.5E-03 $\pm$ 4.2E-02	U
	<sup>134</sup> Cs	-2.3E-02 $\pm$ 5.7E-02	U		<sup>134</sup> Cs	-4.7E-02 $\pm$ 4.7E-02	U
	<sup>137</sup> Cs	3.4E-02 $\pm$ 5.3E-02	U		<sup>137</sup> Cs	4.5E-02 $\pm$ 4.7E-02	U
	<sup>152</sup> Eu	3.1E-02 $\pm$ 1.5E-01	U		<sup>152</sup> Eu	4.6E-02 $\pm$ 1.3E-01	U
	<sup>154</sup> Eu	-1.1E-01 $\pm$ 1.8E-01	U		<sup>154</sup> Eu	1.1E-02 $\pm$ 1.1E-01	U
	<sup>155</sup> Eu	-1.3E-01 $\pm$ 2.1E-01	U		<sup>155</sup> Eu	-5.8E-02 $\pm$ 1.5E-01	U
	<sup>238</sup> Pu	-2.3E-03 $\pm$ 9.2E-03	U		<sup>238</sup> Pu	-9.8E-04 $\pm$ 8.0E-03	U
	<sup>239/240</sup> Pu	3.5E-03 $\pm$ 5.2E-03	U		<sup>239/240</sup> Pu	4.9E-03 $\pm$ 7.4E-03	U
	<sup>103</sup> Ru	-2.2E-02 $\pm$ 5.8E-02	U		<sup>103</sup> Ru	-1.1E-02 $\pm$ 4.7E-02	U
	<sup>106</sup> Ru	3.6E-01 $\pm$ 4.7E-01	U		<sup>106</sup> Ru	-8.2E-02 $\pm$ 3.8E-01	U
	<sup>125</sup> Sb	-6.9E-02 $\pm$ 1.4E-01	U		<sup>125</sup> Sb	-4.4E-02 $\pm$ 1.2E-01	U
	<sup>113</sup> Sn	-4.3E-02 $\pm$ 6.6E-02	U		<sup>113</sup> Sn	6.6E-03 $\pm$ 5.6E-02	U
	<sup>90</sup> Sr	9.8E-01 $\pm$ 2.0E-01			<sup>90</sup> Sr	-1.4E-01 $\pm$ 1.4E-01	U
	<sup>234</sup> U	3.0E-03 $\pm$ 5.4E-03	U		<sup>234</sup> U	1.2E-02 $\pm$ 7.8E-03	
	<sup>235</sup> U	5.5E-03 $\pm$ 5.1E-03			<sup>235</sup> U	3.1E-03 $\pm$ 3.7E-03	
	<sup>238</sup> U	6.0E-03 $\pm$ 5.2E-03			<sup>238</sup> U	1.2E-02 $\pm$ 7.3E-03	
	<sup>65</sup> Zn	2.6E-02 $\pm$ 1.3E-01	U		<sup>65</sup> Zn	9.8E-02 $\pm$ 9.1E-02	U

RQ = Result Qualifier. U = The analyte was analyzed for but not detected.

Table 3-7. 2004 Vegetation Sampling Results (pCi/g  $\pm$  total analytical uncertainty).  
(18 sheets total)

Location	Isotope	Result $\pm$ Error	RQ*	Location	Isotope	Result $\pm$ Error	RQ*
V016 (200 West)	<sup>144</sup> Ce	6.5E-01 $\pm$ 6.3E-01	U	V020 (200 West)	<sup>144</sup> Ce	-1.6E-02 $\pm$ 1.6E-01	U
	<sup>60</sup> Co	3.7E-02 $\pm$ 5.2E-02	U		<sup>60</sup> Co	7.0E-03 $\pm$ 6.1E-02	U
	<sup>134</sup> Cs	6.8E-03 $\pm$ 5.3E-02	U		<sup>134</sup> Cs	-2.0E-02 $\pm$ 6.1E-02	U
	<sup>137</sup> Cs	1.5E-02 $\pm$ 5.1E-02	U		<sup>137</sup> Cs	1.6E-01 $\pm$ 9.4E-02	
	<sup>152</sup> Eu	6.8E-02 $\pm$ 1.4E-01	U		<sup>152</sup> Eu	-1.2E-01 $\pm$ 1.5E-01	U
	<sup>154</sup> Eu	-5.5E-02 $\pm$ 1.6E-01	U		<sup>154</sup> Eu	-1.0E-01 $\pm$ 2.0E-01	U
	<sup>155</sup> Eu	4.1E-02 $\pm$ 1.7E-01	U		<sup>155</sup> Eu	-1.2E-01 $\pm$ 1.7E-01	U
	<sup>238</sup> Pu	-1.5E-02 $\pm$ 1.5E-02	U		<sup>238</sup> Pu	5.2E-03 $\pm$ 1.9E-02	U
	<sup>239/240</sup> Pu	1.0E-03 $\pm$ 4.5E-03	U		<sup>239/240</sup> Pu	2.1E-03 $\pm$ 5.9E-03	U
	<sup>103</sup> Ru	3.1E-02 $\pm$ 5.0E-02	U		<sup>103</sup> Ru	5.3E-03 $\pm$ 5.3E-02	U
	<sup>106</sup> Ru	3.0E-01 $\pm$ 4.6E-01	U		<sup>106</sup> Ru	1.0E-01 $\pm$ 5.1E-01	U
	<sup>125</sup> Sb	-7.1E-02 $\pm$ 1.4E-01	U		<sup>125</sup> Sb	-6.3E-02 $\pm$ 1.4E-01	U
	<sup>113</sup> Sn	-2.7E-02 $\pm$ 5.8E-02	U		<sup>113</sup> Sn	-3.8E-02 $\pm$ 6.7E-02	U
	<sup>90</sup> Sr	1.3E+00 $\pm$ 2.6E-01			<sup>90</sup> Sr	3.0E-01 $\pm$ 1.5E-01	
	<sup>234</sup> U	2.8E-02 $\pm$ 1.3E-02			<sup>234</sup> U	9.2E-03 $\pm$ 6.3E-03	
	<sup>235</sup> U	4.6E-03 $\pm$ 5.1E-03	U		<sup>235</sup> U	4.0E-03 $\pm$ 4.8E-03	U
	<sup>238</sup> U	2.0E-02 $\pm$ 9.6E-03			<sup>238</sup> U	5.6E-03 $\pm$ 5.5E-03	U
	<sup>65</sup> Zn	1.4E-01 $\pm$ 1.3E-01	U		<sup>65</sup> Zn	-1.5E-04 $\pm$ 1.5E-03	U
V022 (200 West)	<sup>144</sup> Ce	-9.3E-02 $\pm$ 8.2E-01	U	V026 (200 West)	<sup>144</sup> Ce	1.4E-01 $\pm$ 7.5E-01	U
	<sup>60</sup> Co	1.1E-02 $\pm$ 6.1E-02	U		<sup>60</sup> Co	-6.4E-02 $\pm$ 6.4E-02	U
	<sup>134</sup> Cs	-3.2E-02 $\pm$ 5.9E-02	U		<sup>134</sup> Cs	-7.1E-03 $\pm$ 5.6E-02	U
	<sup>137</sup> Cs	8.2E-02 $\pm$ 6.6E-02	U		<sup>137</sup> Cs	2.4E-02 $\pm$ 6.0E-02	U
	<sup>152</sup> Eu	-1.3E-01 $\pm$ 2.1E-01	U		<sup>152</sup> Eu	7.5E-02 $\pm$ 1.8E-01	U
	<sup>154</sup> Eu	-4.8E-05 $\pm$ 4.8E-04	U		<sup>154</sup> Eu	8.7E-02 $\pm$ 1.7E-01	U
	<sup>155</sup> Eu	2.9E-02 $\pm$ 2.3E-01	U		<sup>155</sup> Eu	-2.0E-02 $\pm$ 1.9E-01	U
	<sup>238</sup> Pu	-1.2E-02 $\pm$ 1.8E-02	U		<sup>238</sup> Pu	9.2E-03 $\pm$ 1.0E-02	U
	<sup>239/240</sup> Pu	-1.9E-03 $\pm$ 3.8E-03	U		<sup>239/240</sup> Pu	2.0E-03 $\pm$ 5.6E-03	U
	<sup>103</sup> Ru	-3.4E-02 $\pm$ 6.3E-02	U		<sup>103</sup> Ru	4.8E-02 $\pm$ 6.6E-02	U
	<sup>106</sup> Ru	-1.4E-01 $\pm$ 5.0E-01	U		<sup>106</sup> Ru	5.3E-01 $\pm$ 6.6E-01	U
	<sup>125</sup> Sb	-1.3E-02 $\pm$ 1.3E-01	U		<sup>125</sup> Sb	6.3E-02 $\pm$ 1.4E-01	U
	<sup>113</sup> Sn	-7.6E-03 $\pm$ 7.6E-02	U		<sup>113</sup> Sn	3.5E-02 $\pm$ 7.3E-02	U
	<sup>90</sup> Sr	8.7E-01 $\pm$ 1.9E-01			<sup>90</sup> Sr	-2.9E-02 $\pm$ 1.2E-01	U
	<sup>234</sup> U	7.0E-03 $\pm$ 6.3E-03	U		<sup>234</sup> U	9.3E-03 $\pm$ 7.8E-03	U
	<sup>235</sup> U	1.9E-03 $\pm$ 3.8E-03	U		<sup>235</sup> U	6.1E-03 $\pm$ 5.2E-03	
	<sup>238</sup> U	7.0E-03 $\pm$ 5.8E-03			<sup>238</sup> U	5.6E-03 $\pm$ 4.8E-03	
	<sup>65</sup> Zn	7.9E-02 $\pm$ 1.4E-01	U		<sup>65</sup> Zn	6.5E-03 $\pm$ 6.5E-02	U

RQ = Result Qualifier. U = The analyte was analyzed for but not detected.

Table 3-7. 2004 Vegetation Sampling Results (pCi/g  $\pm$  total analytical uncertainty).  
(18 sheets total)

Location	Isotope	Result $\pm$ Error	RQ*	Location	Isotope	Result $\pm$ Error	RQ*
V030 (200 West)	<sup>144</sup> Ce	-3.0E-01 $\pm$ 6.1E-01	U	V032 (200 West)	<sup>144</sup> Ce	-1.1E-01 $\pm$ 5.9E-01	U
	<sup>60</sup> Co	-9.9E-03 $\pm$ 4.6E-02	U		<sup>60</sup> Co	1.0E-02 $\pm$ 4.0E-02	U
	<sup>134</sup> Cs	-4.1E-03 $\pm$ 4.1E-02	U		<sup>134</sup> Cs	3.6E-03 $\pm$ 3.6E-02	U
	<sup>137</sup> Cs	3.1E-03 $\pm$ 3.1E-02	U		<sup>137</sup> Cs	4.0E-02 $\pm$ 4.8E-02	U
	<sup>152</sup> Eu	1.3E-01 $\pm$ 1.3E-01	U		<sup>152</sup> Eu	4.1E-02 $\pm$ 1.3E-01	U
	<sup>154</sup> Eu	-3.2E-02 $\pm$ 1.2E-01	U		<sup>154</sup> Eu	-1.0E-02 $\pm$ 1.0E-01	U
	<sup>155</sup> Eu	-7.6E-02 $\pm$ 1.6E-01	U		<sup>155</sup> Eu	-1.0E-01 $\pm$ 1.4E-01	U
	<sup>238</sup> Pu	-6.6E-03 $\pm$ 9.2E-03	U		<sup>238</sup> Pu	8.5E-03 $\pm$ 8.5E-03	U
	<sup>239/240</sup> Pu	5.6E-03 $\pm$ 6.7E-03	U		<sup>239/240</sup> Pu	5.3E-03 $\pm$ 4.9E-03	
	<sup>103</sup> Ru	-6.3E-03 $\pm$ 5.2E-02	U		<sup>103</sup> Ru	-1.8E-02 $\pm$ 4.0E-02	U
	<sup>106</sup> Ru	1.5E-02 $\pm$ 1.5E-01	U		<sup>106</sup> Ru	5.2E-02 $\pm$ 3.9E-01	U
	<sup>125</sup> Sb	-1.7E-02 $\pm$ 1.2E-01	U		<sup>125</sup> Sb	-2.9E-03 $\pm$ 2.9E-02	U
	<sup>113</sup> Sn	-2.2E-02 $\pm$ 5.7E-02	U		<sup>113</sup> Sn	-1.3E-02 $\pm$ 5.6E-02	U
	<sup>90</sup> Sr	1.4E+00 $\pm$ 2.8E-01			<sup>90</sup> Sr	2.6E-01 $\pm$ 1.4E-01	
	<sup>234</sup> U	1.2E-02 $\pm$ 7.9E-03			<sup>234</sup> U	1.2E-02 $\pm$ 7.1E-03	
	<sup>235</sup> U	3.7E-03 $\pm$ 3.7E-03			<sup>235</sup> U	5.7E-03 $\pm$ 4.9E-03	
	<sup>238</sup> U	5.1E-03 $\pm$ 5.0E-03	U		<sup>238</sup> U	1.2E-02 $\pm$ 7.1E-03	
	<sup>65</sup> Zn	7.4E-02 $\pm$ 1.2E-01	U		<sup>65</sup> Zn	8.1E-03 $\pm$ 8.1E-02	U
V034 (200 West)	<sup>144</sup> Ce	-5.3E-01 $\pm$ 8.1E-01	U	V036 (200 West)	<sup>144</sup> Ce	1.3E-01 $\pm$ 6.2E-01	U
	<sup>60</sup> Co	-3.3E-02 $\pm$ 6.2E-02	U		<sup>60</sup> Co	2.2E-02 $\pm$ 5.3E-02	U
	<sup>134</sup> Cs	-1.8E-02 $\pm$ 5.9E-02	U		<sup>134</sup> Cs	-6.0E-03 $\pm$ 4.8E-02	U
	<sup>137</sup> Cs	2.0E-01 $\pm$ 1.0E-01			<sup>137</sup> Cs	2.3E-02 $\pm$ 4.6E-02	U
	<sup>152</sup> Eu	-1.7E-01 $\pm$ 1.7E-01	U		<sup>152</sup> Eu	6.5E-02 $\pm$ 1.3E-01	U
	<sup>154</sup> Eu	-1.6E-01 $\pm$ 1.9E-01	U		<sup>154</sup> Eu	-6.0E-02 $\pm$ 1.5E-01	U
	<sup>155</sup> Eu	-6.2E-02 $\pm$ 2.3E-01	U		<sup>155</sup> Eu	-2.4E-02 $\pm$ 1.5E-01	U
	<sup>238</sup> Pu	-2.3E-03 $\pm$ 1.0E-02	U		<sup>238</sup> Pu	-9.8E-03 $\pm$ 2.0E-02	U
	<sup>239/240</sup> Pu	1.1E-03 $\pm$ 1.1E-02	U		<sup>239/240</sup> Pu	1.4E-03 $\pm$ 1.4E-02	U
	<sup>103</sup> Ru	-1.1E-02 $\pm$ 6.5E-02	U		<sup>103</sup> Ru	1.2E-02 $\pm$ 5.4E-02	U
	<sup>106</sup> Ru	-2.8E-01 $\pm$ 5.1E-01	U		<sup>106</sup> Ru	1.3E-01 $\pm$ 4.2E-01	U
	<sup>125</sup> Sb	-9.2E-02 $\pm$ 1.5E-01	U		<sup>125</sup> Sb	8.9E-02 $\pm$ 1.3E-01	U
	<sup>113</sup> Sn	1.2E-02 $\pm$ 7.1E-02	U		<sup>113</sup> Sn	-5.8E-02 $\pm$ 6.1E-02	U
	<sup>90</sup> Sr	1.7E+01 $\pm$ 3.4E+00			<sup>90</sup> Sr	6.8E-01 $\pm$ 1.7E-01	
	<sup>234</sup> U	1.7E-02 $\pm$ 8.7E-03			<sup>234</sup> U	4.1E-03 $\pm$ 4.9E-03	U
	<sup>235</sup> U	5.7E-03 $\pm$ 4.9E-03			<sup>235</sup> U	1.8E-03 $\pm$ 2.5E-03	U
	<sup>238</sup> U	8.7E-03 $\pm$ 6.4E-03			<sup>238</sup> U	5.7E-03 $\pm$ 4.6E-03	
	<sup>65</sup> Zn	1.7E-02 $\pm$ 1.4E-01	U		<sup>65</sup> Zn	-2.0E-01 $\pm$ 2.0E-01	U

RQ = Result Qualifier. U = The analyte was analyzed for but not detected.

Table 3-7. 2004 Vegetation Sampling Results (pCi/g  $\pm$  total analytical uncertainty).  
(18 sheets total)

Location	Isotope	Result $\pm$ Error	RQ*	Location	Isotope	Result $\pm$ Error	RQ*
V038 (200 West)	<sup>144</sup> Ce	-1.8E-01 $\pm$ 4.9E-01	U	V040 (200 West)	<sup>144</sup> Ce	1.0E-01 $\pm$ 6.9E-01	U
	<sup>60</sup> Co	4.4E-03 $\pm$ 3.4E-02	U		<sup>60</sup> Co	7.9E-03 $\pm$ 4.8E-02	U
	<sup>134</sup> Cs	-2.2E-03 $\pm$ 2.2E-02	U		<sup>134</sup> Cs	1.2E-03 $\pm$ 1.2E-02	U
	<sup>137</sup> Cs	2.5E-02 $\pm$ 4.0E-02	U		<sup>137</sup> Cs	2.5E-02 $\pm$ 5.0E-02	U
	<sup>152</sup> Eu	-1.9E-02 $\pm$ 1.1E-01	U		<sup>152</sup> Eu	-3.1E-02 $\pm$ 1.5E-01	U
	<sup>154</sup> Eu	-4.9E-02 $\pm$ 9.6E-02	U		<sup>154</sup> Eu	-8.2E-02 $\pm$ 1.4E-01	U
	<sup>155</sup> Eu	1.4E-02 $\pm$ 1.4E-01	U		<sup>155</sup> Eu	-8.4E-03 $\pm$ 8.4E-02	U
	<sup>238</sup> Pu	6.0E-03 $\pm$ 1.6E-02	U		<sup>238</sup> Pu	-1.0E-02 $\pm$ 1.9E-02	U
	<sup>239/240</sup> Pu	1.2E-03 $\pm$ 5.4E-03	U		<sup>239/240</sup> Pu	5.5E-03 $\pm$ 5.1E-03	
	<sup>103</sup> Ru	2.6E-03 $\pm$ 2.6E-02	U		<sup>103</sup> Ru	-6.9E-03 $\pm$ 5.7E-02	U
	<sup>106</sup> Ru	-6.2E-02 $\pm$ 3.2E-01	U		<sup>106</sup> Ru	-4.7E-02 $\pm$ 4.4E-01	U
	<sup>125</sup> Sb	4.9E-02 $\pm$ 9.9E-02	U		<sup>125</sup> Sb	4.4E-02 $\pm$ 1.4E-01	U
	<sup>113</sup> Sn	4.2E-03 $\pm$ 4.2E-02	U		<sup>113</sup> Sn	-8.6E-03 $\pm$ 6.7E-02	U
	<sup>90</sup> Sr	-1.8E-01 $\pm$ 1.8E-01	U		<sup>90</sup> Sr	-1.6E-01 $\pm$ 1.6E-01	U
	<sup>234</sup> U	1.1E-02 $\pm$ 8.2E-03			<sup>234</sup> U	8.3E-03 $\pm$ 5.6E-03	
	<sup>235</sup> U	2.8E-03 $\pm$ 3.4E-03			<sup>235</sup> U	1.8E-03 $\pm$ 4.5E-03	U
	<sup>238</sup> U	8.5E-03 $\pm$ 6.3E-03			<sup>238</sup> U	1.6E-02 $\pm$ 8.6E-03	
	<sup>65</sup> Zn	-1.9E-03 $\pm$ 1.9E-02	U		<sup>65</sup> Zn	1.3E-01 $\pm$ 1.2E-01	U
V042 (200 West)	<sup>144</sup> Ce	6.0E-02 $\pm$ 6.0E-01	U	V044 (200 West)	<sup>144</sup> Ce	2.9E-01 $\pm$ 8.1E-01	U
	<sup>60</sup> Co	3.5E-02 $\pm$ 6.2E-02	U		<sup>60</sup> Co	7.8E-02 $\pm$ 6.6E-02	U
	<sup>134</sup> Cs	-2.3E-02 $\pm$ 6.4E-02	U		<sup>134</sup> Cs	8.6E-03 $\pm$ 6.6E-02	U
	<sup>137</sup> Cs	-1.5E-02 $\pm$ 6.0E-02	U		<sup>137</sup> Cs	-1.5E-03 $\pm$ 1.5E-02	U
	<sup>152</sup> Eu	-1.9E-02 $\pm$ 1.6E-01	U		<sup>152</sup> Eu	1.9E-02 $\pm$ 1.8E-01	U
	<sup>154</sup> Eu	-2.0E-02 $\pm$ 1.8E-01	U		<sup>154</sup> Eu	2.1E-02 $\pm$ 1.9E-01	U
	<sup>155</sup> Eu	-4.8E-02 $\pm$ 1.9E-01	U		<sup>155</sup> Eu	-5.8E-02 $\pm$ 2.1E-01	U
	<sup>238</sup> Pu	7.7E-03 $\pm$ 1.7E-02	U		<sup>238</sup> Pu	-2.2E-03 $\pm$ 1.7E-02	U
	<sup>239/240</sup> Pu	2.2E-03 $\pm$ 5.5E-03	U		<sup>239/240</sup> Pu	2.9E-02 $\pm$ 1.4E-02	
	<sup>103</sup> Ru	2.9E-02 $\pm$ 6.4E-02	U		<sup>103</sup> Ru	-3.5E-02 $\pm$ 7.1E-02	U
	<sup>106</sup> Ru	-3.1E-01 $\pm$ 5.6E-01	U		<sup>106</sup> Ru	1.4E-01 $\pm$ 5.8E-01	U
	<sup>125</sup> Sb	1.1E-02 $\pm$ 1.1E-01	U		<sup>125</sup> Sb	1.0E-01 $\pm$ 1.6E-01	U
	<sup>113</sup> Sn	-1.5E-02 $\pm$ 7.1E-02	U		<sup>113</sup> Sn	-3.4E-04 $\pm$ 3.4E-03	U
	<sup>90</sup> Sr	-1.3E-01 $\pm$ 1.6E-01	U		<sup>90</sup> Sr	-1.3E-01 $\pm$ 1.4E-01	U
	<sup>234</sup> U	7.7E-03 $\pm$ 6.9E-03	U		<sup>234</sup> U	1.4E-02 $\pm$ 8.0E-03	
	<sup>235</sup> U	2.8E-03 $\pm$ 3.4E-03			<sup>235</sup> U	2.6E-03 $\pm$ 3.1E-03	
	<sup>238</sup> U	1.4E-02 $\pm$ 8.3E-03			<sup>238</sup> U	1.0E-02 $\pm$ 6.1E-03	
	<sup>65</sup> Zn	1.6E-02 $\pm$ 1.6E-01	U		<sup>65</sup> Zn	-2.7E-01 $\pm$ 2.7E-01	U

RQ = Result Qualifier. U = The analyte was analyzed for but not detected.

Table 3-7. 2004 Vegetation Sampling Results (pCi/g  $\pm$  total analytical uncertainty).  
(18 sheets total)

Location	Isotope	Result $\pm$ Error	RQ*	Location	Isotope	Result $\pm$ Error	RQ*
V046 (200 West)	<sup>144</sup> Ce	-1.5E-01 $\pm$ 8.7E-01	U	V048 (200 West)	<sup>144</sup> Ce	-2.4E-01 $\pm$ 5.0E-01	U
	<sup>60</sup> Co	-1.2E-02 $\pm$ 6.4E-02	U		<sup>60</sup> Co	-6.0E-03 $\pm$ 3.6E-02	U
	<sup>134</sup> Cs	1.7E-02 $\pm$ 7.5E-02	U		<sup>134</sup> Cs	-8.8E-03 $\pm$ 3.8E-02	U
	<sup>137</sup> Cs	2.0E-02 $\pm$ 6.2E-02	U		<sup>137</sup> Cs	3.9E-02 $\pm$ 4.0E-02	U
	<sup>152</sup> Eu	-1.8E-01 $\pm$ 1.9E-01	U		<sup>152</sup> Eu	1.1E-01 $\pm$ 1.2E-01	U
	<sup>154</sup> Eu	-4.9E-02 $\pm$ 1.8E-01	U		<sup>154</sup> Eu	-4.9E-03 $\pm$ 4.9E-02	U
	<sup>155</sup> Eu	-5.1E-03 $\pm$ 5.1E-02	U		<sup>155</sup> Eu	-9.9E-02 $\pm$ 1.4E-01	U
	<sup>238</sup> Pu	1.1E-03 $\pm$ 1.1E-02	U		<sup>238</sup> Pu	-8.7E-03 $\pm$ 1.8E-02	U
	<sup>239/240</sup> Pu	4.3E-03 $\pm$ 5.2E-03	U		<sup>239/240</sup> Pu	3.7E-03 $\pm$ 4.4E-03	
	<sup>103</sup> Ru	4.7E-02 $\pm$ 7.3E-02	U		<sup>103</sup> Ru	-2.5E-02 $\pm$ 4.5E-02	U
	<sup>106</sup> Ru	-4.3E-01 $\pm$ 5.6E-01	U		<sup>106</sup> Ru	-1.5E-01 $\pm$ 3.4E-01	U
	<sup>125</sup> Sb	-6.2E-02 $\pm$ 1.6E-01	U		<sup>125</sup> Sb	3.4E-02 $\pm$ 1.0E-01	U
	<sup>113</sup> Sn	4.5E-02 $\pm$ 7.9E-02	U		<sup>113</sup> Sn	-9.6E-03 $\pm$ 5.0E-02	U
	<sup>90</sup> Sr	-1.4E-02 $\pm$ 1.1E-01	U		<sup>90</sup> Sr	-8.1E-02 $\pm$ 1.1E-01	U
	<sup>234</sup> U	1.4E-02 $\pm$ 8.5E-03			<sup>234</sup> U	1.2E-02 $\pm$ 7.0E-03	
	<sup>235</sup> U	2.0E-03 $\pm$ 2.8E-03	U		<sup>235</sup> U	2.6E-03 $\pm$ 3.1E-03	
	<sup>238</sup> U	9.0E-03 $\pm$ 6.1E-03			<sup>238</sup> U	8.1E-03 $\pm$ 6.4E-03	
	<sup>65</sup> Zn	-6.3E-02 $\pm$ 1.3E-01	U		<sup>65</sup> Zn	-1.5E-01 $\pm$ 1.5E-01	U
V050 (200 West)	<sup>144</sup> Ce	5.0E-01 $\pm$ 5.6E-01	U	V052 (200 West)	<sup>144</sup> Ce	-5.2E-01 $\pm$ 8.0E-01	U
	<sup>60</sup> Co	6.0E-03 $\pm$ 4.0E-02	U		<sup>60</sup> Co	-2.8E-02 $\pm$ 5.4E-02	U
	<sup>134</sup> Cs	2.5E-02 $\pm$ 4.4E-02	U		<sup>134</sup> Cs	-4.9E-02 $\pm$ 5.9E-02	U
	<sup>137</sup> Cs	2.7E-02 $\pm$ 4.3E-02	U		<sup>137</sup> Cs	6.0E-02 $\pm$ 5.9E-02	U
	<sup>152</sup> Eu	-3.0E-02 $\pm$ 1.2E-01	U		<sup>152</sup> Eu	-2.7E-01 $\pm$ 2.7E-01	U
	<sup>154</sup> Eu	1.9E-01 $\pm$ 1.5E-01	U		<sup>154</sup> Eu	-2.4E-02 $\pm$ 1.5E-01	U
	<sup>155</sup> Eu	2.1E-02 $\pm$ 1.5E-01	U		<sup>155</sup> Eu	6.0E-02 $\pm$ 2.2E-01	U
	<sup>238</sup> Pu	-4.8E-03 $\pm$ 2.2E-02	U		<sup>238</sup> Pu	5.8E-03 $\pm$ 2.0E-02	U
	<sup>239/240</sup> Pu	1.2E-03 $\pm$ 5.4E-03	U		<sup>239/240</sup> Pu	5.8E-03 $\pm$ 7.0E-03	U
	<sup>103</sup> Ru	2.4E-02 $\pm$ 4.9E-02	U		<sup>103</sup> Ru	1.5E-02 $\pm$ 6.0E-02	U
	<sup>106</sup> Ru	-1.5E-01 $\pm$ 3.7E-01	U		<sup>106</sup> Ru	-4.5E-02 $\pm$ 4.5E-01	U
	<sup>125</sup> Sb	-6.9E-02 $\pm$ 1.1E-01	U		<sup>125</sup> Sb	2.5E-02 $\pm$ 1.5E-01	U
	<sup>113</sup> Sn	5.8E-02 $\pm$ 5.7E-02	U		<sup>113</sup> Sn	5.5E-03 $\pm$ 5.5E-02	U
	<sup>90</sup> Sr	3.4E-01 $\pm$ 1.4E-01			<sup>90</sup> Sr	2.5E-02 $\pm$ 1.0E-01	U
	<sup>234</sup> U	9.6E-03 $\pm$ 7.2E-03			<sup>234</sup> U	9.3E-03 $\pm$ 6.9E-03	
	<sup>235</sup> U	2.9E-03 $\pm$ 4.4E-03	U		<sup>235</sup> U	4.1E-03 $\pm$ 4.1E-03	
	<sup>238</sup> U	9.6E-03 $\pm$ 6.2E-03			<sup>238</sup> U	6.5E-03 $\pm$ 5.2E-03	
	<sup>65</sup> Zn	-4.1E-02 $\pm$ 1.2E-01	U		<sup>65</sup> Zn	-1.9E-01 $\pm$ 1.9E-01	U

RQ = Result Qualifier. U = The analyte was analyzed for but not detected.

Table 3-7. 2004 Vegetation Sampling Results (pCi/g  $\pm$  total analytical uncertainty).  
(18 sheets total)

Location	Isotope	Result $\pm$ Error	RQ*	Location	Isotope	Result $\pm$ Error	RQ*
V054 (200 East)	<sup>144</sup> Ce	-2.8E-04 $\pm$ 2.8E-03	U	V056 (200 East)	<sup>144</sup> Ce	3.5E-01 $\pm$ 5.5E-01	U
	<sup>60</sup> Co	8.1E-03 $\pm$ 5.4E-02	U		<sup>60</sup> Co	3.3E-02 $\pm$ 4.1E-02	U
	<sup>134</sup> Cs	-4.0E-02 $\pm$ 5.5E-02	U		<sup>134</sup> Cs	-3.7E-02 $\pm$ 4.5E-02	U
	<sup>137</sup> Cs	-1.7E-02 $\pm$ 5.8E-02	U		<sup>137</sup> Cs	3.3E-01 $\pm$ 9.6E-02	U
	<sup>152</sup> Eu	1.9E-01 $\pm$ 1.4E-01	U		<sup>152</sup> Eu	1.2E-01 $\pm$ 1.3E-01	U
	<sup>154</sup> Eu	-1.3E-02 $\pm$ 1.3E-01	U		<sup>154</sup> Eu	-3.2E-02 $\pm$ 1.3E-01	U
	<sup>155</sup> Eu	-4.8E-02 $\pm$ 1.5E-01	U		<sup>155</sup> Eu	8.9E-02 $\pm$ 1.4E-01	U
	<sup>238</sup> Pu	-1.4E-03 $\pm$ 1.4E-02	U		<sup>238</sup> Pu	-4.9E-03 $\pm$ 1.3E-02	U
	<sup>239/240</sup> Pu	5.4E-03 $\pm$ 5.4E-03			<sup>239/240</sup> Pu	9.8E-04 $\pm$ 9.8E-03	U
	<sup>103</sup> Ru	-2.8E-02 $\pm$ 5.3E-02	U		<sup>103</sup> Ru	-2.0E-02 $\pm$ 4.5E-02	U
	<sup>106</sup> Ru	-3.6E-01 $\pm$ 4.6E-01	U		<sup>106</sup> Ru	-2.3E-01 $\pm$ 3.6E-01	U
	<sup>125</sup> Sb	-1.2E-01 $\pm$ 1.3E-01	U		<sup>125</sup> Sb	9.7E-02 $\pm$ 1.2E-01	U
	<sup>113</sup> Sn	-6.3E-03 $\pm$ 5.8E-02	U		<sup>113</sup> Sn	1.4E-03 $\pm$ 1.4E-02	U
	<sup>90</sup> Sr	-6.4E-02 $\pm$ 9.7E-02	U		<sup>90</sup> Sr	1.3E-01 $\pm$ 1.2E-01	U
	<sup>234</sup> U	9.1E-03 $\pm$ 6.4E-03			<sup>234</sup> U	1.5E-02 $\pm$ 9.0E-03	
	<sup>235</sup> U	2.7E-03 $\pm$ 4.1E-03	U		<sup>235</sup> U	5.4E-03 $\pm$ 4.6E-03	
	<sup>238</sup> U	5.8E-03 $\pm$ 5.7E-03	U		<sup>238</sup> U	8.2E-03 $\pm$ 6.9E-03	U
	<sup>65</sup> Zn	4.6E-02 $\pm$ 1.3E-01	U		<sup>65</sup> Zn	3.3E-03 $\pm$ 3.3E-02	U
V058 (200 East)	<sup>144</sup> Ce	-3.7E-01 $\pm$ 4.8E-01	U	V060 (200 East)	<sup>144</sup> Ce	-2.8E-01 $\pm$ 6.3E-01	U
	<sup>60</sup> Co	-6.4E-03 $\pm$ 3.8E-02	U		<sup>60</sup> Co	2.6E-02 $\pm$ 4.4E-02	U
	<sup>134</sup> Cs	-9.2E-03 $\pm$ 3.6E-02	U		<sup>134</sup> Cs	-3.5E-02 $\pm$ 4.6E-02	U
	<sup>137</sup> Cs	2.7E-01 $\pm$ 9.1E-02			<sup>137</sup> Cs	1.8E-01 $\pm$ 8.6E-02	
	<sup>152</sup> Eu	-4.4E-02 $\pm$ 1.0E-01	U		<sup>152</sup> Eu	-3.7E-02 $\pm$ 1.3E-01	U
	<sup>154</sup> Eu	-8.5E-02 $\pm$ 1.2E-01	U		<sup>154</sup> Eu	-7.5E-02 $\pm$ 1.5E-01	U
	<sup>155</sup> Eu	7.1E-02 $\pm$ 1.2E-01	U		<sup>155</sup> Eu	6.8E-03 $\pm$ 6.8E-02	U
	<sup>238</sup> Pu	1.0E-03 $\pm$ 1.0E-02	U		<sup>238</sup> Pu	-1.8E-02 $\pm$ 2.0E-02	U
	<sup>239/240</sup> Pu	1.1E-03 $\pm$ 1.1E-02	U		<sup>239/240</sup> Pu	1.2E-03 $\pm$ 1.2E-02	U
	<sup>103</sup> Ru	7.5E-04 $\pm$ 7.5E-03	U		<sup>103</sup> Ru	5.2E-03 $\pm$ 4.7E-02	U
	<sup>106</sup> Ru	-2.9E-02 $\pm$ 2.9E-01	U		<sup>106</sup> Ru	-2.7E-01 $\pm$ 4.0E-01	U
	<sup>125</sup> Sb	-1.7E-02 $\pm$ 9.8E-02	U		<sup>125</sup> Sb	-7.7E-03 $\pm$ 7.7E-02	U
	<sup>113</sup> Sn	2.9E-02 $\pm$ 4.6E-02	U		<sup>113</sup> Sn	1.0E-02 $\pm$ 5.4E-02	U
	<sup>90</sup> Sr	3.6E+00 $\pm$ 5.0E-01			<sup>90</sup> Sr	9.0E-01 $\pm$ 1.9E-01	
	<sup>234</sup> U	7.8E-03 $\pm$ 5.8E-03			<sup>234</sup> U	1.1E-02 $\pm$ 6.9E-03	
	<sup>235</sup> U	4.3E-03 $\pm$ 5.2E-03	U		<sup>235</sup> U	4.1E-03 $\pm$ 4.1E-03	
	<sup>238</sup> U	1.2E-02 $\pm$ 8.0E-03			<sup>238</sup> U	6.6E-03 $\pm$ 5.3E-03	
	<sup>65</sup> Zn	-3.0E-02 $\pm$ 1.1E-01	U		<sup>65</sup> Zn	9.5E-02 $\pm$ 1.2E-01	U

RQ = Result Qualifier. U = The analyte was analyzed for but not detected.

Table 3-7. 2004 Vegetation Sampling Results (pCi/g  $\pm$  total analytical uncertainty).  
(18 sheets total)

Location	Isotope	Result $\pm$ Error	RQ*	Location	Isotope	Result $\pm$ Error	RQ*
V062 (200 East)	<sup>144</sup> Ce	-9.3E-02 $\pm$ 5.3E-01	U	V064 (200 East)	<sup>144</sup> Ce	6.6E-02 $\pm$ 3.1E-01	U
	<sup>60</sup> Co	2.4E-02 $\pm$ 3.9E-02	U		<sup>60</sup> Co	-2.1E-03 $\pm$ 2.1E-02	U
	<sup>134</sup> Cs	-5.3E-03 $\pm$ 4.3E-02	U		<sup>134</sup> Cs	6.6E-04 $\pm$ 6.6E-03	U
	<sup>137</sup> Cs	1.0E-02 $\pm$ 4.2E-02	U		<sup>137</sup> Cs	8.0E-03 $\pm$ 2.4E-02	U
	<sup>152</sup> Eu	-3.0E-02 $\pm$ 1.2E-01	U		<sup>152</sup> Eu	4.9E-02 $\pm$ 6.8E-02	U
	<sup>154</sup> Eu	-1.2E-02 $\pm$ 1.2E-01	U		<sup>154</sup> Eu	-2.3E-02 $\pm$ 7.7E-02	U
	<sup>155</sup> Eu	-1.1E-02 $\pm$ 1.1E-01	U		<sup>155</sup> Eu	2.1E-02 $\pm$ 8.5E-02	U
	<sup>238</sup> Pu	-1.2E-03 $\pm$ 1.2E-02	U		<sup>238</sup> Pu	-5.4E-03 $\pm$ 1.4E-02	U
	<sup>239/240</sup> Pu	1.2E-03 $\pm$ 1.2E-02	U		<sup>239/240</sup> Pu	-1.1E-03 $\pm$ 2.2E-03	U
	<sup>103</sup> Ru	-5.1E-03 $\pm$ 4.6E-02	U		<sup>103</sup> Ru	-1.6E-02 $\pm$ 2.5E-02	U
	<sup>106</sup> Ru	4.3E-01 $\pm$ 5.3E-01	U		<sup>106</sup> Ru	2.2E-02 $\pm$ 2.0E-01	U
	<sup>125</sup> Sb	-5.1E-02 $\pm$ 1.1E-01	U		<sup>125</sup> Sb	-3.4E-02 $\pm$ 6.5E-02	U
	<sup>113</sup> Sn	-4.4E-03 $\pm$ 4.4E-02	U		<sup>113</sup> Sn	-9.6E-03 $\pm$ 3.0E-02	U
	<sup>90</sup> Sr	-3.7E-02 $\pm$ 9.6E-02	U		<sup>90</sup> Sr	6.6E-02 $\pm$ 1.1E-01	U
	<sup>234</sup> U	6.8E-03 $\pm$ 5.6E-03			<sup>234</sup> U	1.8E-03 $\pm$ 2.5E-03	U
	<sup>235</sup> U	8.5E-04 $\pm$ 8.5E-03	U		<sup>235</sup> U	4.0E-03 $\pm$ 4.0E-03	
	<sup>238</sup> U	8.5E-03 $\pm$ 6.3E-03			<sup>238</sup> U	6.4E-03 $\pm$ 5.1E-03	
	<sup>65</sup> Zn	-2.2E-01 $\pm$ 2.2E-01	U		<sup>65</sup> Zn	2.0E-03 $\pm$ 2.0E-02	U
V066 (200 East)	<sup>144</sup> Ce	-2.2E-02 $\pm$ 2.2E-01	U	V068 (200 East)	<sup>144</sup> Ce	-1.2E-01 $\pm$ 7.6E-01	U
	<sup>60</sup> Co	1.5E-02 $\pm$ 3.7E-02	U		<sup>60</sup> Co	-1.6E-02 $\pm$ 6.1E-02	U
	<sup>134</sup> Cs	1.5E-02 $\pm$ 3.8E-02	U		<sup>134</sup> Cs	8.0E-04 $\pm$ 8.0E-03	U
	<sup>137</sup> Cs	9.4E-02 $\pm$ 7.3E-02			<sup>137</sup> Cs	5.2E-02 $\pm$ 6.3E-02	U
	<sup>152</sup> Eu	1.1E-02 $\pm$ 1.1E-01	U		<sup>152</sup> Eu	1.1E-01 $\pm$ 1.6E-01	U
	<sup>154</sup> Eu	5.1E-02 $\pm$ 1.1E-01	U		<sup>154</sup> Eu	-1.5E-01 $\pm$ 1.8E-01	U
	<sup>155</sup> Eu	-1.5E-02 $\pm$ 1.1E-01	U		<sup>155</sup> Eu	4.6E-02 $\pm$ 2.0E-01	U
	<sup>238</sup> Pu	-8.6E-03 $\pm$ 1.4E-02	U		<sup>238</sup> Pu	-1.0E-02 $\pm$ 1.6E-02	U
	<sup>239/240</sup> Pu	-1.1E-03 $\pm$ 3.8E-03	U		<sup>239/240</sup> Pu	9.4E-04 $\pm$ 9.4E-03	U
	<sup>103</sup> Ru	-2.5E-02 $\pm$ 4.0E-02	U		<sup>103</sup> Ru	-6.0E-02 $\pm$ 6.5E-02	U
	<sup>106</sup> Ru	-9.7E-02 $\pm$ 3.1E-01	U		<sup>106</sup> Ru	-2.1E-01 $\pm$ 5.6E-01	U
	<sup>125</sup> Sb	-1.1E-02 $\pm$ 1.0E-01	U		<sup>125</sup> Sb	1.1E-01 $\pm$ 1.5E-01	U
	<sup>113</sup> Sn	-3.4E-03 $\pm$ 3.4E-02	U		<sup>113</sup> Sn	-1.1E-02 $\pm$ 7.1E-02	U
	<sup>90</sup> Sr	1.5E-01 $\pm$ 1.3E-01	U		<sup>90</sup> Sr	1.4E-01 $\pm$ 1.3E-01	U
	<sup>234</sup> U	1.4E-02 $\pm$ 8.8E-03			<sup>234</sup> U	4.3E-03 $\pm$ 5.2E-03	U
	<sup>235</sup> U	2.0E-03 $\pm$ 4.0E-03	U		<sup>235</sup> U	7.1E-03 $\pm$ 7.0E-03	U
	<sup>238</sup> U	2.2E-02 $\pm$ 1.1E-02			<sup>238</sup> U	3.2E-03 $\pm$ 4.8E-03	U
	<sup>65</sup> Zn	6.1E-02 $\pm$ 8.6E-02	U		<sup>65</sup> Zn	-2.3E-01 $\pm$ 2.3E-01	U

RQ = Result Qualifier. U = The analyte was analyzed for but not detected.



Table 3-7. 2004 Vegetation Sampling Results (pCi/g  $\pm$  total analytical uncertainty).  
(18 sheets total)

Location	Isotope	Result $\pm$ Error	RQ*	Location	Isotope	Result $\pm$ Error	RQ*
V074 (200 East)	<sup>144</sup> Ce	1.8E-01 $\pm$ 4.7E-01	U	V076 (200 East)	<sup>144</sup> Ce	8.0E-02 $\pm$ 2.8E-01	U
	<sup>60</sup> Co	3.3E-02 $\pm$ 4.0E-02	U		<sup>60</sup> Co	4.3E-03 $\pm$ 2.1E-02	U
	<sup>134</sup> Cs	1.8E-02 $\pm$ 3.9E-02	U		<sup>134</sup> Cs	-1.0E-02 $\pm$ 2.2E-02	U
	<sup>137</sup> Cs	-8.1E-03 $\pm$ 3.8E-02	U		<sup>137</sup> Cs	6.6E-02 $\pm$ 4.3E-02	
	<sup>152</sup> Eu	1.3E-01 $\pm$ 1.1E-01	U		<sup>152</sup> Eu	-6.5E-02 $\pm$ 6.5E-02	U
	<sup>154</sup> Eu	-8.1E-02 $\pm$ 1.3E-01	U		<sup>154</sup> Eu	-4.1E-02 $\pm$ 7.4E-02	U
	<sup>155</sup> Eu	7.1E-03 $\pm$ 7.1E-02	U		<sup>155</sup> Eu	-1.7E-02 $\pm$ 7.1E-02	U
	<sup>238</sup> Pu	2.9E-03 $\pm$ 1.4E-02	U		<sup>238</sup> Pu	2.9E-03 $\pm$ 1.3E-02	U
	<sup>239/240</sup> Pu	9.7E-04 $\pm$ 9.7E-03	U		<sup>239/240</sup> Pu	9.8E-04 $\pm$ 4.4E-03	U
	<sup>103</sup> Ru	1.8E-02 $\pm$ 3.7E-02	U		<sup>103</sup> Ru	-6.5E-03 $\pm$ 2.1E-02	U
	<sup>106</sup> Ru	6.7E-03 $\pm$ 6.7E-02	U		<sup>106</sup> Ru	-2.3E-01 $\pm$ 2.3E-01	U
	<sup>125</sup> Sb	-4.7E-02 $\pm$ 9.6E-02	U		<sup>125</sup> Sb	2.5E-02 $\pm$ 5.7E-02	U
	<sup>113</sup> Sn	-2.6E-02 $\pm$ 4.4E-02	U		<sup>113</sup> Sn	5.0E-03 $\pm$ 2.7E-02	U
	<sup>90</sup> Sr	7.6E-01 $\pm$ 1.9E-01			<sup>90</sup> Sr	-2.2E-02 $\pm$ 9.9E-02	U
	<sup>234</sup> U	1.7E-03 $\pm$ 4.2E-03	U		<sup>234</sup> U	1.8E-02 $\pm$ 1.0E-02	
	<sup>235</sup> U	1.9E-03 $\pm$ 2.7E-03	U		<sup>235</sup> U	4.5E-03 $\pm$ 8.1E-03	U
	<sup>238</sup> U	7.0E-03 $\pm$ 5.2E-03			<sup>238</sup> U	1.2E-02 $\pm$ 8.5E-03	
	<sup>65</sup> Zn	-2.1E-01 $\pm$ 2.1E-01	U		<sup>65</sup> Zn	-1.0E-01 $\pm$ 1.0E-01	U
V078 (200 East)	<sup>144</sup> Ce	7.3E-02 $\pm$ 2.9E-01	U	V082 (600 Area)	<sup>144</sup> Ce	1.7E-01 $\pm$ 4.0E-01	U
	<sup>60</sup> Co	1.5E-02 $\pm$ 2.2E-02	U		<sup>60</sup> Co	-9.9E-04 $\pm$ 9.9E-03	U
	<sup>134</sup> Cs	1.7E-03 $\pm$ 1.7E-02	U		<sup>134</sup> Cs	-7.9E-03 $\pm$ 3.2E-02	U
	<sup>137</sup> Cs	-1.1E-03 $\pm$ 1.1E-02	U		<sup>137</sup> Cs	2.3E-02 $\pm$ 3.4E-02	U
	<sup>152</sup> Eu	-4.0E-03 $\pm$ 4.0E-02	U		<sup>152</sup> Eu	7.4E-03 $\pm$ 7.4E-02	U
	<sup>154</sup> Eu	-1.0E-02 $\pm$ 6.7E-02	U		<sup>154</sup> Eu	-3.5E-02 $\pm$ 1.1E-01	U
	<sup>155</sup> Eu	5.2E-03 $\pm$ 5.2E-02	U		<sup>155</sup> Eu	2.3E-02 $\pm$ 1.0E-01	U
	<sup>238</sup> Pu	4.8E-03 $\pm$ 1.1E-02	U		<sup>238</sup> Pu	-9.0E-03 $\pm$ 1.4E-02	U
	<sup>239/240</sup> Pu	3.8E-03 $\pm$ 5.3E-03	U		<sup>239/240</sup> Pu	-1.0E-03 $\pm$ 3.5E-03	U
	<sup>103</sup> Ru	1.4E-02 $\pm$ 2.3E-02	U		<sup>103</sup> Ru	1.0E-02 $\pm$ 3.0E-02	U
	<sup>106</sup> Ru	3.6E-02 $\pm$ 2.0E-01	U		<sup>106</sup> Ru	-4.2E-02 $\pm$ 2.8E-01	U
	<sup>125</sup> Sb	-3.0E-02 $\pm$ 6.7E-02	U		<sup>125</sup> Sb	-1.2E-02 $\pm$ 8.5E-02	U
	<sup>113</sup> Sn	-2.4E-02 $\pm$ 2.9E-02	U		<sup>113</sup> Sn	-1.3E-02 $\pm$ 3.7E-02	U
	<sup>90</sup> Sr	1.4E-01 $\pm$ 1.2E-01	U		<sup>90</sup> Sr	2.5E-01 $\pm$ 1.3E-01	
	<sup>234</sup> U	1.2E-02 $\pm$ 8.0E-03			<sup>234</sup> U	5.4E-03 $\pm$ 5.3E-03	U
	<sup>235</sup> U	5.6E-03 $\pm$ 5.2E-03			<sup>235</sup> U	4.9E-03 $\pm$ 4.6E-03	
	<sup>238</sup> U	1.4E-02 $\pm$ 8.3E-03			<sup>238</sup> U	7.2E-03 $\pm$ 6.0E-03	
	<sup>65</sup> Zn	-1.7E-01 $\pm$ 1.7E-01	U		<sup>65</sup> Zn	-2.1E-01 $\pm$ 2.1E-01	U

RQ = Result Qualifier. U = The analyte was analyzed for but not detected.

Table 3-7. 2004 Vegetation Sampling Results (pCi/g  $\pm$  total analytical uncertainty).  
(18 sheets total)

Location	Isotope	Result $\pm$ Error	RQ*	Location	Isotope	Result $\pm$ Error	RQ*
V084 (600 Area)	<sup>144</sup> Ce	-2.8E-01 $\pm$ 8.6E-01	U	V086 (600 Area)	<sup>144</sup> Ce	-3.0E-01 $\pm$ 4.2E-01	U
	<sup>60</sup> Co	4.0E-02 $\pm$ 6.9E-02	U		<sup>60</sup> Co	-1.3E-02 $\pm$ 2.5E-02	U
	<sup>134</sup> Cs	7.3E-02 $\pm$ 7.9E-02	U		<sup>134</sup> Cs	1.9E-02 $\pm$ 3.5E-02	U
	<sup>137</sup> Cs	1.6E-02 $\pm$ 7.9E-02	U		<sup>137</sup> Cs	2.9E-02 $\pm$ 3.0E-02	U
	<sup>152</sup> Eu	7.4E-03 $\pm$ 7.4E-02	U		<sup>152</sup> Eu	7.4E-03 $\pm$ 7.3E-02	U
	<sup>154</sup> Eu	3.4E-02 $\pm$ 2.1E-01	U		<sup>154</sup> Eu	3.9E-02 $\pm$ 8.4E-02	U
	<sup>155</sup> Eu	1.2E-01 $\pm$ 2.0E-01	U		<sup>155</sup> Eu	-1.3E-01 $\pm$ 1.3E-01	U
	<sup>238</sup> Pu	6.0E-03 $\pm$ 1.7E-02	U		<sup>238</sup> Pu	1.8E-03 $\pm$ 1.4E-02	U
	<sup>239/240</sup> Pu	1.0E-03 $\pm$ 2.0E-03	U		<sup>239/240</sup> Pu	8.8E-04 $\pm$ 8.8E-03	U
	<sup>103</sup> Ru	1.7E-02 $\pm$ 7.4E-02	U		<sup>103</sup> Ru	-1.7E-02 $\pm$ 3.0E-02	U
	<sup>106</sup> Ru	-2.4E-01 $\pm$ 6.2E-01	U		<sup>106</sup> Ru	-1.4E-01 $\pm$ 2.8E-01	U
	<sup>125</sup> Sb	-7.6E-03 $\pm$ 7.6E-02	U		<sup>125</sup> Sb	-2.3E-02 $\pm$ 7.7E-02	U
	<sup>113</sup> Sn	-5.8E-03 $\pm$ 5.8E-02	U		<sup>113</sup> Sn	1.4E-02 $\pm$ 3.7E-02	U
	<sup>90</sup> Sr	3.6E-02 $\pm$ 1.1E-01	U		<sup>90</sup> Sr	7.9E-02 $\pm$ 1.1E-01	U
	<sup>234</sup> U	6.8E-03 $\pm$ 5.1E-03			<sup>234</sup> U	4.0E-03 $\pm$ 6.8E-03	U
	<sup>235</sup> U	5.6E-03 $\pm$ 4.8E-03			<sup>235</sup> U	2.6E-03 $\pm$ 3.1E-03	
	<sup>238</sup> U	4.3E-03 $\pm$ 4.7E-03	U		<sup>238</sup> U	4.0E-03 $\pm$ 4.4E-03	U
	<sup>65</sup> Zn	-6.8E-02 $\pm$ 1.7E-01	U		<sup>65</sup> Zn	-1.8E-02 $\pm$ 6.5E-02	U
V090 (600 Area)	<sup>144</sup> Ce	3.8E-01 $\pm$ 5.1E-01	U	V092 (600 Area)	<sup>144</sup> Ce	5.3E-02 $\pm$ 9.3E-02	
	<sup>60</sup> Co	6.9E-03 $\pm$ 4.2E-02	U		<sup>60</sup> Co	-3.7E-03 $\pm$ 1.1E-02	
	<sup>134</sup> Cs	2.2E-02 $\pm$ 4.0E-02	U		<sup>134</sup> Cs	-3.9E-04 $\pm$ 3.9E-03	
	<sup>137</sup> Cs	2.9E-02 $\pm$ 3.9E-02	U		<sup>137</sup> Cs	1.9E-02 $\pm$ 1.5E-02	
	<sup>152</sup> Eu	3.9E-02 $\pm$ 1.1E-01	U		<sup>152</sup> Eu	-1.1E-02 $\pm$ 2.5E-02	
	<sup>154</sup> Eu	-6.1E-02 $\pm$ 1.4E-01	U		<sup>154</sup> Eu	1.6E-03 $\pm$ 1.5E-02	
	<sup>155</sup> Eu	-1.5E-01 $\pm$ 1.5E-01	U		<sup>155</sup> Eu	1.5E-03 $\pm$ 1.5E-02	
	<sup>238</sup> Pu	-1.8E-02 $\pm$ 1.8E-02	U		<sup>238</sup> Pu	-2.7E-03 $\pm$ 1.5E-02	U
	<sup>239/240</sup> Pu	-3.0E-03 $\pm$ 4.5E-03	U		<sup>239/240</sup> Pu	1.8E-03 $\pm$ 4.5E-03	U
	<sup>103</sup> Ru	-2.6E-03 $\pm$ 2.6E-02	U		<sup>103</sup> Ru	-3.9E-03 $\pm$ 7.7E-03	
	<sup>106</sup> Ru	5.7E-02 $\pm$ 3.3E-01	U		<sup>106</sup> Ru	1.2E-03 $\pm$ 1.2E-02	
	<sup>125</sup> Sb	-5.3E-02 $\pm$ 1.1E-01	U		<sup>125</sup> Sb	1.5E-02 $\pm$ 2.1E-02	
	<sup>113</sup> Sn	-2.5E-02 $\pm$ 4.7E-02	U		<sup>113</sup> Sn	-4.9E-03 $\pm$ 9.4E-03	
	<sup>90</sup> Sr	1.6E+00 $\pm$ 3.2E-01			<sup>90</sup> Sr	2.2E+00 $\pm$ 4.4E-01	
	<sup>234</sup> U	1.4E-02 $\pm$ 8.1E-03			<sup>234</sup> U	1.0E-02 $\pm$ 7.1E-03	
	<sup>235</sup> U	1.0E-03 $\pm$ 1.0E-02	U		<sup>235</sup> U	6.7E-03 $\pm$ 5.4E-03	
	<sup>238</sup> U	8.4E-03 $\pm$ 6.0E-03			<sup>238</sup> U	1.6E-02 $\pm$ 8.6E-03	
	<sup>65</sup> Zn	-4.3E-02 $\pm$ 1.2E-01	U		<sup>65</sup> Zn	-2.1E-02 $\pm$ 2.5E-02	

RQ = Result Qualifier. U = The analyte was analyzed for but not detected.

Table 3-7. 2004 Vegetation Sampling Results (pCi/g  $\pm$  total analytical uncertainty).  
(18 sheets total)

Location	Isotope	Result $\pm$ Error	RQ*	Location	Isotope	Result $\pm$ Error	RQ*
V094 (600 Area)	<sup>144</sup> Ce	-1.7E-01 $\pm$ 4.5E-01	U	V096 (600 Area)	<sup>144</sup> Ce	-6.0E-02 $\pm$ 3.6E-01	U
	<sup>60</sup> Co	2.6E-05 $\pm$ 2.6E-04	U		<sup>60</sup> Co	2.0E-03 $\pm$ 2.0E-02	U
	<sup>134</sup> Cs	-4.2E-03 $\pm$ 4.2E-02	U		<sup>134</sup> Cs	6.9E-03 $\pm$ 2.9E-02	U
	<sup>137</sup> Cs	-1.3E-02 $\pm$ 4.2E-02	U		<sup>137</sup> Cs	9.8E-05 $\pm$ 9.8E-04	U
	<sup>152</sup> Eu	6.2E-02 $\pm$ 1.1E-01	U		<sup>152</sup> Eu	-8.6E-02 $\pm$ 8.6E-02	U
	<sup>154</sup> Eu	5.4E-02 $\pm$ 1.3E-01	U		<sup>154</sup> Eu	-2.0E-02 $\pm$ 7.1E-02	U
	<sup>155</sup> Eu	-9.5E-02 $\pm$ 1.3E-01	U		<sup>155</sup> Eu	-4.5E-02 $\pm$ 9.9E-02	U
	<sup>238</sup> Pu	-2.9E-03 $\pm$ 1.4E-02	U		<sup>238</sup> Pu	7.3E-03 $\pm$ 1.5E-02	U
	<sup>239/240</sup> Pu	1.9E-03 $\pm$ 4.7E-03	U		<sup>239/240</sup> Pu	9.1E-04 $\pm$ 9.1E-03	U
	<sup>103</sup> Ru	-3.3E-02 $\pm$ 4.0E-02	U		<sup>103</sup> Ru	-2.5E-02 $\pm$ 2.5E-02	U
	<sup>106</sup> Ru	-7.3E-02 $\pm$ 3.9E-01	U		<sup>106</sup> Ru	-1.0E-01 $\pm$ 2.8E-01	U
	<sup>125</sup> Sb	4.8E-02 $\pm$ 1.0E-01	U		<sup>125</sup> Sb	2.1E-03 $\pm$ 2.1E-02	U
	<sup>113</sup> Sn	-7.7E-04 $\pm$ 7.7E-03	U		<sup>113</sup> Sn	-1.3E-02 $\pm$ 3.1E-02	U
	<sup>90</sup> Sr	-5.2E-02 $\pm$ 8.8E-02	U		<sup>90</sup> Sr	-1.9E-01 $\pm$ 1.9E-01	U
	<sup>234</sup> U	4.9E-03 $\pm$ 5.9E-03	U		<sup>234</sup> U	2.6E-03 $\pm$ 3.9E-03	U
	<sup>235</sup> U	2.7E-03 $\pm$ 3.2E-03			<sup>235</sup> U	6.5E-03 $\pm$ 5.2E-03	
	<sup>238</sup> U	5.8E-03 $\pm$ 4.6E-03			<sup>238</sup> U	8.5E-04 $\pm$ 3.0E-03	U
	<sup>65</sup> Zn	-1.1E-01 $\pm$ 1.1E-01	U		<sup>65</sup> Zn	-2.5E-02 $\pm$ 5.3E-02	U
V098 (600 Area)	<sup>144</sup> Ce	2.9E-01 $\pm$ 4.8E-01	U	V100 (600 Area)	<sup>144</sup> Ce	2.1E-01 $\pm$ 4.6E-01	U
	<sup>60</sup> Co	3.6E-03 $\pm$ 3.6E-02	U		<sup>60</sup> Co	-2.3E-02 $\pm$ 3.7E-02	U
	<sup>134</sup> Cs	-9.8E-03 $\pm$ 3.8E-02	U		<sup>134</sup> Cs	1.0E-03 $\pm$ 1.0E-02	U
	<sup>137</sup> Cs	1.9E-02 $\pm$ 3.8E-02	U		<sup>137</sup> Cs	-2.1E-02 $\pm$ 3.3E-02	U
	<sup>152</sup> Eu	-5.0E-02 $\pm$ 1.1E-01	U		<sup>152</sup> Eu	-1.9E-02 $\pm$ 9.1E-02	U
	<sup>154</sup> Eu	-8.6E-02 $\pm$ 1.1E-01	U		<sup>154</sup> Eu	-2.4E-02 $\pm$ 1.3E-01	U
	<sup>155</sup> Eu	8.6E-03 $\pm$ 8.6E-02	U		<sup>155</sup> Eu	-1.0E-01 $\pm$ 1.3E-01	U
	<sup>238</sup> Pu	8.6E-03 $\pm$ 1.5E-02	U		<sup>238</sup> Pu	8.8E-03 $\pm$ 1.9E-02	U
	<sup>239/240</sup> Pu	9.5E-04 $\pm$ 9.5E-03	U		<sup>239/240</sup> Pu	-3.9E-03 $\pm$ 3.9E-03	U
	<sup>103</sup> Ru	-1.2E-02 $\pm$ 3.7E-02	U		<sup>103</sup> Ru	1.2E-02 $\pm$ 3.1E-02	U
	<sup>106</sup> Ru	2.0E-01 $\pm$ 3.2E-01	U		<sup>106</sup> Ru	-2.3E-01 $\pm$ 2.8E-01	U
	<sup>125</sup> Sb	1.7E-02 $\pm$ 1.0E-01	U		<sup>125</sup> Sb	-1.6E-03 $\pm$ 1.6E-02	U
	<sup>113</sup> Sn	-2.3E-02 $\pm$ 4.7E-02	U		<sup>113</sup> Sn	-4.0E-02 $\pm$ 4.0E-02	U
	<sup>90</sup> Sr	-4.8E-02 $\pm$ 9.1E-02	U		<sup>90</sup> Sr	-3.2E-02 $\pm$ 8.5E-02	U
	<sup>234</sup> U	6.0E-03 $\pm$ 4.8E-03			<sup>234</sup> U	9.8E-03 $\pm$ 7.7E-03	
	<sup>235</sup> U	9.4E-04 $\pm$ 3.3E-03	U		<sup>235</sup> U	2.0E-03 $\pm$ 4.0E-03	U
	<sup>238</sup> U	2.6E-03 $\pm$ 3.1E-03			<sup>238</sup> U	2.7E-03 $\pm$ 4.9E-03	U
	<sup>65</sup> Zn	-1.5E-01 $\pm$ 1.5E-01	U		<sup>65</sup> Zn	-2.7E-01 $\pm$ 2.7E-01	U

RQ = Result Qualifier. U = The analyte was analyzed for but not detected.

Table 3-7. 2004 Vegetation Sampling Results (pCi/g  $\pm$  total analytical uncertainty).  
(18 sheets total)

Location	Isotope	Result $\pm$ Error	RQ*	Location	Isotope	Result $\pm$ Error	RQ*
V102 (600 Area)	<sup>144</sup> Ce	2.7E-01 $\pm$ 4.1E-01	U	V104 (600 Area)	<sup>144</sup> Ce	3.4E-01 $\pm$ 5.3E-01	U
	<sup>60</sup> Co	2.4E-03 $\pm$ 2.4E-02	U		<sup>60</sup> Co	-5.2E-02 $\pm$ 5.7E-02	U
	<sup>134</sup> Cs	-8.9E-04 $\pm$ 8.9E-03	U		<sup>134</sup> Cs	-1.3E-02 $\pm$ 6.6E-02	U
	<sup>137</sup> Cs	4.7E-02 $\pm$ 3.9E-02	U		<sup>137</sup> Cs	4.4E-02 $\pm$ 5.5E-02	U
	<sup>152</sup> Eu	8.2E-02 $\pm$ 9.4E-02	U		<sup>152</sup> Eu	-4.2E-03 $\pm$ 4.2E-02	U
	<sup>154</sup> Eu	-1.1E-01 $\pm$ 1.1E-01	U		<sup>154</sup> Eu	1.3E-01 $\pm$ 1.9E-01	U
	<sup>155</sup> Eu	-1.4E-02 $\pm$ 9.8E-02	U		<sup>155</sup> Eu	-5.5E-02 $\pm$ 1.5E-01	U
	<sup>238</sup> Pu	-5.1E-03 $\pm$ 1.9E-02	U		<sup>238</sup> Pu	-3.1E-03 $\pm$ 1.5E-02	U
	<sup>239/240</sup> Pu	1.3E-02 $\pm$ 7.9E-03			<sup>239/240</sup> Pu	4.2E-03 $\pm$ 4.2E-03	
	<sup>103</sup> Ru	1.6E-02 $\pm$ 2.7E-02	U		<sup>103</sup> Ru	9.0E-03 $\pm$ 4.4E-02	U
	<sup>106</sup> Ru	-6.0E-02 $\pm$ 3.3E-01	U		<sup>106</sup> Ru	-2.9E-01 $\pm$ 4.4E-01	U
	<sup>125</sup> Sb	-3.4E-02 $\pm$ 7.6E-02	U		<sup>125</sup> Sb	-3.9E-02 $\pm$ 1.2E-01	U
	<sup>113</sup> Sn	2.2E-03 $\pm$ 2.2E-02	U		<sup>113</sup> Sn	-1.1E-02 $\pm$ 5.3E-02	U
	<sup>90</sup> Sr	4.0E-03 $\pm$ 4.0E-02	U		<sup>90</sup> Sr	1.4E+00 $\pm$ 2.8E-01	
	<sup>234</sup> U	1.8E-02 $\pm$ 9.7E-03			<sup>234</sup> U	1.4E-02 $\pm$ 9.2E-03	
	<sup>235</sup> U	1.9E-03 $\pm$ 3.8E-03	U		<sup>235</sup> U	4.5E-03 $\pm$ 6.3E-03	U
	<sup>238</sup> U	1.0E-02 $\pm$ 6.7E-03			<sup>238</sup> U	7.2E-03 $\pm$ 5.8E-03	
	<sup>65</sup> Zn	-4.1E-02 $\pm$ 7.2E-02	U		<sup>65</sup> Zn	-1.6E-01 $\pm$ 1.6E-01	U
V106 (600 Area)	<sup>144</sup> Ce	-3.2E-02 $\pm$ 3.2E-01	U	V108 (600 Area)	<sup>144</sup> Ce	-2.6E-01 $\pm$ 5.7E-01	U
	<sup>60</sup> Co	2.1E-03 $\pm$ 2.1E-02	U		<sup>60</sup> Co	-2.0E-02 $\pm$ 4.2E-02	U
	<sup>134</sup> Cs	-6.1E-03 $\pm$ 3.8E-02	U		<sup>134</sup> Cs	8.4E-03 $\pm$ 4.2E-02	U
	<sup>137</sup> Cs	4.2E-04 $\pm$ 4.2E-03	U		<sup>137</sup> Cs	9.4E-02 $\pm$ 6.4E-02	
	<sup>152</sup> Eu	4.4E-02 $\pm$ 1.1E-01	U		<sup>152</sup> Eu	-2.1E-02 $\pm$ 1.2E-01	U
	<sup>154</sup> Eu	-6.9E-02 $\pm$ 1.1E-01	U		<sup>154</sup> Eu	5.9E-02 $\pm$ 1.3E-01	U
	<sup>155</sup> Eu	1.2E-01 $\pm$ 1.2E-01	U		<sup>155</sup> Eu	4.4E-02 $\pm$ 1.5E-01	U
	<sup>238</sup> Pu	-1.0E-03 $\pm$ 1.0E-02	U		<sup>238</sup> Pu	9.4E-04 $\pm$ 9.4E-03	U
	<sup>239/240</sup> Pu	3.1E-03 $\pm$ 5.6E-03	U		<sup>239/240</sup> Pu	1.3E-02 $\pm$ 7.7E-03	
	<sup>103</sup> Ru	2.8E-02 $\pm$ 3.3E-02	U		<sup>103</sup> Ru	-4.2E-03 $\pm$ 4.2E-02	U
	<sup>106</sup> Ru	-1.0E-01 $\pm$ 3.2E-01	U		<sup>106</sup> Ru	6.1E-02 $\pm$ 3.9E-01	U
	<sup>125</sup> Sb	-3.8E-02 $\pm$ 9.0E-02	U		<sup>125</sup> Sb	2.7E-02 $\pm$ 1.2E-01	U
	<sup>113</sup> Sn	-1.6E-02 $\pm$ 4.2E-02	U		<sup>113</sup> Sn	-1.8E-02 $\pm$ 5.1E-02	U
	<sup>90</sup> Sr	-9.6E-02 $\pm$ 1.2E-01	U		<sup>90</sup> Sr	-4.6E-02 $\pm$ 8.7E-02	U
	<sup>234</sup> U	1.1E-02 $\pm$ 8.2E-03			<sup>234</sup> U	1.6E-02 $\pm$ 8.6E-03	
	<sup>235</sup> U	4.0E-03 $\pm$ 4.0E-03			<sup>235</sup> U	3.8E-03 $\pm$ 3.8E-03	
	<sup>238</sup> U	8.2E-03 $\pm$ 5.8E-03			<sup>238</sup> U	7.9E-03 $\pm$ 5.6E-03	
	<sup>65</sup> Zn	-1.0E-01 $\pm$ 1.0E-01	U		<sup>65</sup> Zn	-9.7E-03 $\pm$ 9.7E-02	U

RQ = Result Qualifier. U = The analyte was analyzed for but not detected.

Table 3-7. 2004 Vegetation Sampling Results (pCi/g  $\pm$  total analytical uncertainty).  
(18 sheets total)

Location	Isotope	Result $\pm$ Error	RQ*	Location	Isotope	Result $\pm$ Error	RQ*
V110 (600 Area)	<sup>144</sup> Ce	-4.1E-02 $\pm$ 4.1E-01	U	V112 (Duplicate of V032, 200 West)	<sup>144</sup> Ce	1.5E-01 $\pm$ 5.8E-01	U
	<sup>60</sup> Co	5.3E-02 $\pm$ 5.4E-02			<sup>60</sup> Co	1.7E-02 $\pm$ 4.3E-02	U
	<sup>134</sup> Cs	-4.5E-02 $\pm$ 4.5E-02	U		<sup>134</sup> Cs	-1.8E-02 $\pm$ 4.1E-02	U
	<sup>137</sup> Cs	-2.2E-02 $\pm$ 3.0E-02	U		<sup>137</sup> Cs	1.3E-02 $\pm$ 4.4E-02	U
	<sup>152</sup> Eu	-5.5E-02 $\pm$ 1.0E-01	U		<sup>152</sup> Eu	-1.3E-03 $\pm$ 1.3E-02	U
	<sup>154</sup> Eu	-2.4E-02 $\pm$ 9.7E-02	U		<sup>154</sup> Eu	-5.6E-02 $\pm$ 1.2E-01	U
	<sup>155</sup> Eu	-4.6E-02 $\pm$ 1.2E-01	U		<sup>155</sup> Eu	-1.6E-01 $\pm$ 1.6E-01	U
	<sup>238</sup> Pu	9.6E-03 $\pm$ 1.9E-02	U		<sup>238</sup> Pu	1.2E-02 $\pm$ 1.6E-02	U
	<sup>239/240</sup> Pu	-4.3E-03 $\pm$ 4.3E-03	U		<sup>239/240</sup> Pu	7.4E-03 $\pm$ 7.2E-03	U
	<sup>103</sup> Ru	7.3E-03 $\pm$ 2.8E-02	U		<sup>103</sup> Ru	2.4E-02 $\pm$ 4.1E-02	U
	<sup>106</sup> Ru	-9.7E-02 $\pm$ 2.9E-01	U		<sup>106</sup> Ru	-1.0E-01 $\pm$ 3.7E-01	U
	<sup>125</sup> Sb	-1.7E-02 $\pm$ 8.1E-02	U		<sup>125</sup> Sb	-1.1E-02 $\pm$ 1.1E-01	U
	<sup>113</sup> Sn	2.3E-02 $\pm$ 3.6E-02	U		<sup>113</sup> Sn	-2.4E-02 $\pm$ 5.6E-02	U
	<sup>90</sup> Sr	-1.7E-03 $\pm$ 1.7E-02	U		<sup>90</sup> Sr	-1.6E-02 $\pm$ 1.2E-01	U
	<sup>234</sup> U	7.9E-03 $\pm$ 7.1E-03	U		<sup>234</sup> U	1.2E-02 $\pm$ 8.3E-03	
	<sup>235</sup> U	2.9E-03 $\pm$ 4.4E-03	U		<sup>235</sup> U	9.0E-04 $\pm$ 4.0E-03	U
	<sup>238</sup> U	1.8E-03 $\pm$ 5.0E-03	U		<sup>238</sup> U	5.0E-03 $\pm$ 4.3E-03	
	<sup>65</sup> Zn	-1.3E-01 $\pm$ 1.3E-01	U		<sup>65</sup> Zn	-3.8E-01 $\pm$ 3.8E-01	U
V114 (Duplicate of V096, 600 Area)	<sup>144</sup> Ce	1.2E-01 $\pm$ 5.8E-01	U	V116 (300 Area)	<sup>144</sup> Ce	3.0E-02 $\pm$ 3.0E-01	U
	<sup>60</sup> Co	-4.1E-03 $\pm$ 4.1E-02	U		<sup>60</sup> Co	-4.4E-02 $\pm$ 4.4E-02	U
	<sup>134</sup> Cs	1.3E-04 $\pm$ 1.3E-03	U		<sup>134</sup> Cs	7.4E-03 $\pm$ 2.8E-02	U
	<sup>137</sup> Cs	-6.6E-05 $\pm$ 6.6E-04	U		<sup>137</sup> Cs	-2.5E-03 $\pm$ 2.5E-02	U
	<sup>152</sup> Eu	-2.7E-03 $\pm$ 2.7E-02	U		<sup>152</sup> Eu	-7.6E-02 $\pm$ 8.7E-02	U
	<sup>154</sup> Eu	1.2E-01 $\pm$ 1.5E-01	U		<sup>154</sup> Eu	-3.4E-02 $\pm$ 8.8E-02	U
	<sup>155</sup> Eu	-4.3E-03 $\pm$ 4.3E-02	U		<sup>155</sup> Eu	6.7E-02 $\pm$ 9.6E-02	U
	<sup>238</sup> Pu	-5.2E-03 $\pm$ 1.1E-02	U		<sup>238</sup> Pu	-4.8E-03 $\pm$ 1.6E-02	U
	<sup>239/240</sup> Pu	1.0E-03 $\pm$ 3.5E-03	U		<sup>239/240</sup> Pu	-3.8E-03 $\pm$ 3.8E-03	U
	<sup>103</sup> Ru	2.7E-02 $\pm$ 5.1E-02	U		<sup>103</sup> Ru	-1.5E-02 $\pm$ 3.0E-02	U
	<sup>106</sup> Ru	3.4E-01 $\pm$ 4.8E-01	U		<sup>106</sup> Ru	2.0E-01 $\pm$ 2.5E-01	U
	<sup>125</sup> Sb	-9.8E-02 $\pm$ 1.4E-01	U		<sup>125</sup> Sb	-2.3E-02 $\pm$ 7.8E-02	U
	<sup>113</sup> Sn	-1.5E-02 $\pm$ 5.8E-02	U		<sup>113</sup> Sn	6.2E-03 $\pm$ 3.7E-02	U
	<sup>90</sup> Sr	-1.7E-01 $\pm$ 1.7E-01	U		<sup>90</sup> Sr	-1.1E-01 $\pm$ 1.1E-01	U
	<sup>234</sup> U	4.4E-03 $\pm$ 4.1E-03			<sup>234</sup> U	1.2E-02 $\pm$ 7.9E-03	
	<sup>235</sup> U	2.9E-03 $\pm$ 3.5E-03			<sup>235</sup> U	9.6E-04 $\pm$ 4.3E-03	U
	<sup>238</sup> U	2.6E-03 $\pm$ 3.9E-03	U		<sup>238</sup> U	7.0E-03 $\pm$ 5.2E-03	
	<sup>65</sup> Zn	-1.2E-01 $\pm$ 1.3E-01	U		<sup>65</sup> Zn	6.1E-02 $\pm$ 7.5E-02	U

RQ = Result Qualifier. U = The analyte was analyzed for but not detected.

Table 3-7. 2004 Vegetation Sampling Results (pCi/g  $\pm$  total analytical uncertainty).  
(18 sheets total)

Location	Isotope	Result $\pm$ Error	RQ*	Location	Isotope	Result $\pm$ Error	RQ*
V117 (300 Area)	<sup>144</sup> Ce	2.6E-01 $\pm$ 3.5E-01	U	V119 (300 Area)	<sup>144</sup> Ce	3.2E-02 $\pm$ 3.2E-01	U
	<sup>60</sup> Co	-1.6E-03 $\pm$ 1.6E-02	U		<sup>60</sup> Co	6.7E-03 $\pm$ 2.7E-02	U
	<sup>134</sup> Cs	2.1E-02 $\pm$ 2.7E-02	U		<sup>134</sup> Cs	1.0E-03 $\pm$ 1.0E-02	U
	<sup>137</sup> Cs	-6.5E-04 $\pm$ 6.5E-03	U		<sup>137</sup> Cs	-2.8E-02 $\pm$ 2.9E-02	U
	<sup>152</sup> Eu	3.7E-02 $\pm$ 8.1E-02	U		<sup>152</sup> Eu	-1.9E-02 $\pm$ 8.4E-02	U
	<sup>154</sup> Eu	3.7E-03 $\pm$ 3.7E-02	U		<sup>154</sup> Eu	-1.1E-01 $\pm$ 1.1E-01	U
	<sup>155</sup> Eu	-2.7E-02 $\pm$ 8.4E-02	U		<sup>155</sup> Eu	-2.1E-02 $\pm$ 9.3E-02	U
	<sup>238</sup> Pu	-6.8E-03 $\pm$ 1.6E-02	U		<sup>238</sup> Pu	-1.0E-02 $\pm$ 1.4E-02	U
	<sup>239/240</sup> Pu	9.7E-06 $\pm$ 9.7E-06	U		<sup>239/240</sup> Pu	3.7E-03 $\pm$ 5.9E-03	U
	<sup>103</sup> Ru	-1.3E-03 $\pm$ 1.3E-02	U		<sup>103</sup> Ru	8.8E-03 $\pm$ 3.1E-02	U
	<sup>106</sup> Ru	7.8E-02 $\pm$ 2.3E-01	U		<sup>106</sup> Ru	7.6E-03 $\pm$ 7.6E-02	U
	<sup>125</sup> Sb	-6.5E-03 $\pm$ 6.5E-02	U		<sup>125</sup> Sb	5.9E-04 $\pm$ 5.9E-03	U
	<sup>113</sup> Sn	-1.3E-02 $\pm$ 3.3E-02	U		<sup>113</sup> Sn	-1.1E-02 $\pm$ 3.9E-02	U
	<sup>90</sup> Sr	-8.3E-02 $\pm$ 9.5E-02	U		<sup>90</sup> Sr	-8.6E-02 $\pm$ 1.1E-01	U
	<sup>234</sup> U	2.8E-02 $\pm$ 1.2E-02			<sup>234</sup> U	1.8E-01 $\pm$ 5.4E-02	
	<sup>235</sup> U	4.0E-03 $\pm$ 4.0E-03			<sup>235</sup> U	1.3E-02 $\pm$ 8.2E-03	
	<sup>238</sup> U	2.2E-02 $\pm$ 1.1E-02			<sup>238</sup> U	1.5E-01 $\pm$ 4.5E-02	
	<sup>65</sup> Zn	4.2E-02 $\pm$ 6.6E-02	U		<sup>65</sup> Zn	-1.2E-02 $\pm$ 7.8E-02	U
V121 (300 Area)	<sup>144</sup> Ce	-1.4E-02 $\pm$ 1.4E-01	U	V123 (300 Area)	<sup>144</sup> Ce	1.0E-01 $\pm$ 4.7E-01	U
	<sup>60</sup> Co	-2.2E-02 $\pm$ 3.1E-02	U		<sup>60</sup> Co	-1.0E-02 $\pm$ 3.4E-02	U
	<sup>134</sup> Cs	7.7E-03 $\pm$ 3.1E-02	U		<sup>134</sup> Cs	4.4E-03 $\pm$ 3.6E-02	U
	<sup>137</sup> Cs	4.8E-03 $\pm$ 3.6E-02	U		<sup>137</sup> Cs	-3.9E-03 $\pm$ 3.6E-02	U
	<sup>152</sup> Eu	-5.6E-02 $\pm$ 9.9E-02	U		<sup>152</sup> Eu	4.6E-02 $\pm$ 1.0E-01	U
	<sup>154</sup> Eu	-6.9E-02 $\pm$ 9.3E-02	U		<sup>154</sup> Eu	5.7E-02 $\pm$ 1.1E-01	U
	<sup>155</sup> Eu	5.2E-02 $\pm$ 1.1E-01	U		<sup>155</sup> Eu	3.8E-02 $\pm$ 1.2E-01	U
	<sup>238</sup> Pu	-1.3E-02 $\pm$ 1.7E-02	U		<sup>238</sup> Pu	-9.8E-04 $\pm$ 9.8E-03	U
	<sup>239/240</sup> Pu	1.1E-03 $\pm$ 3.8E-03	U		<sup>239/240</sup> Pu	3.9E-03 $\pm$ 3.9E-03	
	<sup>103</sup> Ru	-4.9E-05 $\pm$ 4.9E-04	U		<sup>103</sup> Ru	2.8E-02 $\pm$ 3.7E-02	U
	<sup>106</sup> Ru	2.7E-01 $\pm$ 2.8E-01	U		<sup>106</sup> Ru	3.4E-01 $\pm$ 3.2E-01	U
	<sup>125</sup> Sb	-4.1E-04 $\pm$ 4.1E-03	U		<sup>125</sup> Sb	3.3E-02 $\pm$ 9.3E-02	U
	<sup>113</sup> Sn	-9.6E-03 $\pm$ 4.4E-02	U		<sup>113</sup> Sn	-3.4E-02 $\pm$ 4.9E-02	U
	<sup>90</sup> Sr	-9.4E-02 $\pm$ 1.2E-01	U		<sup>90</sup> Sr	-1.8E-01 $\pm$ 1.8E-01	U
	<sup>234</sup> U	6.3E-02 $\pm$ 2.3E-02			<sup>234</sup> U	6.5E-03 $\pm$ 6.4E-03	U
	<sup>235</sup> U	9.5E-03 $\pm$ 7.4E-03			<sup>235</sup> U	4.0E-03 $\pm$ 5.6E-03	U
	<sup>238</sup> U	5.2E-02 $\pm$ 1.9E-02			<sup>238</sup> U	5.6E-03 $\pm$ 4.8E-03	
	<sup>65</sup> Zn	6.5E-03 $\pm$ 6.5E-02	U		<sup>65</sup> Zn	-2.5E-03 $\pm$ 2.5E-02	U

RQ = Result Qualifier. U = The analyte was analyzed for but not detected.

Table 3-7. 2004 Vegetation Sampling Results (pCi/g  $\pm$  total analytical uncertainty).  
(18 sheets total)

Location	Isotope	Result $\pm$ Error	RQ*	Location	Isotope	Result $\pm$ Error	RQ*
V124 (300 Area)	<sup>144</sup> Ce	-9.1E-02 $\pm$ 3.4E-01	U	V125 (300 Area)	<sup>144</sup> Ce	-1.5E-01 $\pm$ 4.8E-01	U
	<sup>60</sup> Co	-3.0E-04 $\pm$ 3.0E-03	U		<sup>60</sup> Co	2.2E-03 $\pm$ 2.2E-02	U
	<sup>134</sup> Cs	-2.9E-02 $\pm$ 2.9E-02	U		<sup>134</sup> Cs	1.2E-02 $\pm$ 3.6E-02	U
	<sup>137</sup> Cs	-2.6E-02 $\pm$ 2.7E-02	U		<sup>137</sup> Cs	-1.3E-02 $\pm$ 3.8E-02	U
	<sup>152</sup> Eu	-2.7E-02 $\pm$ 7.4E-02	U		<sup>152</sup> Eu	-1.1E-02 $\pm$ 1.1E-01	U
	<sup>154</sup> Eu	-2.0E-02 $\pm$ 7.6E-02	U		<sup>154</sup> Eu	7.9E-02 $\pm$ 1.1E-01	U
	<sup>155</sup> Eu	2.6E-02 $\pm$ 8.2E-02	U		<sup>155</sup> Eu	-2.3E-02 $\pm$ 1.2E-01	U
	<sup>238</sup> Pu	3.1E-03 $\pm$ 1.1E-02	U		<sup>238</sup> Pu	8.3E-03 $\pm$ 1.5E-02	U
	<sup>239/240</sup> Pu	-2.1E-03 $\pm$ 2.9E-03	U		<sup>239/240</sup> Pu	-3.1E-03 $\pm$ 5.6E-03	U
	<sup>103</sup> Ru	4.6E-03 $\pm$ 2.4E-02	U		<sup>103</sup> Ru	-2.6E-02 $\pm$ 3.9E-02	U
	<sup>106</sup> Ru	-9.3E-02 $\pm$ 2.2E-01	U		<sup>106</sup> Ru	-2.0E-01 $\pm$ 3.1E-01	U
	<sup>125</sup> Sb	-6.0E-02 $\pm$ 7.2E-02	U		<sup>125</sup> Sb	4.5E-02 $\pm$ 9.7E-02	U
	<sup>113</sup> Sn	-2.6E-02 $\pm$ 3.5E-02	U		<sup>113</sup> Sn	-1.7E-02 $\pm$ 5.1E-02	U
	<sup>90</sup> Sr	-1.5E-01 $\pm$ 1.5E-01	U		<sup>90</sup> Sr	-1.0E-01 $\pm$ 1.0E-01	U
	<sup>234</sup> U	2.0E-02 $\pm$ 1.0E-02			<sup>234</sup> U	1.8E-02 $\pm$ 1.1E-02	
	<sup>235</sup> U	3.4E-03 $\pm$ 6.1E-03	U		<sup>235</sup> U	5.0E-03 $\pm$ 5.5E-03	U
	<sup>238</sup> U	1.0E-02 $\pm$ 8.4E-03	U		<sup>238</sup> U	2.6E-02 $\pm$ 1.2E-02	
	<sup>65</sup> Zn	-6.3E-02 $\pm$ 7.7E-02	U		<sup>65</sup> Zn	-3.5E-02 $\pm$ 1.0E-01	U
V126 (300 Area)	<sup>144</sup> Ce	-4.1E-01 $\pm$ 4.4E-01	U	V127 (300 Area)	<sup>144</sup> Ce	-1.4E+00 $\pm$ 1.4E+00	U
	<sup>60</sup> Co	-1.3E-03 $\pm$ 1.3E-02	U		<sup>60</sup> Co	-3.0E-02 $\pm$ 5.1E-02	U
	<sup>134</sup> Cs	-5.0E-03 $\pm$ 4.1E-02	U		<sup>134</sup> Cs	-2.4E-02 $\pm$ 5.4E-02	U
	<sup>137</sup> Cs	1.7E-02 $\pm$ 3.9E-02	U		<sup>137</sup> Cs	1.3E-02 $\pm$ 5.2E-02	U
	<sup>152</sup> Eu	-1.7E-02 $\pm$ 9.7E-02	U		<sup>152</sup> Eu	-2.3E-02 $\pm$ 1.5E-01	U
	<sup>154</sup> Eu	-2.1E-02 $\pm$ 1.2E-01	U		<sup>154</sup> Eu	4.7E-04 $\pm$ 4.7E-03	U
	<sup>155</sup> Eu	-8.2E-02 $\pm$ 1.4E-01	U		<sup>155</sup> Eu	-9.2E-02 $\pm$ 2.0E-01	U
	<sup>238</sup> Pu	-3.2E-03 $\pm$ 1.4E-02	U		<sup>238</sup> Pu	6.2E-03 $\pm$ 1.2E-02	U
	<sup>239/240</sup> Pu	4.2E-03 $\pm$ 4.2E-03			<sup>239/240</sup> Pu	5.1E-03 $\pm$ 5.6E-03	U
	<sup>103</sup> Ru	-1.6E-02 $\pm$ 3.7E-02	U		<sup>103</sup> Ru	4.2E-03 $\pm$ 4.2E-02	U
	<sup>106</sup> Ru	-1.6E-02 $\pm$ 1.6E-01	U		<sup>106</sup> Ru	1.7E-01 $\pm$ 4.6E-01	U
	<sup>125</sup> Sb	-5.8E-02 $\pm$ 9.4E-02	U		<sup>125</sup> Sb	2.1E-02 $\pm$ 1.4E-01	U
	<sup>113</sup> Sn	-3.9E-02 $\pm$ 4.3E-02	U		<sup>113</sup> Sn	-4.2E-02 $\pm$ 6.5E-02	U
	<sup>90</sup> Sr	-3.2E-02 $\pm$ 9.0E-02	U		<sup>90</sup> Sr	-1.4E-01 $\pm$ 1.4E-01	U
	<sup>234</sup> U	2.5E-02 $\pm$ 1.2E-02			<sup>234</sup> U	3.6E-03 $\pm$ 4.3E-03	
	<sup>235</sup> U	6.1E-03 $\pm$ 5.2E-03			<sup>235</sup> U	2.6E-03 $\pm$ 5.2E-03	U
	<sup>238</sup> U	1.6E-02 $\pm$ 9.1E-03			<sup>238</sup> U	5.9E-03 $\pm$ 5.5E-03	
	<sup>65</sup> Zn	-3.1E-02 $\pm$ 8.8E-02	U		<sup>65</sup> Zn	4.8E-02 $\pm$ 1.2E-01	U

RQ = Result Qualifier. U = The analyte was analyzed for but not detected.

Table 3-7. 2004 Vegetation Sampling Results (pCi/g  $\pm$  total analytical uncertainty).  
(18 sheets total)

Location	Isotope	Result $\pm$ Error	RQ*	Location	Isotope	Result $\pm$ Error	RQ*
V128 (300 Area)	<sup>144</sup> Ce	-3.2E-01 $\pm$ 6.4E-01	U	V129 (300 Area)	<sup>144</sup> Ce	-2.8E-01 $\pm$ 4.6E-01	U
	<sup>60</sup> Co	-1.9E-02 $\pm$ 5.1E-02	U		<sup>60</sup> Co	7.7E-03 $\pm$ 3.6E-02	U
	<sup>134</sup> Cs	-1.0E-02 $\pm$ 5.6E-02	U		<sup>134</sup> Cs	-2.2E-02 $\pm$ 3.5E-02	U
	<sup>137</sup> Cs	1.9E-02 $\pm$ 5.4E-02	U		<sup>137</sup> Cs	-1.9E-03 $\pm$ 1.9E-02	U
	<sup>152</sup> Eu	-1.6E-02 $\pm$ 1.5E-01	U		<sup>152</sup> Eu	-9.9E-03 $\pm$ 9.9E-02	U
	<sup>154</sup> Eu	-7.5E-02 $\pm$ 1.6E-01	U		<sup>154</sup> Eu	-6.6E-02 $\pm$ 1.2E-01	U
	<sup>155</sup> Eu	-3.6E-03 $\pm$ 3.6E-02	U		<sup>155</sup> Eu	5.4E-02 $\pm$ 1.2E-01	U
	<sup>238</sup> Pu	6.2E-03 $\pm$ 1.2E-02	U		<sup>238</sup> Pu	2.3E-02 $\pm$ 1.7E-02	U
	<sup>239/240</sup> Pu	1.0E-03 $\pm$ 1.0E-03	U		<sup>239/240</sup> Pu	5.3E-03 $\pm$ 5.8E-03	U
	<sup>103</sup> Ru	-1.4E-02 $\pm$ 5.4E-02	U		<sup>103</sup> Ru	6.6E-03 $\pm$ 3.4E-02	U
	<sup>106</sup> Ru	-3.2E-02 $\pm$ 3.2E-01	U		<sup>106</sup> Ru	-4.3E-02 $\pm$ 3.2E-01	U
	<sup>125</sup> Sb	7.1E-02 $\pm$ 1.5E-01	U		<sup>125</sup> Sb	-6.1E-02 $\pm$ 9.4E-02	U
	<sup>113</sup> Sn	-1.2E-02 $\pm$ 6.8E-02	U		<sup>113</sup> Sn	2.5E-02 $\pm$ 4.3E-02	U
	<sup>90</sup> Sr	3.7E-02 $\pm$ 9.7E-02	U		<sup>90</sup> Sr	-1.1E-01 $\pm$ 1.1E-01	U
	<sup>234</sup> U	1.2E-02 $\pm$ 1.1E-02	U		<sup>234</sup> U	1.0E-02 $\pm$ 7.5E-03	
	<sup>235</sup> U	8.5E-03 $\pm$ 7.9E-03			<sup>235</sup> U	4.0E-03 $\pm$ 4.0E-03	
	<sup>238</sup> U	1.7E-02 $\pm$ 1.3E-02			<sup>238</sup> U	6.4E-03 $\pm$ 5.7E-03	U
	<sup>65</sup> Zn	-2.5E-01 $\pm$ 2.5E-01	U		<sup>65</sup> Zn	4.7E-02 $\pm$ 8.6E-02	U
V130 (400 Area)	<sup>144</sup> Ce	3.8E-02 $\pm$ 3.6E-01	U	V131 (Duplicate of V116, 300 Area)	<sup>144</sup> Ce	-1.6E-01 $\pm$ 3.0E-01	U
	<sup>60</sup> Co	-7.0E-03 $\pm$ 2.5E-02	U		<sup>60</sup> Co	5.7E-03 $\pm$ 2.3E-02	U
	<sup>134</sup> Cs	-3.3E-03 $\pm$ 2.7E-02	U		<sup>134</sup> Cs	1.0E-02 $\pm$ 2.3E-02	U
	<sup>137</sup> Cs	-5.8E-03 $\pm$ 2.9E-02	U		<sup>137</sup> Cs	2.4E-03 $\pm$ 2.4E-02	U
	<sup>152</sup> Eu	4.1E-02 $\pm$ 7.9E-02	U		<sup>152</sup> Eu	-7.4E-03 $\pm$ 6.4E-02	U
	<sup>154</sup> Eu	7.2E-02 $\pm$ 9.2E-02	U		<sup>154</sup> Eu	-3.6E-02 $\pm$ 7.2E-02	U
	<sup>155</sup> Eu	5.3E-03 $\pm$ 5.3E-02	U		<sup>155</sup> Eu	9.3E-03 $\pm$ 7.1E-02	U
	<sup>238</sup> Pu	5.1E-03 $\pm$ 1.5E-02	U		<sup>238</sup> Pu	2.0E-03 $\pm$ 7.6E-03	U
	<sup>239/240</sup> Pu	-1.0E-03 $\pm$ 2.0E-03	U		<sup>239/240</sup> Pu	1.0E-03 $\pm$ 4.5E-03	U
	<sup>103</sup> Ru	-8.0E-03 $\pm$ 2.6E-02	U		<sup>103</sup> Ru	1.6E-03 $\pm$ 1.6E-02	U
	<sup>106</sup> Ru	2.3E-01 $\pm$ 2.4E-01	U		<sup>106</sup> Ru	1.3E-01 $\pm$ 1.9E-01	U
	<sup>125</sup> Sb	-2.1E-02 $\pm$ 7.1E-02	U		<sup>125</sup> Sb	4.4E-02 $\pm$ 5.9E-02	U
	<sup>113</sup> Sn	2.3E-02 $\pm$ 3.6E-02	U		<sup>113</sup> Sn	1.2E-02 $\pm$ 3.1E-02	U
	<sup>90</sup> Sr	-7.8E-02 $\pm$ 1.1E-01	U		<sup>90</sup> Sr	9.0E-02 $\pm$ 1.2E-01	U
	<sup>234</sup> U	1.1E-02 $\pm$ 6.9E-03			<sup>234</sup> U	5.2E-02 $\pm$ 3.0E-02	
	<sup>235</sup> U	9.4E-04 $\pm$ 9.4E-03	U		<sup>235</sup> U	3.0E-02 $\pm$ 2.3E-02	
	<sup>238</sup> U	7.5E-03 $\pm$ 6.2E-03			<sup>238</sup> U	2.4E-02 $\pm$ 2.0E-02	
	<sup>65</sup> Zn	-6.7E-03 $\pm$ 6.7E-02	U		<sup>65</sup> Zn	3.5E-02 $\pm$ 6.4E-02	U

RQ = Result Qualifier. U = The analyte was analyzed for but not detected.



Table 3-7. 2004 Vegetation Sampling Results (pCi/g  $\pm$  total analytical uncertainty).  
(18 sheets total)

Location	Isotope	Result $\pm$ Error	RQ*
V132 (Duplicate of V123, 300 Area)	<sup>144</sup> Ce	1.8E-01 $\pm$ 5.3E-01	U
	<sup>60</sup> Co	4.1E-02 $\pm$ 4.4E-02	U
	<sup>134</sup> Cs	5.8E-03 $\pm$ 4.7E-02	U
	<sup>137</sup> Cs	-1.7E-02 $\pm$ 4.1E-02	U
	<sup>152</sup> Eu	3.3E-04 $\pm$ 3.3E-03	U
	<sup>154</sup> Eu	-1.1E-01 $\pm$ 1.5E-01	U
	<sup>155</sup> Eu	-5.4E-02 $\pm$ 1.5E-01	U
	<sup>238</sup> Pu	-2.1E-03 $\pm$ 8.0E-03	U
	<sup>239/240</sup> Pu	1.1E-03 $\pm$ 1.1E-03	U
	<sup>103</sup> Ru	-6.9E-03 $\pm$ 4.0E-02	U
	<sup>106</sup> Ru	-6.3E-02 $\pm$ 3.6E-01	U
	<sup>125</sup> Sb	6.7E-02 $\pm$ 1.0E-01	U
	<sup>113</sup> Sn	1.2E-02 $\pm$ 4.8E-02	U
	<sup>90</sup> Sr	-4.3E-02 $\pm$ 9.0E-02	U
	<sup>234</sup> U	1.5E-02 $\pm$ 9.1E-03	
	<sup>235</sup> U	4.2E-03 $\pm$ 4.2E-03	
	<sup>238</sup> U	4.8E-03 $\pm$ 5.3E-03	U
	<sup>65</sup> Zn	-5.0E-02 $\pm$ 1.1E-01	U

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RQ = Result Qualifier. U = The analyte was analyzed for but not detected.

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## 4.0 EXTERNAL RADIATION

External radiation fields were monitored near facilities and waste handling, storage, and disposal sites to measure and assess the impacts of operations. Thermoluminescent Dosimeter (TLD) results were used at numerous fixed locations to gather dose rate information over extended periods of time, typically three months.

In 2004, there were 135 TLD locations collecting external radiation information. At the 100-N Area, the dosimeter results showed a decrease of approximately 19% from 2003 levels. In the 100-K Area, and in the 200 East and 200 West Areas, there were significant increases in the annual average dose rate in 2004. All were attributable to the transfer and storage of radioactive materials associated with cleanup activities in the K Basins, the A Tank Farm and the S Tank Farm, respectively. At the remaining operational areas, the external radiation levels during 2004 were  $\pm 4\%$  compared to 2003 levels. The number of TLD locations and a summary comparing the 2003 and 2004 TLD results for each of the operational areas is provided in Table 4-1. Maps illustrating TLD locations in 2004 are provided in Figures 4-1 through 4-10. Individual TLD results for 2004 are provided in Table 4-2.

Table 4-1. TLD Results (mrem/yr  $\pm 2$  standard deviations) for 2003 and 2004.

Area	Number of Dosimeters, 2004	2003		2004		% Change <sup>c</sup>
		Maximum <sup>a</sup>	Mean <sup>b</sup>	Maximum <sup>a</sup>	Mean <sup>b</sup>	
100-B/C	4	88 $\pm$ 6	85 $\pm$ 5	88 $\pm$ 7	86 $\pm$ 5	<1%
100-K	11	523 $\pm$ 1060	162 $\pm$ 304	1,352 $\pm$ 3329	229 $\pm$ 748	41%
100-KR-1	5	103 $\pm$ 11	95 $\pm$ 15	104 $\pm$ 10	97 $\pm$ 15	2%
100-N	14	993 $\pm$ 71	261 $\pm$ 485	475 $\pm$ 76	210 $\pm$ 257	-19%
200-East Area	42	482 $\pm$ 225	118 $\pm$ 138	3,995 $\pm$ 11797	200 $\pm$ 1202	69%
200-West Area	24	189 $\pm$ 21	106 $\pm$ 52	3,032 $\pm$ 9915	225 $\pm$ 1196	112%
200-North (212-R)	1	3,400 $\pm$ 131	3,000 $\pm$ 570	3,047 $\pm$ 472	2,867 $\pm$ 295	-4%
300 Area	8	112 $\pm$ 2	92 $\pm$ 24	112 $\pm$ 12	92 $\pm$ 25	<1%
300 TEDF <sup>d</sup>	6	90 $\pm$ 12	85 $\pm$ 5	87 $\pm$ 5	85 $\pm$ 4	<1%
300-FF-2	6	Not Applicable: new for 2004		91 $\pm$ 40	87 $\pm$ 5	Not Applicable
400 Area	7	85 $\pm$ 7	81 $\pm$ 5	85 $\pm$ 6	83 $\pm$ 2	3%
CVDF <sup>e</sup>	4	82 $\pm$ 4	80 $\pm$ 6	258 $\pm$ 445	177 $\pm$ 175	122%
ERDF <sup>f</sup>	3	99 $\pm$ 11	94 $\pm$ 11	100 $\pm$ 22	95 $\pm$ 8	1%

<sup>a</sup>Maximum values are  $\pm$  analytical uncertainty

<sup>b</sup> $\pm 2$  standard deviations.

<sup>c</sup>Numbers indicate a decrease (-) or increase from the 2003 mean.

<sup>d</sup>TEDF = 300 Area Treated Effluent Disposal Facility.

<sup>e</sup>CVDF = Cold Vacuum Drying Facility (100-K Area).

<sup>f</sup>ERDF = Environmental Restoration Disposal Facility.

Noteworthy observations in dose rate monitoring during 2004 included the following:

- In the 100-K Area, compared to 2003, there was an overall 41% increase in the 2004 annual average dose rate. As with a similar increase observed during 2003, the 2004 increase was primarily due to elevated dose rates at two monitoring locations situated near radioactive materials transfer and storage areas; one location was near the 105-K East Area spent nuclear fuel storage load-out station and the other was near the 105-K West spent nuclear fuel

storage basin. Dose rates at the 105-K East Area location, which were elevated during the first half of the year as spent nuclear fuel was removed from the storage basin, decreased by year's end to a level slightly higher than typical site background levels. Dose rates at the 105-K West location, which had declined during the first quarter of the year from levels measured at the end of 2003, steadily decreased during the next two quarters of 2004 and then increased significantly during the fourth quarter when radioactive materials destined for disposal were temporarily stored in outdoor staging areas. The quarterly dose rate levels from these locations as compared to the 100-K Area dose rate average are shown in graph form in Figure 4-11.

- Dosimeter monitoring sites around the 100-K Area's Cold Vacuum Drying Facility showed a significant annual dose rate increase of 122% in 2004 compared to 2003. Dose rates at all four locations began increasing noticeably at mid-year when radioactive materials associated with cleanup activities in the K Basins began to be stored on the east side of the facility. As addition of these materials continued, dose rates at two monitoring locations situated on the east side of the facility continued to increase significantly during the last half of the year, while the levels observed at two locations on the west side showed a more moderate, though continual increase during the third and fourth quarters. The quarterly dose rate levels from the four dosimeter locations at the facility are shown in graph form in Figure 4-12.
- In the 100-N Area, direct radiation levels were again highest near the two retired facilities that contained or received liquid effluent from N Reactor. These facilities being the 116-N-1 (1301-N) and 116-N-3 (1325-N) liquid waste disposal facilities. Three of the five monitoring locations near the retired 116-N-1 continued to show dose rates noticeably higher than the overall average dose rates observed at the 100-N area. Two of these locations showed dose rate levels approximately 30% higher in 2004 than those measured in 2003. These increases may be ascribed to the removal and transfer of radioactively contaminated material from selected portions of the crib and trench soil columns in 2004. Figure 4-13 provides trend plots of quarterly dose rates from these three 116-N-1 monitoring locations. The 2004 annual average dose rate levels at the three monitoring locations at the 116-N-3 Facility (1325-N), although considerably higher than all other locations in the 100-N area, showed a decrease of approximately 35% from 2003 levels. This continued reduction in dose rates was directly attributable to source material removal activities that began in July 2000. Figure 4-14 provides trend plots of quarterly dose rates from these three 116-N-3 monitoring locations. Significantly reduced were the dose rates near the retired 1304-N Emergency Dump Tank, which was decontaminated and demolished during 2004. Average dose rates at the two nearby monitoring locations were approximately 50% lower in 2004 than they were in 2003.
- The highest dose rates in the 200 Areas were measured near waste handling facilities. One such location in the 200 East Area and another in the 200 West Area exhibited noticeably high dose rates during the second quarter of 2004. The 200 East Area location was at the A Tank Farm and the 200 West Area location was at the S Tank Farm. By year's end, dose rates at both locations returned to typical site background levels. The overall effect, primarily from these two elevated-dose rate locations, was that average dose rates measured in the 200 East and 200 West Areas in 2004 were, respectively, 69% and 112% higher than the 2003 average levels. Figure 4-15 provides trend plots of quarterly dose rate levels from these two monitoring locations as well as average dose rate levels for both the 200 East and 200 West Areas.

Figure 4-1. 100-B/C Area TLD Locations.

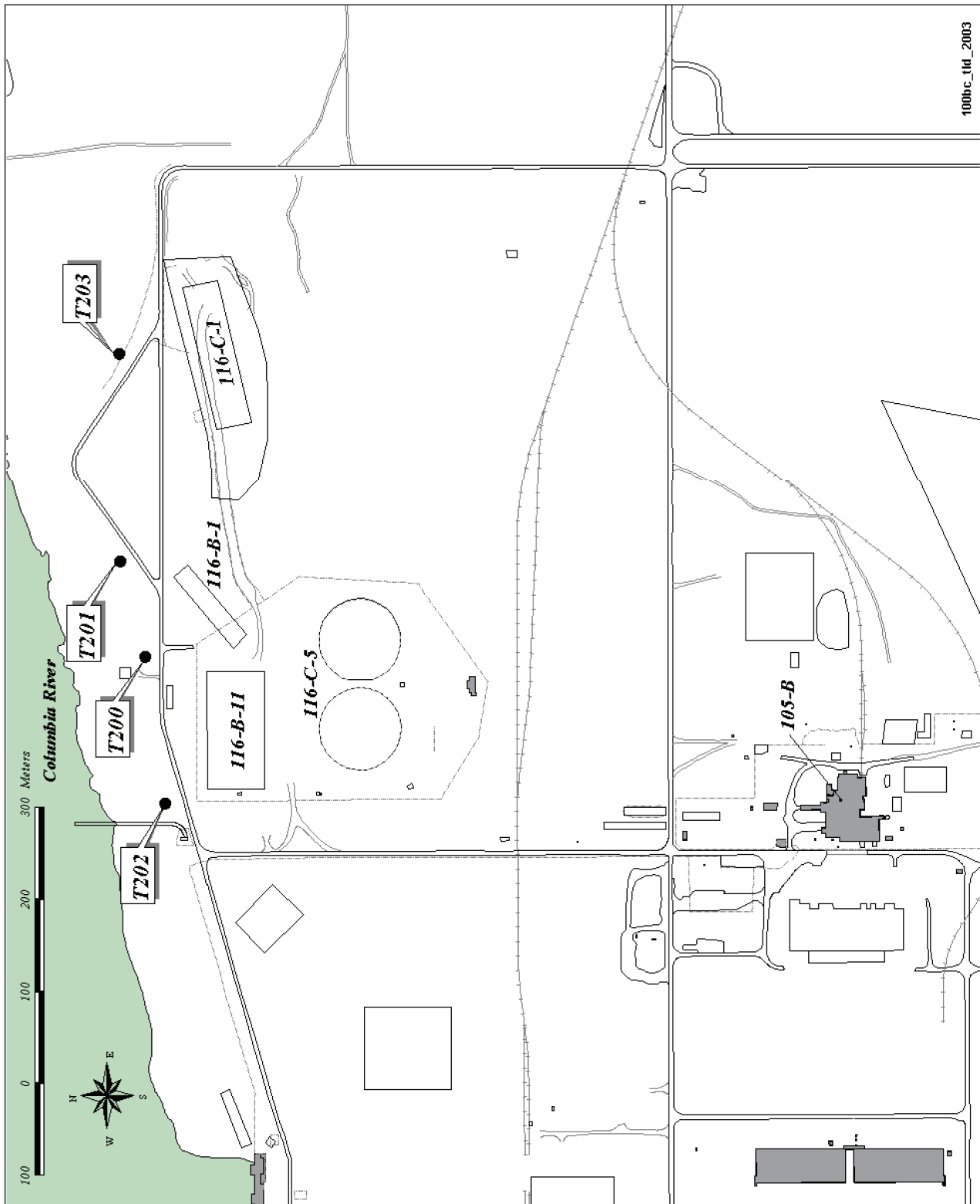


Figure 4-2. 100-K Area, Cold Vacuum Drying Facility and 100-KR-1 TLD Locations.

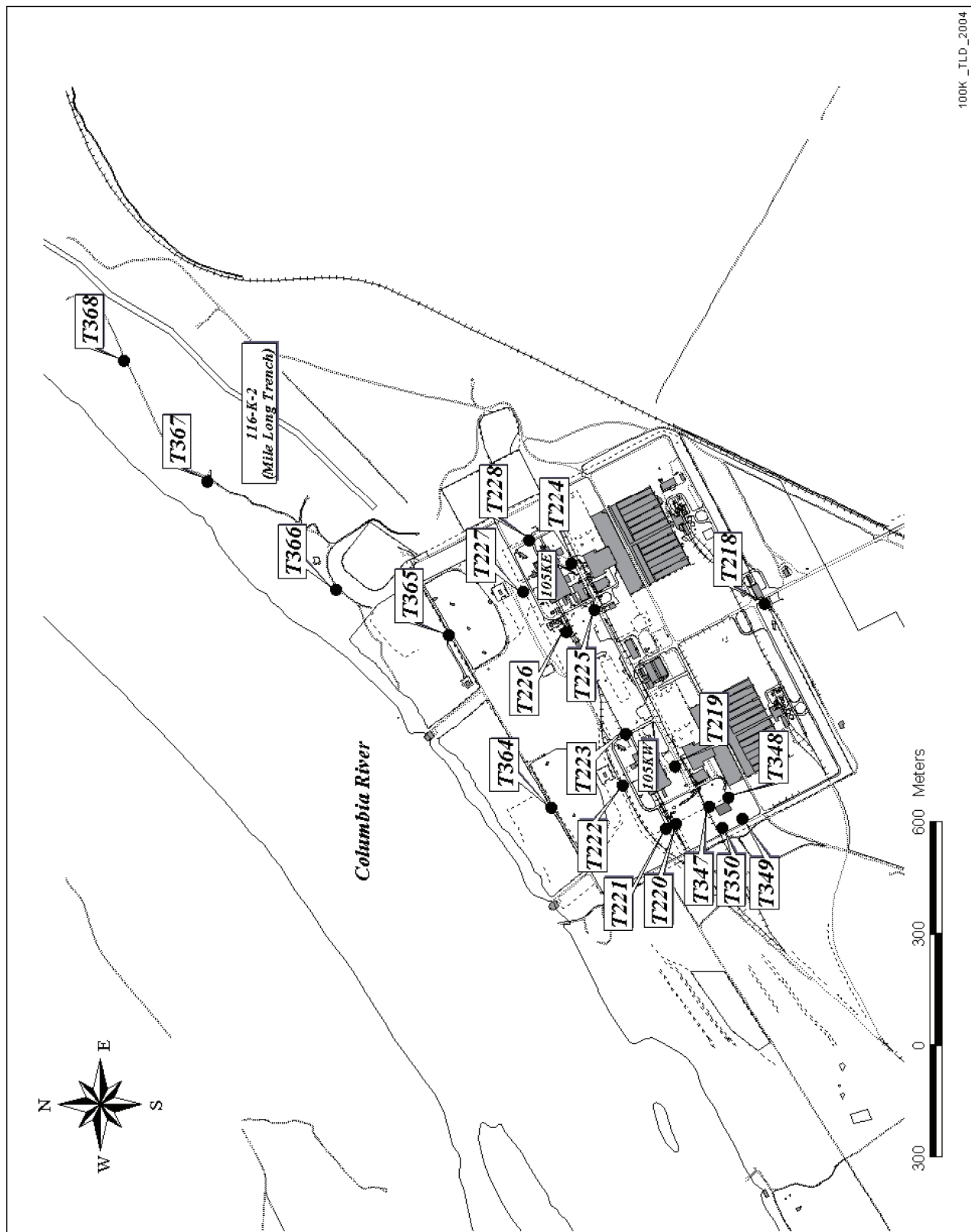


Figure 4-3. 100-N Area TLD Locations.

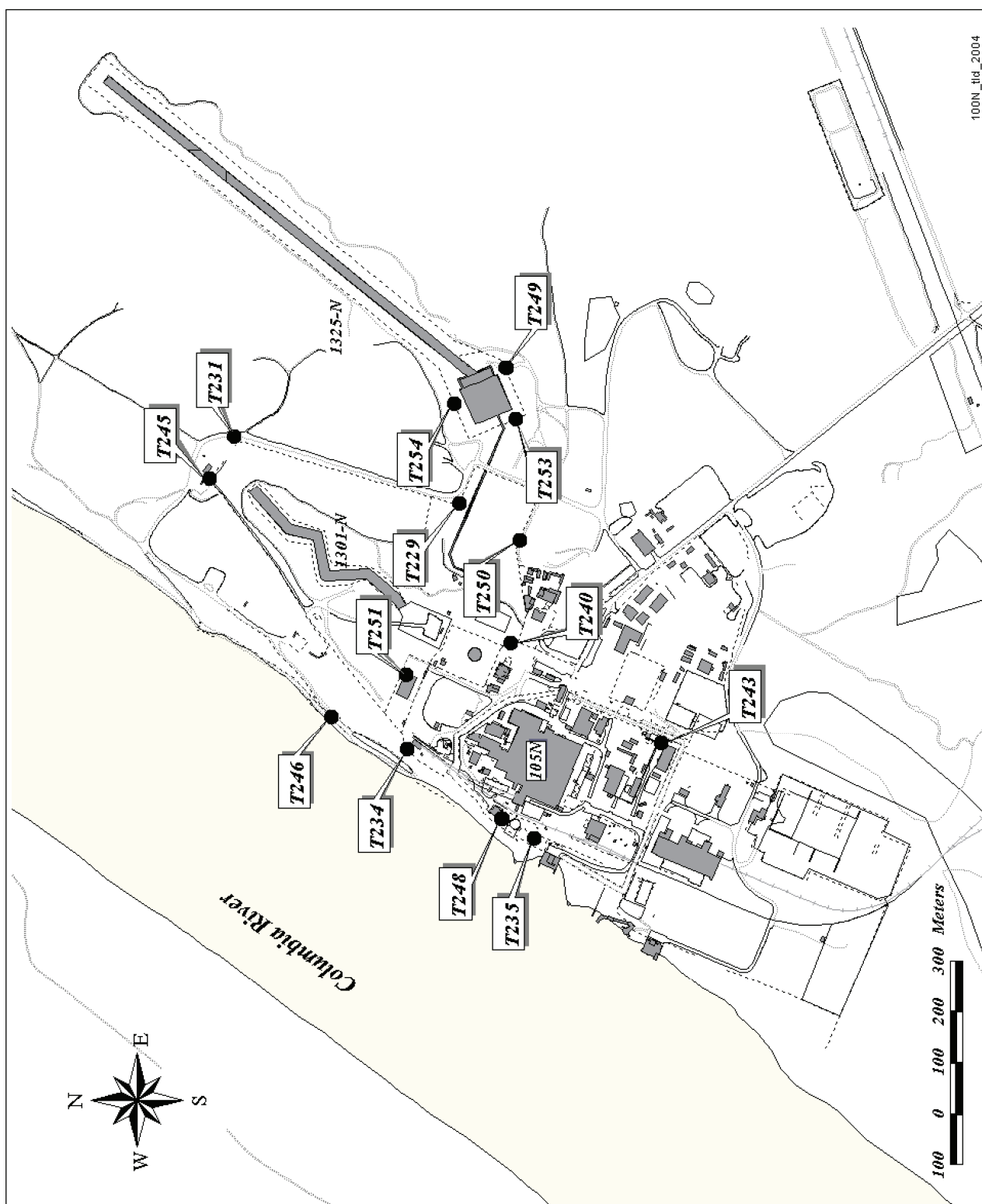
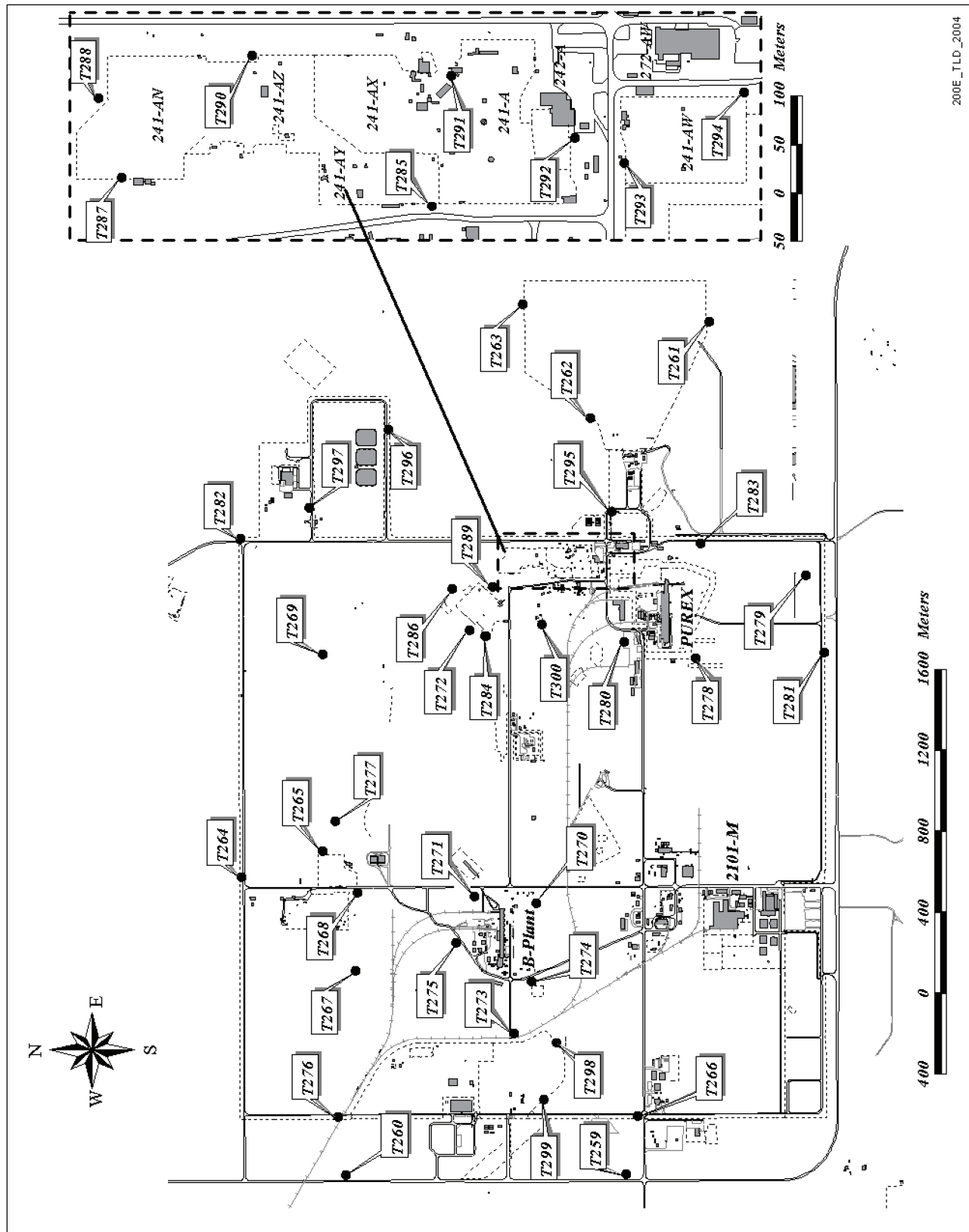


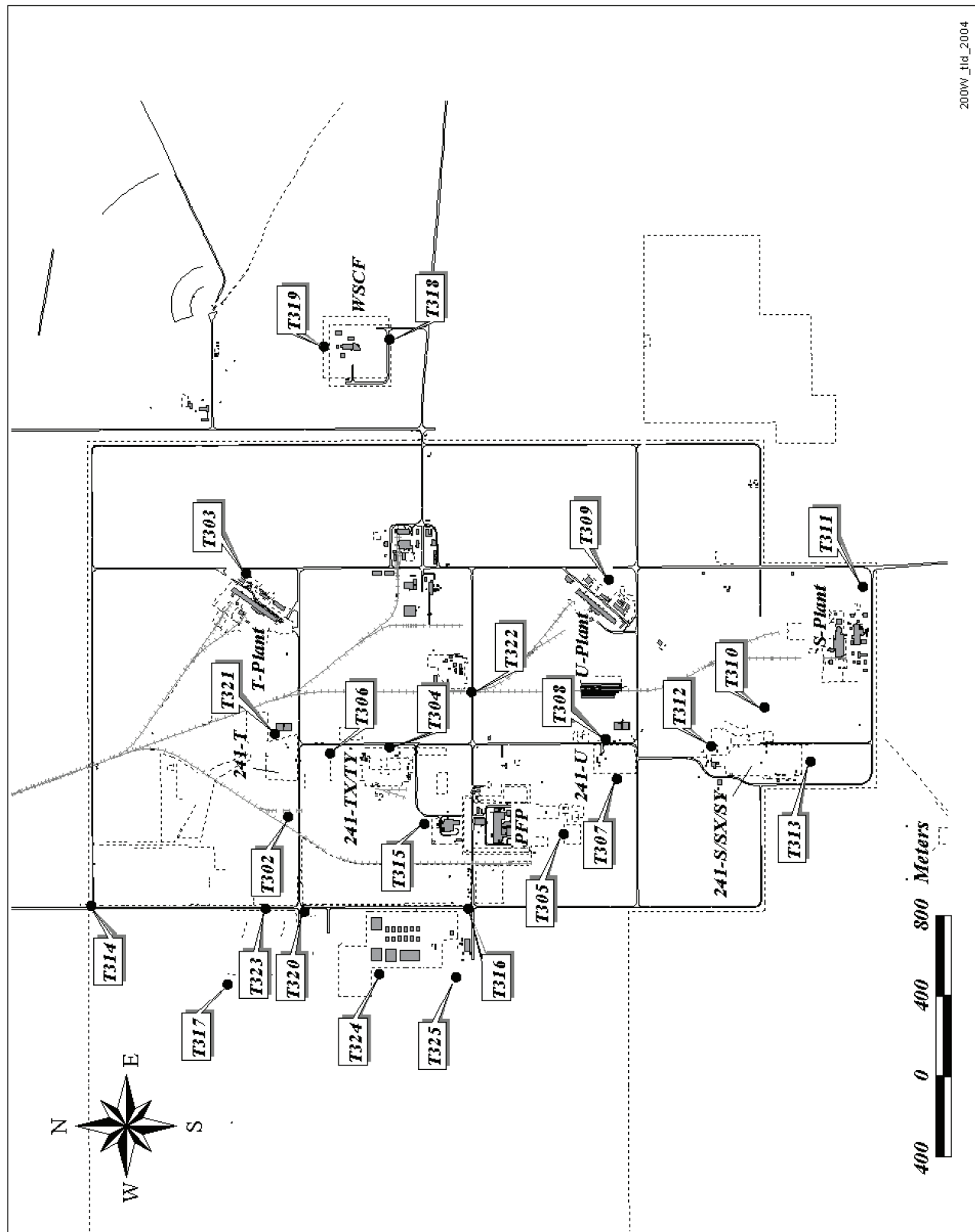
Figure 4-4. 200 East Area TLD Locations.



200E\_TLD\_2004

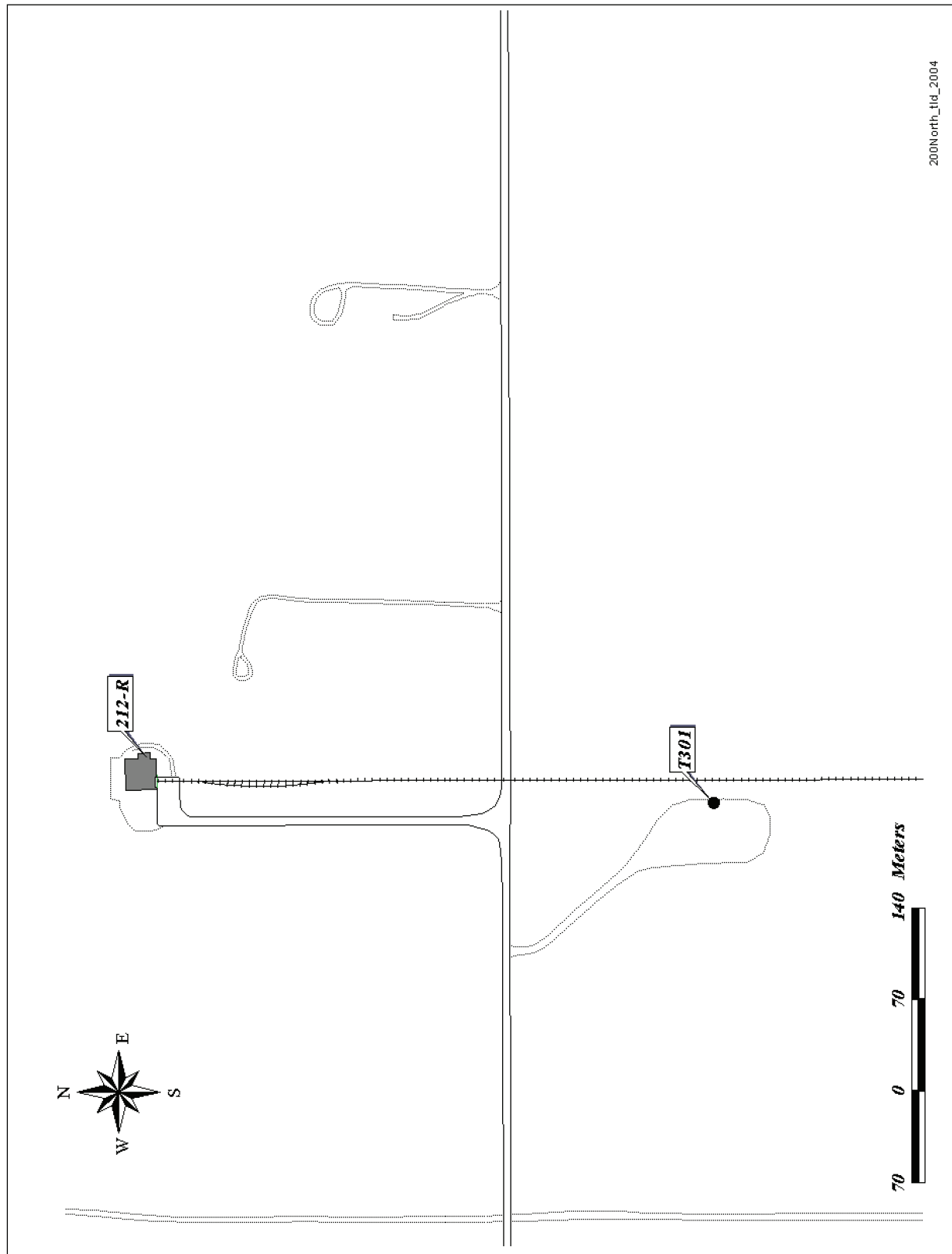


Figure 4-5. 200 West Area TLD Locations.



200W\_tld\_2004

Figure 4-6. 200 North Area TLD Location.



The map shows the Columbia River at the top. A compass rose indicates North (N), South (S), East (E), and West (W). A scale bar at the bottom right shows distances of 0, 300, and 600 meters. Sampling locations are marked with black dots and labeled with codes: T326, T327, T328, T329, T330, T331, T332, T333, T334, T335, T336, T337, T338, T339, T371, T372, T373, T370, and T369. A large area is labeled 618-9 (Exhumed). The Columbia River is labeled on the right side of the map.

Figure 4-8. 300 Area (North) TLD Locations.

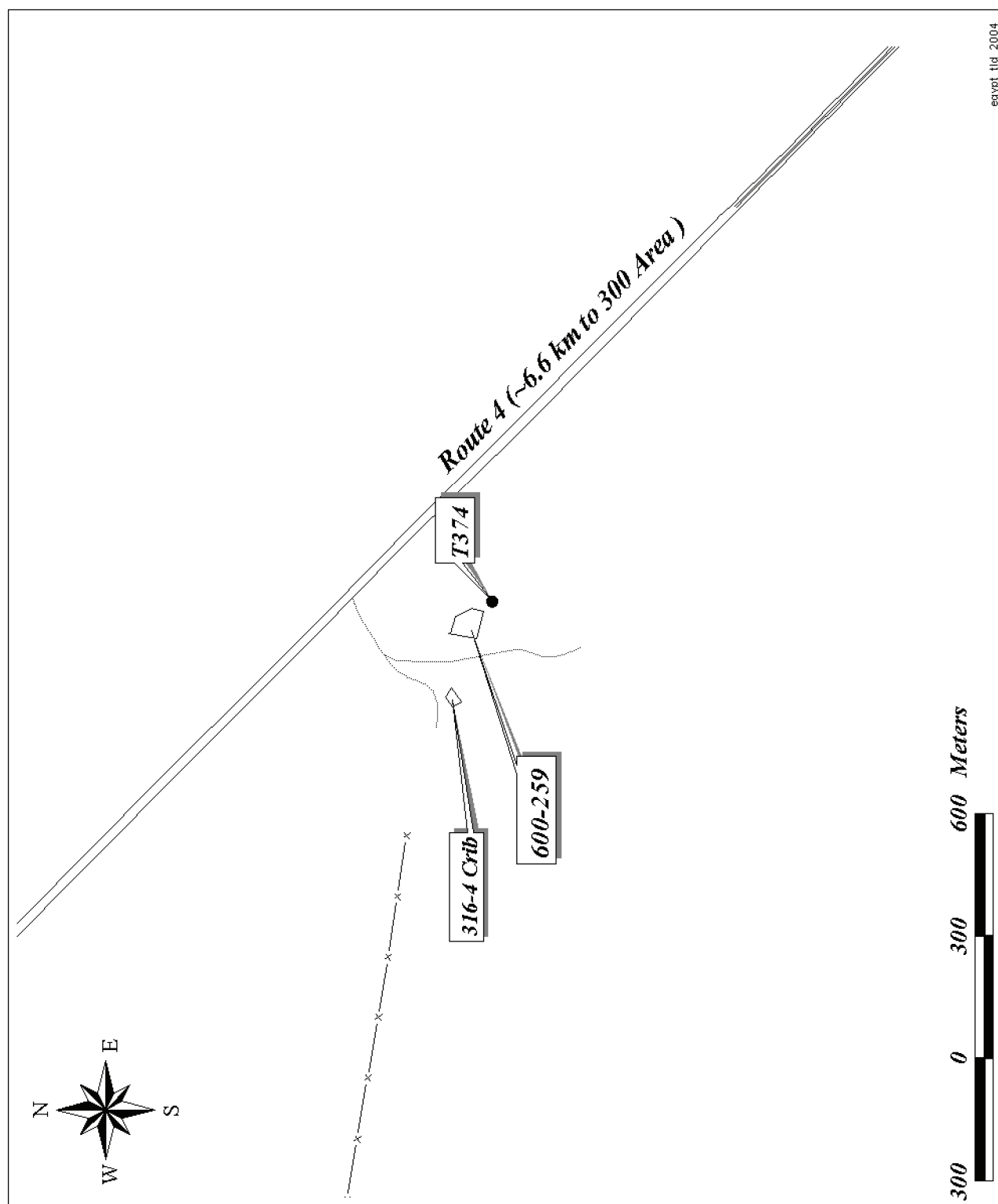


Figure 4-9. 400 Area TLD Locations.

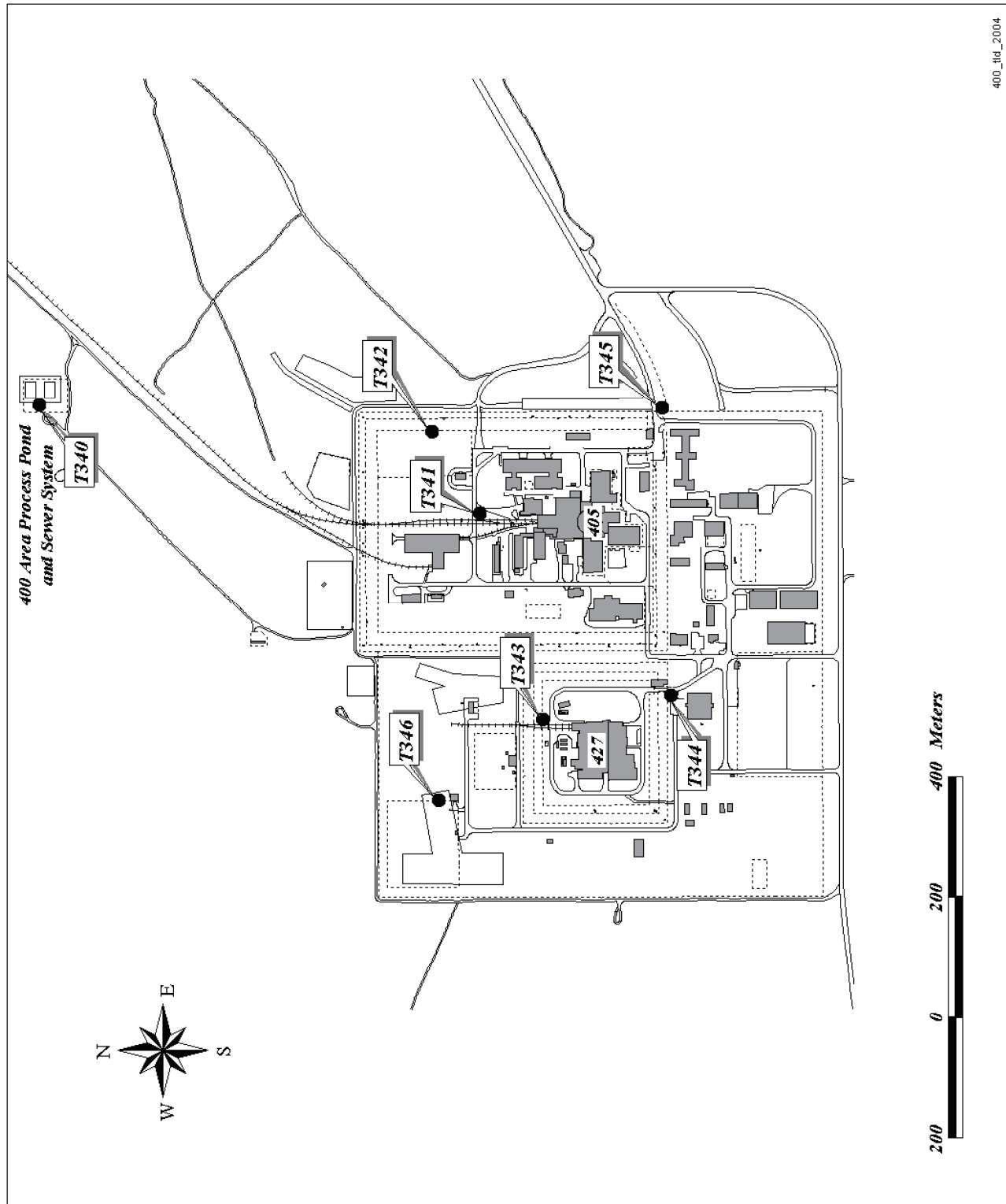


Figure 4-10. Environmental Restoration Disposal Facility TLD Locations.

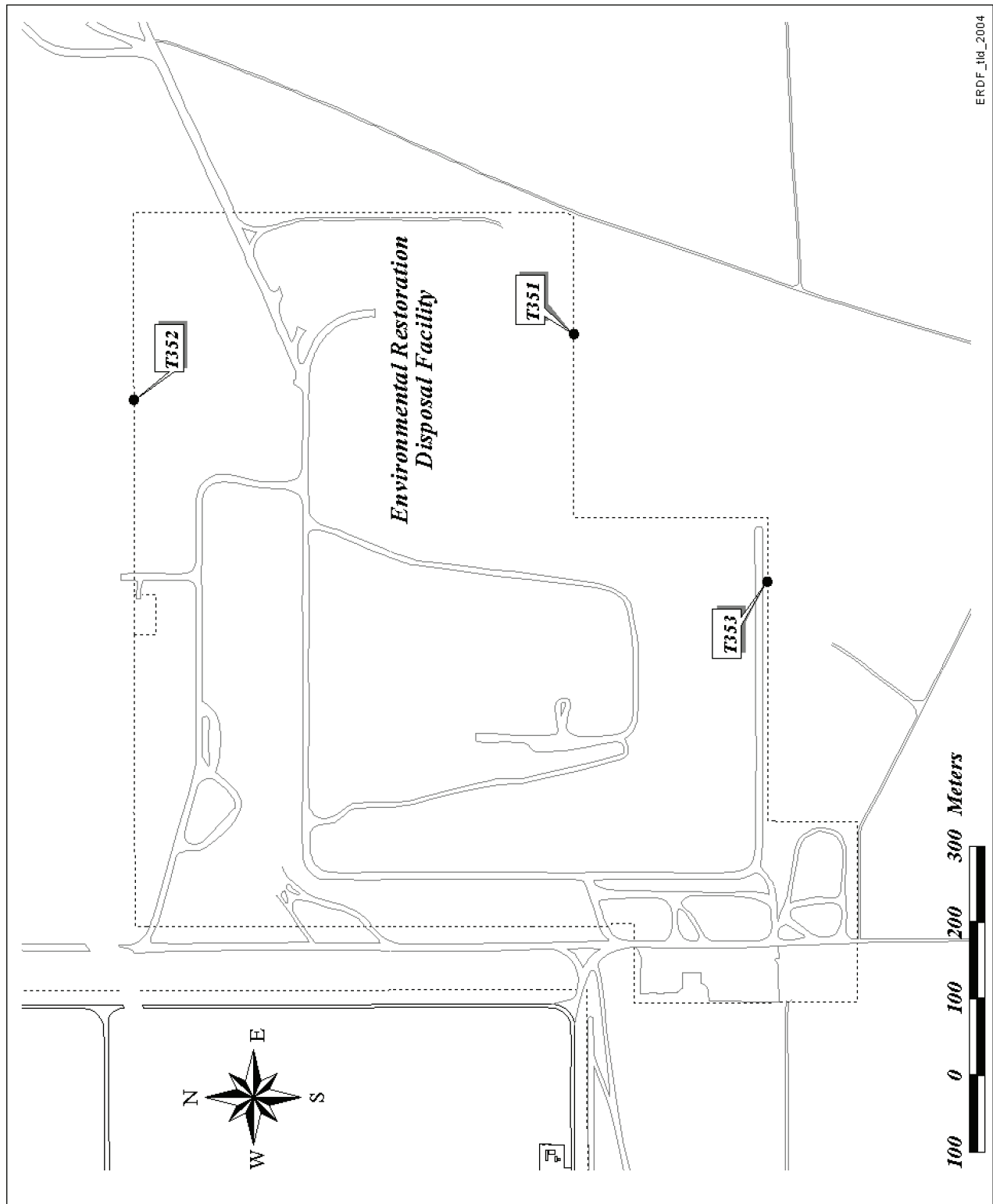
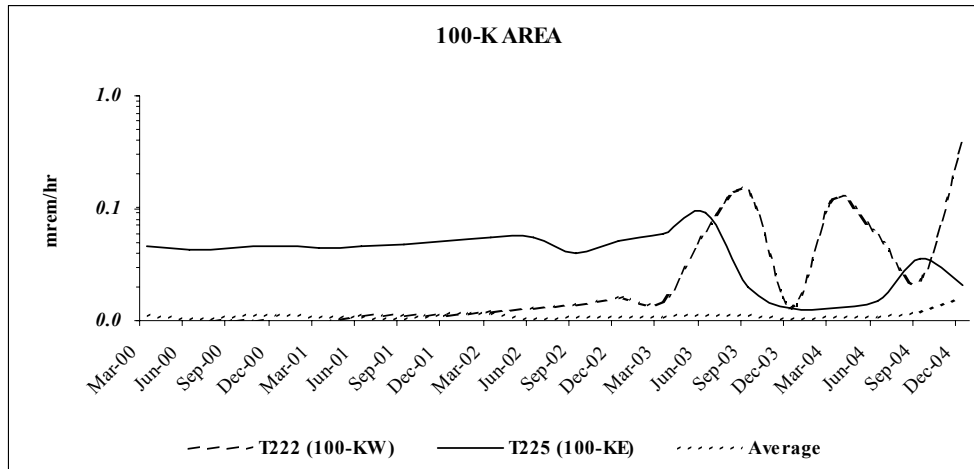


Figure 4-11. TLD Results, 100-K Area.



NOTE: 100-K area, "average" values do not include T222 and T225 results.

Figure 4-12. TLD Results, Cold Vacuum Drying Facility (100-K).

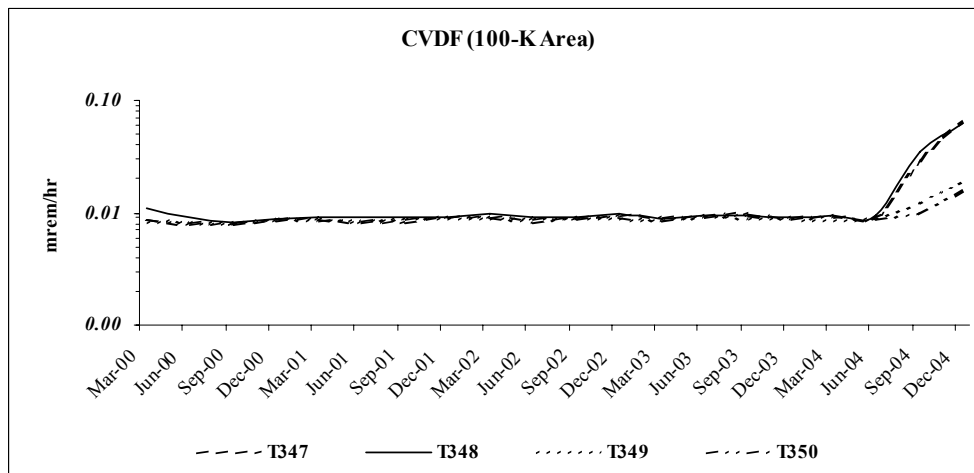


Figure 4-13. TLD Results, 100-N Area.

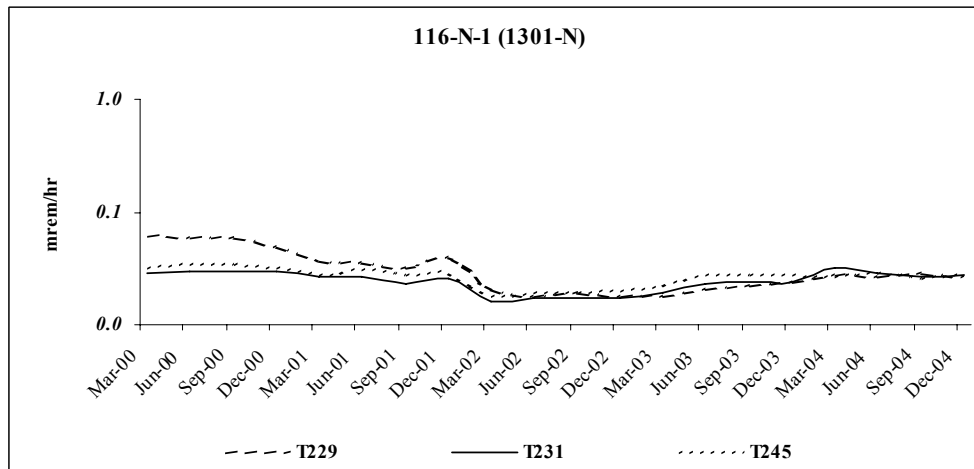


Figure 4-14. TLD Results, 100-N Area.

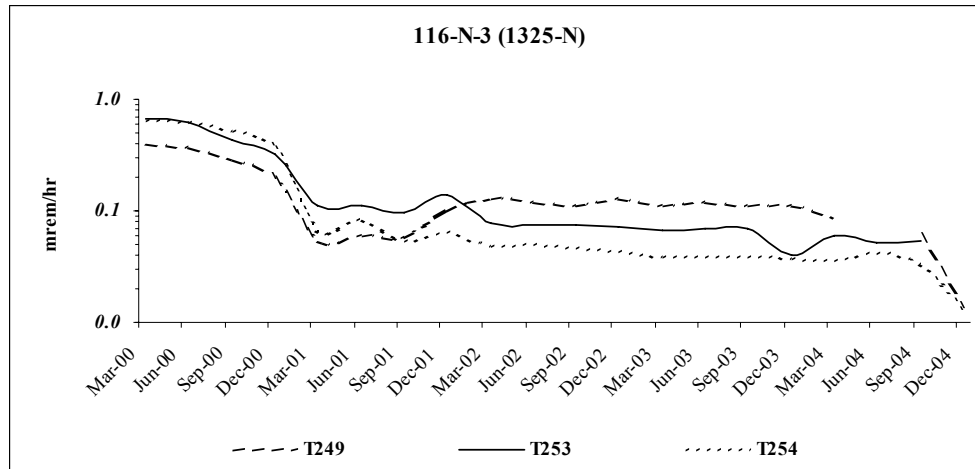
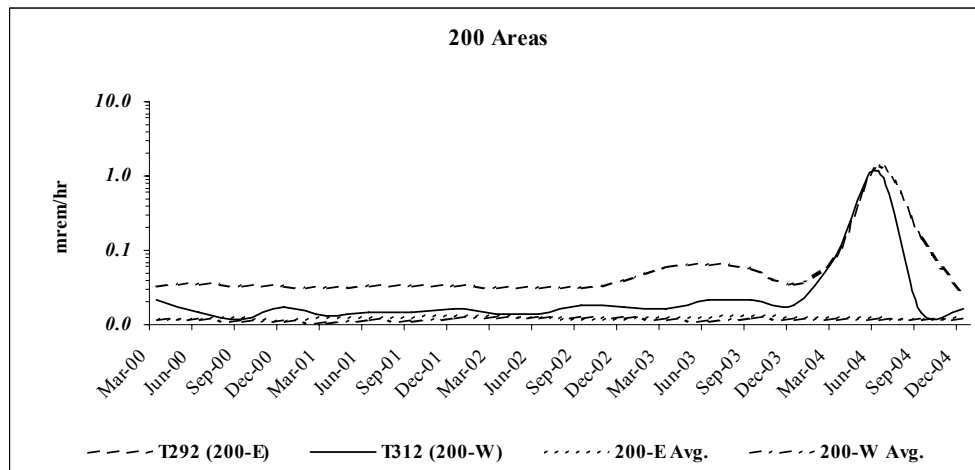


Figure 4-15. TLD Results, 200 Areas.



NOTE: 200 East and 200 West area "average" values do not include T292 and T312 results.



Table 4-2. 2004 TLD Results. (20 sheets total)

Location	Sample Period	EDP Code	mrem/hr	mrem/day	mrem/qtr	mrem/year	Days in Field
100-B/C RA	1st Quarter '04	T200	0.01	0.23	19.9	84	86
		T201	0.01	0.21	18.2	77	86
		T202	0.01	0.25	21.3	91	86
		T203	0.01	0.24	20.2	86	86
	2nd Quarter '04	T200	0.01	0.24	21.5	88	89
		T201	0.01	0.24	21.6	89	89
		T202	0.01	0.24	21.0	86	89
		T203	0.01	0.23	20.5	84	89
	3rd Quarter '04	T200	0.01	0.24	24.3	87	102
		T201	0.01	0.23	23.0	83	102
		T202	0.01	0.23	23.4	84	102
		T203	0.01	0.21	21.9	78	102
	4th Quarter '04	T200	0.01	0.25	22.0	92	87
		T201	0.01	0.23	19.9	84	87
		T202	0.01	0.25	21.7	91	87
		T203	0.01	0.24	21.2	89	87

100-B/C RA, Annual Average  $\pm$  2 Standard Deviation (2SD)

EDP Code	mrem/hr $\pm$ 2SD	mrem/day $\pm$ 2SD	mrem/qtr $\pm$ 2SD	mrem/yr $\pm$ 2SD
T200	0.01 $\pm$ 0.001	0.24 $\pm$ 0.02	22.0 $\pm$ 1.7	88 $\pm$ 7
T201	0.01 $\pm$ 0.001	0.23 $\pm$ 0.03	20.8 $\pm$ 2.3	83 $\pm$ 9
T202	0.01 $\pm$ 0.001	0.24 $\pm$ 0.02	21.9 $\pm$ 1.8	88 $\pm$ 7
T203	0.01 $\pm$ 0.001	0.23 $\pm$ 0.02	21.0 $\pm$ 2.2	84 $\pm$ 9

Table 4-2. 2004 TLD Results. (20 sheets total)

Location	Sample Period	EDP Code	mrem/hr	mrem/day	mrem/qtr	mrem/year	Days in Field
100-K Area	1st Quarter '04	T218	0.01	0.20	17.5	74	86
		T219	0.01	0.26	22.2	94	86
		T220	0.01	0.26	22.6	96	86
		T221	0.01	0.27	23.6	100	86
		T222	0.12	2.87	246.8	1047	86
		T223	0.01	0.34	29.5	125	86
		T224	0.01	0.23	20.1	86	86
		T225	0.01	0.32	27.7	118	86
		T226	0.01	0.23	19.9	85	86
		T227	0.01	0.34	29.6	126	86
		T228	0.01	0.23	19.7	84	86
	2nd Quarter '04	T218	0.01	0.20	18.2	75	89
		T219	0.01	0.23	20.9	86	89
		T220	0.01	0.25	21.8	90	89
		T221	0.01	0.27	24.0	98	89
		T222	0.06	1.39	123.6	507	89
		T223	0.01	0.26	22.7	93	89
		T224	0.01	0.24	21.6	89	89
		T225	0.02	0.37	32.8	135	89
		T226	0.01	0.24	21.1	86	89
		T227	0.02	0.41	36.1	148	89
		T228	0.01	0.23	20.3	83	89
	3rd Quarter '04	T218	0.01	0.21	21.0	75	102
		T219	0.02	0.37	37.8	135	102
		T220	0.01	0.33	33.7	120	102
		T221	0.02	0.38	38.4	137	102
		T222	0.02	0.54	55.4	198	102
		T223	0.01	0.23	23.3	83	102
		T224	0.01	0.23	23.7	85	102
		T225	0.03	0.83	84.7	303	102
		T226	0.01	0.27	27.8	100	102
		T227	0.01	0.34	34.2	123	102
		T228	0.01	0.22	22.7	81	102
	4th Quarter '04	T218	0.01	0.22	19.2	80	88
		T219	0.03	0.72	62.8	263	87
		T220	0.02	0.53	46.0	193	87
		T221	0.02	0.59	51.3	215	87
		T222	0.44	10.5	925.9	3838	87
		T223	0.01	0.30	25.9	109	87
		T224	0.01	0.24	20.8	87	87
		T225	0.02	0.51	44.6	187	87
		T226	0.01	0.25	21.5	90	87
		T227	0.02	0.36	31.7	133	87
		T228	0.01	0.22	18.9	79	87

**100-K Area, Annual Average  $\pm$  2 Standard Deviation (2SD)**

EDP Code	mrem/hr $\pm$ 2SD	mrem/day $\pm$ 2SD	mrem/qtr $\pm$ 2SD	mrem/yr $\pm$ 2SD
T218	0.01 $\pm$ 0.001	0.21 $\pm$ 0.01	19.0 $\pm$ 1.3	76 $\pm$ 5
T219	0.02 $\pm$ 0.019	0.39 $\pm$ 0.45	36.0 $\pm$ 41.1	144 $\pm$ 164
T220	0.01 $\pm$ 0.011	0.34 $\pm$ 0.26	31.1 $\pm$ 23.7	124 $\pm$ 95
T221	0.02 $\pm$ 0.013	0.38 $\pm$ 0.30	34.4 $\pm$ 27.3	138 $\pm$ 109
T222	0.15 $\pm$ 0.380	3.70 $\pm$ 9.12	338 $\pm$ 832	1352 $\pm$ 3329
T223	0.01 $\pm$ 0.004	0.28 $\pm$ 0.10	25.4 $\pm$ 9.2	102 $\pm$ 37
T224	0.01 $\pm$ 0.000	0.24 $\pm$ 0.01	21.6 $\pm$ 0.9	86 $\pm$ 4
T225	0.02 $\pm$ 0.019	0.52 $\pm$ 0.46	47.6 $\pm$ 41.9	190 $\pm$ 168
T226	0.01 $\pm$ 0.002	0.25 $\pm$ 0.04	22.6 $\pm$ 3.3	90 $\pm$ 13
T227	0.02 $\pm$ 0.003	0.36 $\pm$ 0.06	33.0 $\pm$ 5.7	132 $\pm$ 23
T228	0.01 $\pm$ 0.001	0.22 $\pm$ 0.01	20.4 $\pm$ 1.0	82 $\pm$ 4

Table 4-2. 2004 TLD Results. (20 sheets total)

Location	Sample Period	EDP Code	mrem/hr	mrem/day	mrem/qtr	mrem/year	Days in Field
CVDF (100-K area)	1st Quarter '04	T347	0.01	0.23	19.5	83	86
		T348	0.01	0.23	19.4	82	86
		T349	0.01	0.20	17.4	74	86
		T350	0.01	0.21	18.5	78	86
	2nd Quarter '04	T347	0.01	0.22	19.4	80	89
		T348	0.01	0.23	20.1	83	89
		T349	0.01	0.21	18.6	76	89
		T350	0.01	0.21	19.0	78	89
	3rd Quarter '04	T347	0.03	0.70	71.7	257	102
		T348	0.04	0.85	86.5	309	102
		T349	0.01	0.29	30.0	107	102
		T350	0.01	0.25	25.3	91	102
	4th Quarter '04	T347	0.07	1.56	135.8	570	87
		T348	0.06	1.50	132.3	548	88
		T349	0.02	0.47	41.1	171	88
		T350	0.02	0.38	33.5	139	88
CVDF, Annual Average ± 2 Standard Deviation (2SD)							
EDP Code	mrem/hr ± 2SD		mrem/day ± 2SD		mrem/qtr ± 2SD		mrem/yr ± 2SD
T347	0.03 ± 0.053		0.68 ± 1.26		61.8 ± 115		247 ± 461
T348	0.03 ± 0.051		0.71 ± 1.22		64.5 ± 111		258 ± 445
T349	0.01 ± 0.010		0.29 ± 0.25		26.8 ± 22.5		107 ± 90
T350	0.01 ± 0.007		0.26 ± 0.16		24.1 ± 14.4		96 ± 58

Table 4-2. 2004 TLD Results. (20 sheets total)

Location	Sample Period	EDP Code	mrem/hr	mrem/day	mrem/qtr	mrem/year	Days in Field
100-KR-1 RA	1st Quarter '04	T364	0.01	0.27	23.3	99	86
		T365	0.01	0.24	20.2	86	86
		T366	0.01	0.26	22.6	96	86
		T367	0.01	0.27	23.1	98	86
		T368	0.01	0.27	22.8	97	86
	2nd Quarter '04	T364	0.01	0.25	22.4	92	89
		T365	0.01	0.23	20.8	86	89
		T366	0.01	0.29	25.9	106	89
		T367	0.01	0.27	24.0	98	89
		T368	0.01	0.29	25.6	105	89
	3rd Quarter '04	T364	0.01	0.25	25.9	93	102
		T365	0.01	0.22	22.5	81	102
		T366	0.01	0.27	27.8	99	102
		T367	0.01	0.26	26.8	96	102
		T368	0.01	0.29	29.9	107	102
	4th Quarter '04	T364	0.01	0.27	23.7	99	87
		T365	0.01	0.24	21.1	89	87
		T366	0.01	0.28	24.0	101	87
		T367	0.01	0.28	24.7	104	87
		T368	0.01	0.30	25.8	108	87

**100-KR-1, Annual Average  $\pm$  2 Standard Deviation (2SD)**

EDP Code	mrem/hr $\pm$ 2SD	mrem/day $\pm$ 2SD	mrem/qtr $\pm$ 2SD	mrem/yr $\pm$ 2SD
T364	0.01 $\pm$ 0.001	0.26 $\pm$ 0.02	23.9 $\pm$ 2.0	96 $\pm$ 8
T365	0.01 $\pm$ 0.001	0.23 $\pm$ 0.02	21.2 $\pm$ 1.7	85 $\pm$ 7
T366	0.01 $\pm$ 0.001	0.28 $\pm$ 0.02	25.1 $\pm$ 2.2	100 $\pm$ 9
T367	0.01 $\pm$ 0.001	0.27 $\pm$ 0.02	24.7 $\pm$ 1.6	99 $\pm$ 6
T368	0.01 $\pm$ 0.001	0.29 $\pm$ 0.03	26.1 $\pm$ 2.6	104 $\pm$ 10

Table 4-2. 2004 TLD Results. (20 sheets total)

Location	Sample Period	EDP Code	mrem/hr	mrem/day	mrem/qtr	mrem/year	Days in Field
100-N Area	1st Quarter '04	T229	0.03	0.67	57.0	245	85
		T231	0.03	0.77	65.8	283	85
		T234	0.01	0.28	23.8	102	85
		T235	0.02	0.41	35.0	150	85
		T240	0.02	0.41	35.1	151	85
		T243	0.01	0.22	19.0	82	85
		T245	0.03	0.65	55.0	236	85
		T246	0.01	0.28	23.6	101	85
		T248	0.02	0.51	43.5	187	85
		T249	0.08	2.04	173.2	744	85
		T250	0.01	0.30	25.1	108	85
		T251	0.01	0.29	25.0	107	85
		T253	0.06	1.42	120.5	517	85
		T254	0.04	0.87	73.9	317	85
	2nd Quarter '04	T229	0.03	0.66	59.0	239	90
		T231	0.03	0.69	62.2	252	90
		T234	0.01	0.30	27.0	110	90
		T235	0.01	0.29	26.0	105	90
		T240	0.02	0.44	39.4	160	90
		T243	0.01	0.21	18.9	77	90
		T245	0.03	0.70	62.7	254	90
		T246	0.01	0.32	29.0	118	90
		T248			TLD not recoverable		
		T249			TLD not recoverable		
		T250	0.01	0.30	26.9	109	90
		T251	0.01	0.31	27.5	112	90
		T253	0.05	1.21	109.1	443	90
		T254	0.04	1.00	89.6	364	90
	3rd Quarter '04	T229	0.03	0.69	69.6	252	101
		T231	0.03	0.65	65.6	237	101
		T234	0.01	0.30	30.4	110	101
		T235	0.01	0.30	30.0	108	101
		T240	0.02	0.41	41.3	149	101
		T243	0.01	0.22	21.9	79	101
		T245	0.03	0.62	62.9	227	101
		T246	0.01	0.31	31.1	113	101
		T248	0.03	0.63	64.1	232	101
		T249	0.06	1.51	152.3	550	101
		T250	0.01	0.30	30.7	111	101
		T251	0.01	0.32	32.1	116	101
		T253	0.05	1.28	129.6	468	101
		T254	0.03	0.78	79.1	286	101
	4th Quarter '04	T229	0.03	0.66	58.1	241	88
		T231	0.03	0.67	58.5	245	87
		T234	0.01	0.34	29.8	125	87
		T235	0.01	0.29	25.0	105	87
		T240	0.02	0.46	40.0	168	87
		T243	0.01	0.22	19.8	82	88
		T245	0.03	0.68	59.1	248	87
		T246	0.01	0.32	27.9	117	87
		T248	0.01	0.23	20.2	85	87
		T249	0.01	0.35	30.5	126	88
		T250	0.01	0.31	26.9	113	87
		T251	0.02	0.38	33.5	139	88
		T253			TLD not recoverable		
		T254	0.01	0.31	26.9	111	118

Table 4-2. 2004 TLD Results. (20 sheets total)

EDP Code	100-N Area, Annual Average $\pm$ 2 Standard Deviation (2SD)			
	mrem/hr $\pm$ 2SD	mrem/day $\pm$ 2SD	mrem/qtr $\pm$ 2SD	mrem/yr $\pm$ 2SD
T229	0.03 $\pm$ 0.001	0.67 $\pm$ 0.03	61.1 $\pm$ 2.7	244 $\pm$ 11
T231	0.03 $\pm$ 0.005	0.69 $\pm$ 0.11	63.4 $\pm$ 9.9	253 $\pm$ 40
T234	0.01 $\pm$ 0.002	0.31 $\pm$ 0.05	27.9 $\pm$ 4.8	112 $\pm$ 19
T235	0.01 $\pm$ 0.005	0.32 $\pm$ 0.12	29.1 $\pm$ 11.1	117 $\pm$ 44
T240	0.02 $\pm$ 0.002	0.43 $\pm$ 0.05	39.2 $\pm$ 4.3	157 $\pm$ 17
T243	0.01 $\pm$ 0.001	0.22 $\pm$ 0.01	19.9 $\pm$ 1.2	80 $\pm$ 5
T245	0.03 $\pm$ 0.003	0.66 $\pm$ 0.07	60.3 $\pm$ 6.0	241 $\pm$ 24
T246	0.01 $\pm$ 0.002	0.31 $\pm$ 0.04	28.1 $\pm$ 3.8	112 $\pm$ 15
T248	0.02 $\pm$ 0.017	0.37 $\pm$ 0.40	33.8 $\pm$ 36.2	135 $\pm$ 145
T249	0.05 $\pm$ 0.072	1.30 $\pm$ 1.73	119 $\pm$ 158	474 $\pm$ 631
T250	0.01 $\pm$ 0.001	0.30 $\pm$ 0.01	27.6 $\pm$ 1.1	110 $\pm$ 4
T251	0.01 $\pm$ 0.003	0.32 $\pm$ 0.08	29.6 $\pm$ 7.0	118 $\pm$ 28
T253	0.05 $\pm$ 0.009	1.30 $\pm$ 0.21	119 $\pm$ 19	475 $\pm$ 76
T254	0.03 $\pm$ 0.025	0.74 $\pm$ 0.60	67.6 $\pm$ 55.1	270 $\pm$ 220

Table 4-2. 2004 TLD Results. (20 sheets total)

Location	Sample Period	EDP Code	mrem/hr	mrem/day	mrem/qtr	mrem/year	Days in Field
200 East area	1st Quarter '04	T259	0.01	0.23	17.9	83	79
		T260	0.01	0.22	17.7	82	79
		T261	0.01	0.24	19.1	89	79
		T262	0.01	0.22	17.2	80	79
		T263	0.01	0.22	17.6	82	79
		T264	0.01	0.27	21.6	100	79
		T265	0.01	0.29	23.0	106	79
		T266	0.01	0.23	18.0	83	79
		T267	0.01	0.23	18.4	85	79
		T268	0.01	0.30	23.6	109	79
		T269	0.01	0.25	19.5	90	79
		T270	0.02	0.36	28.9	132	80
		T271	0.01	0.23	18.6	85	80
		T272	0.01	0.27	21.0	97	79
		T273	0.01	0.24	19.1	88	79
		T274	0.01	0.24	19.2	88	80
		T275	0.01	0.24	19.0	87	80
		T276	0.01	0.22	17.6	81	79
		T277	0.01	0.24	19.3	89	79
		T278	0.01	0.23	18.5	86	79
		T279	0.01	0.24	18.7	86	79
		T280	0.01	0.24	19.0	88	79
		T281	0.01	0.24	19.2	89	79
		T282	0.01	0.24	18.6	86	79
		T283	0.01	0.26	20.5	95	79
		T284	0.01	0.28	21.8	101	79
		T285	0.02	0.57	44.8	207	79
		T286	0.01	0.36	28.3	131	79
		T287	0.02	0.41	32.6	151	79
		T288	0.03	0.77	60.6	280	79
		T289	0.01	0.34	27.1	125	79
		T290	0.03	0.61	48.0	222	79
		T291	0.02	0.45	35.4	164	79
		T292	0.08	2.0	157	727	79
		T293	0.01	0.31	24.8	115	79
		T294	0.02	0.47	37.4	173	79
		T295	0.01	0.25	19.5	90	79
		T296	0.01	0.25	19.9	92	79
		T297	0.01	0.24	18.6	86	79
		T298	0.01	0.23	18.6	86	79
		T299	0.01	0.25	19.6	91	79
		T300	0.01	0.27	21.0	97	79

Table 4-2. 2004 TLD Results. (20 sheets total)

Location	Sample Period	EDP Code	mrem/hr	mrem/day	mrem/qtr	mrem/year	Days in Field
200 East area	2nd Quarter '04	T259	0.01	0.23	22.5	83	99
		T260	0.01	0.22	21.6	80	99
		T261	0.01	0.24	23.4	87	98
		T262	0.01	0.22	21.8	81	98
		T263	0.01	0.23	22.7	85	98
		T264	0.01	0.30	29.7	110	99
		T265	0.01	0.30	29.6	109	99
		T266	0.01	0.23	22.3	82	99
		T267	0.01	0.25	24.9	92	99
		T268	0.01	0.30	29.5	109	99
		T269	0.01	0.26	25.4	95	98
		T270	0.02	0.38	36.8	137	98
		T271	0.01	0.25	24.2	90	98
		T272	0.01	0.28	27.8	104	98
		T273	0.01	0.22	21.6	80	99
		T274	0.01	0.24	23.6	88	98
		T275	0.01	0.25	24.1	90	98
		T276	0.01	0.23	22.5	83	99
		T277	0.01	0.26	25.6	94	99
		T278	0.01	0.24	23.3	87	98
		T279	0.01	0.24	23.1	86	98
		T280	0.01	0.23	22.4	84	98
		T281	0.01	0.23	22.5	84	98
		T282	0.01	0.24	23.8	89	98
		T283	0.01	0.25	24.1	90	98
		T284	0.01	0.30	29.0	108	98
		T285	0.02	0.54	53.2	198	98
		T286	0.02	0.36	35.5	132	98
		T287	0.02	0.45	44.6	166	98
		T288	0.03	0.75	73.5	274	98
		T289	0.01	0.35	34.2	127	98
		T290	0.02	0.41	40.6	151	98
		T291	0.02	0.49	47.6	178	98
		T292	1.43	34.3	3362	12527	98
		T293	0.01	0.36	34.9	130	98
		T294	0.02	0.46	44.7	167	98
		T295	0.01	0.24	23.3	87	98
		T296	0.01	0.26	25.0	93	98
		T297	0.01	0.23	22.9	85	98
		T298	0.01	0.23	22.7	84	99
		T299	0.01	0.24	23.8	88	99
		T300	0.01	0.25	24.3	90	98



Table 4-2. 2004 TLD Results. (20 sheets total)

Location	Sample Period	EDP Code	mrem/hr	mrem/day	mrem/qtr	mrem/year	Days in Field
200 East area	3rd Quarter '04	T259	0.01	0.23	22.4	84	97
		T260	0.01	0.22	21.5	81	97
		T261	0.01	0.24	23.4	88	97
		T262	0.01	0.22	21.3	80	97
		T263	0.01	0.24	23.3	88	97
		T264	0.01	0.29	27.7	104	97
		T265	0.01	0.29	28.0	106	97
		T266	0.01	0.23	22.3	84	97
		T267	0.01	0.24	23.2	87	97
		T268	0.01	0.31	29.9	112	97
		T269	0.01	0.24	23.7	89	97
		T270	0.02	0.37	35.5	134	97
		T271	0.01	0.25	24.1	91	97
		T272	0.01	0.32	31.4	118	97
		T273	0.01	0.23	22.4	84	97
		T274			TLD not recoverable		
		T275	0.01	0.23	22.7	86	97
		T276	0.01	0.21	20.7	78	97
		T277	0.01	0.24	23.3	88	97
		T278	0.01	0.23	22.2	84	97
		T279	0.01	0.22	21.8	82	97
		T280	0.01	0.22	21.1	80	97
		T281	0.01	0.23	22.5	85	97
		T282	0.01	0.22	21.2	80	97
		T283	0.01	0.23	22.3	84	97
		T284	0.01	0.28	26.7	101	97
		T285	0.02	0.53	51.8	195	97
		T286	0.01	0.29	28.3	107	97
		T287	0.02	0.48	46.9	177	97
		T288	0.03	0.72	70.3	264	97
		T289	0.02	0.37	35.6	134	97
		T290	0.02	0.37	35.8	135	97
		T291	0.02	0.43	41.4	156	97
		T292	0.15	3.7	359	1352	97
		T293	0.01	0.32	31.5	118	97
		T294	0.02	0.47	45.7	172	97
		T295	0.01	0.23	22.3	84	97
		T296	0.01	0.24	23.5	89	97
		T297	0.01	0.23	22.1	83	97
		T298	0.01	0.21	20.6	78	97
		T299	0.01	0.22	21.7	82	97
		T300	0.01	0.25	24.1	91	97

Table 4-2. 2004 TLD Results. (20 sheets total)

Location	Sample Period	EDP Code	mrem/hr	mrem/day	mrem/qtr	mrem/year	Days in Field
200 East area	4th Quarter '04	T259	0.01	0.23	19.5	85	84
		T260	0.01	0.24	19.9	87	84
		T261	0.01	0.26	21.8	93	85
		T262	0.01	0.23	19.3	83	85
		T263	0.01	0.26	22.3	96	85
		T264	0.01	0.30	25.2	109	84
		T265	0.01	0.32	27.2	118	84
		T266	0.01	0.24	20.1	88	84
		T267	0.01	0.26	21.7	94	84
		T268	0.01	0.33	27.5	119	84
		T269	0.01	0.25	21.6	92	86
		T270	0.02	0.40	33.4	145	84
		T271	0.01	0.24	20.4	89	84
		T272	0.01	0.29	24.4	105	85
		T273	0.01	0.23	19.1	83	84
		T274	0.01	0.27	22.4	97	84
		T275	0.01	0.25	20.9	91	84
		T276	0.01	0.21	17.6	77	84
		T277	0.01	0.26	21.5	93	84
		T278	0.01	0.24	20.3	87	85
		T279	0.01	0.22	18.9	81	85
		T280	0.01	0.22	19.1	82	85
		T281	0.01	0.24	20.2	87	85
		T282	0.01	0.23	19.8	85	85
		T283	0.01	0.24	20.4	86	86
		T284	0.01	0.28	23.8	102	85
		T285	0.02	0.51	43.8	188	85
		T286	0.02	0.38	32.3	139	85
		T287	0.02	0.50	42.1	181	85
		T288	0.03	0.73	62.7	266	86
		T289	0.02	0.37	31.8	137	85
		T290	0.01	0.33	28.2	120	86
		T291	0.02	0.45	39.1	166	86
		T292	0.02	0.60	50.9	218	85
		T293	0.01	0.34	28.6	123	85
		T294	0.02	0.47	39.6	170	85
		T295	0.01	0.23	19.6	84	85
		T296	0.01	0.25	21.2	92	84
		T297	0.01	0.23	19.7	86	84
		T298	0.01	0.23	19.0	82	84
		T299	0.01	0.25	20.7	90	84
		T300	0.01	0.26	21.8	93	85

Table 4-2. 2004 TLD Results. (20 sheets total)

EDP Code	200 East area, Annual Average $\pm$ 2 Standard Deviation (2SD)			
	mrem/hr $\pm$ 2SD	mrem/day $\pm$ 2SD	mrem/qtr $\pm$ 2SD	mrem/yr $\pm$ 2SD
T259	0.01 $\pm$ 0.000	0.23 $\pm$ 0.01	20.9 $\pm$ 0.5	84 $\pm$ 2
T260	0.01 $\pm$ 0.001	0.22 $\pm$ 0.02	20.5 $\pm$ 1.5	82 $\pm$ 6
T261	0.01 $\pm$ 0.001	0.24 $\pm$ 0.02	22.3 $\pm$ 1.4	89 $\pm$ 6
T262	0.01 $\pm$ 0.000	0.22 $\pm$ 0.01	20.2 $\pm$ 0.7	81 $\pm$ 3
T263	0.01 $\pm$ 0.001	0.24 $\pm$ 0.03	21.8 $\pm$ 3.0	87 $\pm$ 12
T264	0.01 $\pm$ 0.001	0.29 $\pm$ 0.03	26.5 $\pm$ 2.4	106 $\pm$ 9
T265	0.01 $\pm$ 0.001	0.30 $\pm$ 0.03	27.4 $\pm$ 2.9	110 $\pm$ 11
T266	0.01 $\pm$ 0.001	0.23 $\pm$ 0.01	21.0 $\pm$ 1.1	84 $\pm$ 5
T267	0.01 $\pm$ 0.001	0.25 $\pm$ 0.02	22.4 $\pm$ 2.1	90 $\pm$ 8
T268	0.01 $\pm$ 0.001	0.31 $\pm$ 0.03	28.1 $\pm$ 2.5	112 $\pm$ 10
T269	0.01 $\pm$ 0.001	0.25 $\pm$ 0.01	22.9 $\pm$ 1.2	91 $\pm$ 5
T270	0.02 $\pm$ 0.001	0.38 $\pm$ 0.03	34.2 $\pm$ 3.0	137 $\pm$ 12
T271	0.01 $\pm$ 0.001	0.24 $\pm$ 0.01	22.2 $\pm$ 1.3	89 $\pm$ 5
T272	0.01 $\pm$ 0.002	0.29 $\pm$ 0.05	26.6 $\pm$ 4.4	106 $\pm$ 18
T273	0.01 $\pm$ 0.001	0.23 $\pm$ 0.02	20.9 $\pm$ 1.8	84 $\pm$ 7
T274	0.01 $\pm$ 0.001	0.25 $\pm$ 0.03	22.7 $\pm$ 2.7	91 $\pm$ 11
T275	0.01 $\pm$ 0.001	0.24 $\pm$ 0.01	22.1 $\pm$ 1.3	88 $\pm$ 5
T276	0.01 $\pm$ 0.001	0.22 $\pm$ 0.02	19.9 $\pm$ 1.5	80 $\pm$ 6
T277	0.01 $\pm$ 0.001	0.25 $\pm$ 0.02	22.8 $\pm$ 1.6	91 $\pm$ 6
T278	0.01 $\pm$ 0.000	0.23 $\pm$ 0.01	21.4 $\pm$ 0.8	86 $\pm$ 3
T279	0.01 $\pm$ 0.001	0.23 $\pm$ 0.02	21.0 $\pm$ 1.4	84 $\pm$ 6
T280	0.01 $\pm$ 0.001	0.23 $\pm$ 0.02	20.8 $\pm$ 1.7	83 $\pm$ 7
T281	0.01 $\pm$ 0.001	0.24 $\pm$ 0.01	21.5 $\pm$ 1.1	86 $\pm$ 4
T282	0.01 $\pm$ 0.001	0.23 $\pm$ 0.02	21.2 $\pm$ 1.9	85 $\pm$ 7
T283	0.01 $\pm$ 0.001	0.24 $\pm$ 0.03	22.1 $\pm$ 2.3	88 $\pm$ 9
T284	0.01 $\pm$ 0.001	0.28 $\pm$ 0.02	25.8 $\pm$ 1.8	103 $\pm$ 7
T285	0.02 $\pm$ 0.002	0.54 $\pm$ 0.04	49.2 $\pm$ 4.0	197 $\pm$ 16
T286	0.01 $\pm$ 0.003	0.35 $\pm$ 0.08	31.6 $\pm$ 7.0	126 $\pm$ 28
T287	0.02 $\pm$ 0.003	0.46 $\pm$ 0.07	42.2 $\pm$ 6.7	169 $\pm$ 27
T288	0.03 $\pm$ 0.002	0.74 $\pm$ 0.04	67.7 $\pm$ 3.7	271 $\pm$ 15
T289	0.01 $\pm$ 0.001	0.36 $\pm$ 0.03	32.7 $\pm$ 2.6	131 $\pm$ 11
T290	0.02 $\pm$ 0.01	0.42 $\pm$ 0.25	38.7 $\pm$ 22.6	155 $\pm$ 90
T291	0.02 $\pm$ 0.002	0.45 $\pm$ 0.05	41.5 $\pm$ 4.5	166 $\pm$ 18
T292	0.46 $\pm$ 1.35	10.9 $\pm$ 32.3	999 $\pm$ 2949	3995 $\pm$ 11797
T293	0.01 $\pm$ 0.002	0.33 $\pm$ 0.04	30.4 $\pm$ 3.2	122 $\pm$ 13
T294	0.02 $\pm$ 0.001	0.47 $\pm$ 0.02	42.6 $\pm$ 1.4	170 $\pm$ 5
T295	0.01 $\pm$ 0.001	0.24 $\pm$ 0.02	21.5 $\pm$ 1.4	86 $\pm$ 6
T296	0.01 $\pm$ 0.001	0.25 $\pm$ 0.01	22.9 $\pm$ 1.0	91 $\pm$ 4
T297	0.01 $\pm$ 0.000	0.23 $\pm$ 0.01	21.2 $\pm$ 0.6	85 $\pm$ 2
T298	0.01 $\pm$ 0.001	0.23 $\pm$ 0.02	20.5 $\pm$ 1.8	82 $\pm$ 7
T299	0.01 $\pm$ 0.001	0.24 $\pm$ 0.02	21.8 $\pm$ 2.0	87 $\pm$ 8
T300	0.01 $\pm$ 0.001	0.25 $\pm$ 0.02	23.2 $\pm$ 1.5	93 $\pm$ 6

Table 4-2. 2004 TLD Results. (20 sheets total)

Location	Sample Period	EDP Code	mrem/hr	mrem/day	mrem/qtr	mrem/year	Days in Field
200 West area	1st Quarter '04	T302	0.01	0.24	18.8	87	79
		T303	0.01	0.32	25.5	118	79
		T304	0.01	0.34	26.6	123	79
		T305	0.01	0.23	17.9	83	79
		T306	0.01	0.31	24.9	115	79
		T307	0.01	0.27	21.3	99	79
		T308	0.01	0.25	20.1	93	79
		T309	0.01	0.24	18.8	87	79
		T310	0.01	0.26	20.5	95	79
		T311	0.01	0.25	19.4	90	79
		T312	0.09	2.09	165.1	763	79
		T313	0.02	0.49	38.8	179	79
		T314	0.01	0.23	18.2	84	79
		T315	0.01	0.24	19.1	88	79
		T316	0.01	0.24	19.2	89	79
		T317	0.01	0.24	19.1	88	79
		T318	0.01	0.23	18.0	83	79
		T319	0.01	0.23	17.9	83	79
		T320	0.01	0.30	23.5	109	79
		T321	0.01	0.26	20.9	96	79
		T322	0.01	0.26	20.8	96	79
		T323	0.01	0.30	23.5	109	79
		T324	0.01	0.35	27.3	126	79
		T325	0.01	0.34	27.1	125	79
	2nd Quarter '04	T302	0.01	0.26	25.4	95	98
		T303	0.01	0.33	32.3	120	98
		T304	0.01	0.34	33.1	123	98
		T305	0.01	0.23	22.1	82	98
		T306	0.01	0.28	27.9	104	98
		T307	0.01	0.28	27.1	101	98
		T308	0.01	0.26	25.3	94	98
		T309	0.01	0.27	26.4	98	98
		T310	0.01	0.27	26.9	100	98
		T311	0.01	0.28	27.5	103	98
		T312	1.17	28.1	2749	10243	98
		T313	0.02	0.51	49.9	186	98
		T314	0.01	0.24	23.1	86	98
		T315	0.01	0.25	25.0	93	98
		T316	0.01	0.24	23.5	88	98
		T317	0.01	0.26	25.6	96	98
		T318	0.01	0.23	22.4	83	98
		T319	0.01	0.24	23.1	86	98
		T320	0.01	0.30	29.5	110	98
		T321			TLD not recoverable		
		T322	0.01	0.23	22.4	83	98
		T323	0.01	0.28	27.5	103	98
		T324	0.01	0.35	34.5	129	98
		T325	0.01	0.32	31.0	116	98

Table 4-2. 2004 TLD Results. (20 sheets total)

Location	Sample Period	EDP Code	mrem/hr	mrem/day	mrem/qtr	mrem/year	Days in Field
200 West area	3rd Quarter '04	T302			TLD not recoverable		
		T303	0.01	0.31	30.5	114	98
		T304	0.01	0.34	33.3	124	98
		T305	0.01	0.24	23.5	88	98
		T306	0.01	0.29	28.1	105	98
		T307	0.01	0.27	26.9	100	98
		T308	0.01	0.25	25.0	93	98
		T309	0.01	0.26	25.3	94	98
		T310	0.01	0.27	26.5	99	98
		T311	0.01	0.29	28.3	105	98
		T312	0.02	0.36	35.3	131	98
		T313	0.02	0.47	45.9	171	98
		T314	0.01	0.22	21.8	81	98
		T315	0.01	0.24	23.0	86	98
		T316	0.01	0.26	25.8	96	98
		T317	0.01	0.25	24.5	91	98
		T318	0.01	0.22	21.3	79	98
		T319	0.01	0.24	23.1	86	98
		T320	0.01	0.28	27.5	103	98
		T321	0.01	0.29	28.6	107	98
		T322	0.01	0.23	22.2	83	98
		T323	0.01	0.28	27.0	101	98
		T324	0.01	0.35	34.6	129	98
		T325	0.01	0.32	31.4	117	98
	4th Quarter '04	T302	0.01	0.25	20.8	90	84
		T303	0.01	0.33	27.9	121	84
		T304	0.02	0.36	30.2	131	84
		T305	0.01	0.25	20.9	91	84
		T306	0.01	0.29	24.7	107	84
		T307	0.01	0.29	24.5	107	84
		T308	0.01	0.26	21.9	95	84
		T309	0.01	0.24	19.9	87	84
		T310	0.01	0.28	23.5	102	84
		T311	0.01	0.31	26.3	114	84
		T312	0.02	0.39	32.7	142	84
		T313	0.02	0.51	42.9	186	84
		T314	0.01	0.23	19.7	86	84
		T315	0.01	0.26	22.3	97	84
		T316	0.01	0.27	22.9	100	84
		T317	0.01	0.25	21.0	91	84
		T318	0.01	0.24	20.4	89	84
		T319	0.01	0.23	19.6	85	84
		T320	0.01	0.25	20.8	91	84
		T321	0.01	0.28	23.7	103	84
		T322	0.01	0.24	19.8	86	84
		T323	0.01	0.28	23.7	103	84
		T324	0.02	0.38	31.8	138	84
		T325	0.01	0.34	28.5	124	84

Table 4-2. 2004 TLD Results. (20 sheets total)

EDP Code	200 West area, Annual Average $\pm$ 2 Standard Deviation (2SD)			
	mrem/hr $\pm$ 2SD	mrem/day $\pm$ 2SD	mrem/qtr $\pm$ 2SD	mrem/yr $\pm$ 2SD
T302	0.01 $\pm$ 0.001	0.25 $\pm$ 0.02	22.7 $\pm$ 1.9	91 $\pm$ 8
T303	0.01 $\pm$ 0.001	0.32 $\pm$ 0.02	29.5 $\pm$ 1.6	118 $\pm$ 7
T304	0.01 $\pm$ 0.001	0.34 $\pm$ 0.02	31.3 $\pm$ 2.0	125 $\pm$ 8
T305	0.01 $\pm$ 0.001	0.24 $\pm$ 0.02	21.5 $\pm$ 2.0	86 $\pm$ 8
T306	0.01 $\pm$ 0.001	0.29 $\pm$ 0.03	26.8 $\pm$ 2.5	107 $\pm$ 10
T307	0.01 $\pm$ 0.001	0.28 $\pm$ 0.02	25.4 $\pm$ 1.8	101 $\pm$ 7
T308	0.01 $\pm$ 0.000	0.26 $\pm$ 0.01	23.5 $\pm$ 0.5	94 $\pm$ 2
T309	0.01 $\pm$ 0.001	0.25 $\pm$ 0.03	23.0 $\pm$ 2.9	92 $\pm$ 12
T310	0.01 $\pm$ 0.001	0.27 $\pm$ 0.02	24.7 $\pm$ 1.6	99 $\pm$ 6
T311	0.01 $\pm$ 0.002	0.28 $\pm$ 0.06	25.8 $\pm$ 5.1	103 $\pm$ 20
T312	0.35 $\pm$ 1.13	8.31 $\pm$ 27.2	758 $\pm$ 2479	3032 $\pm$ 9915
T313	0.02 $\pm$ 0.002	0.49 $\pm$ 0.04	45.1 $\pm$ 3.6	180 $\pm$ 14
T314	0.01 $\pm$ 0.001	0.23 $\pm$ 0.01	21.1 $\pm$ 1.2	84 $\pm$ 5
T315	0.01 $\pm$ 0.001	0.25 $\pm$ 0.03	22.7 $\pm$ 2.4	91 $\pm$ 10
T316	0.01 $\pm$ 0.001	0.25 $\pm$ 0.03	23.2 $\pm$ 2.8	93 $\pm$ 11
T317	0.01 $\pm$ 0.001	0.25 $\pm$ 0.02	22.9 $\pm$ 1.5	92 $\pm$ 6
T318	0.01 $\pm$ 0.001	0.23 $\pm$ 0.02	20.9 $\pm$ 1.9	83 $\pm$ 7
T319	0.01 $\pm$ 0.000	0.23 $\pm$ 0.01	21.3 $\pm$ 0.9	85 $\pm$ 3
T320	0.01 $\pm$ 0.002	0.28 $\pm$ 0.05	25.8 $\pm$ 4.5	103 $\pm$ 18
T321	0.01 $\pm$ 0.001	0.28 $\pm$ 0.03	25.6 $\pm$ 2.5	102 $\pm$ 10
T322	0.01 $\pm$ 0.001	0.24 $\pm$ 0.03	21.6 $\pm$ 3.1	86 $\pm$ 13
T323	0.01 $\pm$ 0.001	0.28 $\pm$ 0.02	25.9 $\pm$ 1.8	103 $\pm$ 7
T324	0.01 $\pm$ 0.001	0.36 $\pm$ 0.03	32.6 $\pm$ 2.6	130 $\pm$ 10
T325	0.01 $\pm$ 0.001	0.33 $\pm$ 0.03	30.0 $\pm$ 2.5	120 $\pm$ 10

Table 4-2. 2004 TLD Results. (20 sheets total)

Location	Sample Period	EDP Code	mrem/hr	mrem/day	mrem/qtr	mrem/year	Days in Field
212-R (200 North)	1st Quarter '04	T301	0.31	7.36	581	2685	79
	2nd Quarter '04	T301	0.33	7.86	762	2870	97
	3rd Quarter '04	T301	0.33	7.82	767	2856	98
	4th Quarter '04	T301	0.35	8.35	710	3047	85
<b>212-R, Annual Average <math>\pm</math> 2 Standard Deviation (2SD)</b>							
EDP Code	mrem/hr $\pm$ 2SD		mrem/day $\pm$ 2SD		mrem/qtr $\pm$ 2SD		mrem/yr $\pm$ 2SD
T301	0.33 $\pm$ 0.034		7.86 $\pm$ 0.81		717 $\pm$ 74		2867 $\pm$ 295

Table 4-2. 2004 TLD Results. (20 sheets total)

Location	Sample Period	EDP Code	mrem/hr	mrem/day	mrem/qtr	mrem/year	Days in Field
300 Area	1st Quarter '04	T332	0.01	0.22	20.1	81	91
		T333	0.01	0.24	22.2	89	91
		T334	0.01	0.23	20.7	83	91
		T335	0.01	0.25	22.3	89	91
		T336	0.01	0.21	19.5	78	91
		T337	0.01	0.25	22.4	90	91
		T338	0.01	0.29	26.5	106	91
		T339	0.01	0.29	26.1	105	91
	2nd Quarter '04	T332	0.01	0.24	20.5	87	86
		T333	0.01	0.24	20.6	88	86
		T334	0.01	0.23	19.9	84	86
		T335	0.01	0.24	20.9	89	86
		T336	0.01	0.23	20.1	85	86
		T337	0.01	0.26	21.9	93	86
		T338	0.01	0.32	27.5	117	86
		T339	0.01	0.32	27.6	117	86
	3rd Quarter '04	T332	0.01	0.23	23.2	84	101
		T333	0.01	0.23	23.6	85	101
		T334	0.01	0.22	22.3	81	101
		T335	0.01	0.24	24.1	87	101
		T336	0.01	0.21	21.7	78	101
		T337	0.01	0.27	27.1	98	101
		T338	0.01	0.31	30.9	112	101
		T339	0.01	0.30	30.8	111	101
	4th Quarter '04	T332	0.01	0.23	19.5	85	84
		T333	0.01	0.24	19.9	87	84
		T334	0.01	0.22	18.4	80	84
		T335	0.01	0.24	20.3	88	84
		T336	0.01	0.24	19.8	86	84
		T337	0.01	0.24	20.2	88	84
		T338	0.01	0.31	25.7	112	84
		T339	0.01	0.32	27.1	118	84

**300 Area, Annual Average  $\pm$  2 Standard Deviation (2SD)**

EDP Code	mrem/hr $\pm$ 2SD	mrem/day $\pm$ 2SD	mrem/qtr $\pm$ 2SD	mrem/yr $\pm$ 2SD
T332	0.01 $\pm$ 0.001	0.23 $\pm$ 0.01	21.0 $\pm$ 1.3	84 $\pm$ 5
T333	0.01 $\pm$ 0.000	0.24 $\pm$ 0.01	21.8 $\pm$ 0.8	87 $\pm$ 3
T334	0.01 $\pm$ 0.001	0.22 $\pm$ 0.01	20.5 $\pm$ 1.0	82 $\pm$ 4
T335	0.01 $\pm$ 0.000	0.24 $\pm$ 0.01	22.1 $\pm$ 0.5	88 $\pm$ 2
T336	0.01 $\pm$ 0.001	0.22 $\pm$ 0.02	20.4 $\pm$ 2.1	82 $\pm$ 8
T337	0.01 $\pm$ 0.001	0.25 $\pm$ 0.02	23.1 $\pm$ 2.2	92 $\pm$ 9
T338	0.01 $\pm$ 0.001	0.31 $\pm$ 0.02	27.9 $\pm$ 2.1	111 $\pm$ 8
T339	0.01 $\pm$ 0.001	0.31 $\pm$ 0.03	28.1 $\pm$ 3.0	112 $\pm$ 12



Table 4-2. 2004 TLD Results. (20 sheets total)

Location	Sample Period	EDP Code	mrem/hr	mrem/day	mrem/qtr	mrem/year	Days in Field
300 TEDF	1st Quarter '04	T326	0.01	0.23	21.1	85	91
		T327	0.01	0.22	20.1	81	91
		T328	0.01	0.23	21.0	84	91
		T329	0.01	0.24	21.5	86	91
		T330	0.01	0.23	21.0	84	91
		T331	0.01	0.22	20.3	81	91
	2nd Quarter '04	T326	0.01	0.25	21.2	90	86
		T327	0.01	0.25	21.6	92	86
		T328	0.01	0.25	21.1	90	86
		T329	0.01	0.24	20.3	86	86
		T330	0.01	0.22	18.7	79	86
		T331	0.01	0.24	21.0	89	86
	3rd Quarter '04	T326	0.01	0.23	23.7	86	101
		T327	0.01	0.24	23.9	86	101
		T328	0.01	0.24	23.9	86	101
		T329	0.01	0.23	23.0	83	101
		T330	0.01	0.22	22.1	80	101
		T331	0.01	0.24	24.4	88	101
	4th Quarter '04	T326	0.01	0.23	19.5	85	84
		T327	0.01	0.23	19.6	85	84
		T328	0.01	0.25	20.7	90	84
		T329	0.01	0.24	19.8	86	84
		T330	0.01	0.22	18.7	81	84
		T331	0.01	0.24	19.8	86	84

**300 TEDF, Annual Average  $\pm$  2 Standard Deviation (2SD)**

EDP Code	mrem/hr $\pm$ 2SD	mrem/day $\pm$ 2SD	mrem/qtr $\pm$ 2SD	mrem/yr $\pm$ 2SD
T326	0.01 $\pm$ 0.001	0.24 $\pm$ 0.01	21.5 $\pm$ 1.2	86 $\pm$ 5
T327	0.01 $\pm$ 0.001	0.24 $\pm$ 0.03	21.5 $\pm$ 2.3	86 $\pm$ 9
T328	0.01 $\pm$ 0.001	0.24 $\pm$ 0.01	21.8 $\pm$ 1.3	87 $\pm$ 5
T329	0.01 $\pm$ 0.000	0.23 $\pm$ 0.01	21.3 $\pm$ 0.7	85 $\pm$ 3
T330	0.01 $\pm$ 0.001	0.22 $\pm$ 0.01	20.3 $\pm$ 1.1	81 $\pm$ 4
T331	0.01 $\pm$ 0.001	0.24 $\pm$ 0.02	21.6 $\pm$ 1.7	86 $\pm$ 7

Table 4-2. 2004 TLD Results. (20 sheets total)

Location	Sample Period	EDP Code	mrem/hr	mrem/day	mrem/qtr	mrem/year	Days in Field
300-FF-2 RA (300 Area)	2nd Quarter '04	T369	0.01	0.25	20.4	92	81
		T370	0.01	0.25	20.1	91	81
		T371	0.01	0.25	20.1	91	81
		T372	0.01	0.24	19.7	89	81
		T373	0.01	0.25	20.4	92	81
		T374	0.01	0.23	18.9	85	81
	3rd Quarter '04	T369	0.01	0.22	21.8	79	101
		T370	0.01	0.23	23.4	84	101
		T371	0.01	0.23	23.3	84	101
		T372	0.01	0.24	24.2	87	101
		T373	0.01	0.23	23.0	83	101
		T374	0.01	0.21	21.1	76	101
	4th Quarter '04	T369	0.01	0.23	19.4	84	84
		T370	0.01	0.23	19.0	83	84
		T371	0.01	0.24	20.5	89	84
		T372	0.01	0.25	20.8	90	84
		T373	0.01	0.23	19.4	84	84
		T374	0.01	0.31	26.4	114	84

**300-FF-2, Annual Average  $\pm$  2 Standard Deviation (2SD)**

EDP Code	mrem/hr $\pm$ 2SD	mrem/day $\pm$ 2SD	mrem/qtr $\pm$ 2SD	mrem/yr $\pm$ 2SD
T369	0.01 $\pm$ 0.002	0.23 $\pm$ 0.04	21.1 $\pm$ 3.3	85 $\pm$ 13
T370	0.01 $\pm$ 0.001	0.23 $\pm$ 0.02	21.4 $\pm$ 2.1	86 $\pm$ 9
T371	0.01 $\pm$ 0.001	0.24 $\pm$ 0.02	21.9 $\pm$ 1.7	88 $\pm$ 7
T372	0.01 $\pm$ 0.000	0.24 $\pm$ 0.01	22.2 $\pm$ 0.7	89 $\pm$ 3
T373	0.01 $\pm$ 0.001	0.24 $\pm$ 0.03	21.6 $\pm$ 2.4	86 $\pm$ 10
T374	0.01 $\pm$ 0.005	0.25 $\pm$ 0.11	22.8 $\pm$ 10.0	91 $\pm$ 40

Table 4-2. 2004 TLD Results. (20 sheets total)

Location	Sample Period	EDP Code	mrem/hr	mrem/day	mrem/qtr	mrem/year	Days in Field
400 Area	1st Quarter '04	T340	0.01	0.22	20.0	80	91
		T341	0.01	0.22	19.7	79	91
		T342	0.01	0.23	20.8	83	91
		T343	0.01	0.22	19.8	79	91
		T344	0.01	0.22	20.0	80	91
		T345	0.01	0.22	20.0	80	91
		T346	0.01	0.24	22.2	89	91
	2nd Quarter '04	T340	0.01	0.23	20.1	85	86
		T341	0.01	0.22	19.1	81	86
		T342	0.01	0.23	19.9	84	86
		T343	0.01	0.22	19.2	82	86
		T344	0.01	0.21	18.5	78	86
		T345	0.01	0.24	20.3	86	86
		T346	0.01	0.22	19.0	81	86
	3rd Quarter '04	T340	0.01	0.24	24.0	87	101
		T341	0.01	0.23	23.2	84	101
		T342	0.01	0.23	23.6	86	101
		T343	0.01	0.23	22.8	82	101
		T344	0.01	0.23	23.4	85	101
		T345	0.01	0.23	23.6	85	101
		T346	0.01	0.21	21.1	76	101
	4th Quarter '04	T340	0.01	0.24	20.0	87	84
		T341	0.01	0.23	19.5	85	84
		T342	0.01	0.22	18.5	81	84
		T343	0.01	0.23	19.6	85	84
		T344	0.01	0.23	19.1	83	84
		T345	0.01	0.23	19.3	84	84
		T346	0.01	0.24	19.9	86	84

400 Area, Annual Average  $\pm$  2 Standard Deviation (2SD)

EDP Code	mrem/hr $\pm$ 2SD	mrem/day $\pm$ 2SD	mrem/qtr $\pm$ 2SD	mrem/yr $\pm$ 2SD
T340	0.01 $\pm$ 0.001	0.23 $\pm$ 0.02	21.2 $\pm$ 1.5	85 $\pm$ 6
T341	0.01 $\pm$ 0.001	0.23 $\pm$ 0.01	20.5 $\pm$ 1.3	82 $\pm$ 5
T342	0.01 $\pm$ 0.001	0.23 $\pm$ 0.01	20.9 $\pm$ 1.1	83 $\pm$ 4
T343	0.01 $\pm$ 0.001	0.22 $\pm$ 0.01	20.5 $\pm$ 1.2	82 $\pm$ 5
T344	0.01 $\pm$ 0.001	0.22 $\pm$ 0.02	20.4 $\pm$ 1.4	82 $\pm$ 5
T345	0.01 $\pm$ 0.001	0.23 $\pm$ 0.01	21.0 $\pm$ 1.3	84 $\pm$ 5
T346	0.01 $\pm$ 0.001	0.23 $\pm$ 0.03	20.7 $\pm$ 2.9	83 $\pm$ 11

Table 4-2. 2004 TLD Results. (20 sheets total)

Location	Sample Period	EDP Code	mrem/hr	mrem/day	mrem/qtr	mrem/year	Days in Field
ERDF	1st Quarter '04	T351	0.01	0.26	23.5	95	90
		T352	0.01	0.25	22.5	91	90
		T353	0.01	0.25	22.9	93	90
	2nd Quarter '04	T351	0.01	0.27	26.5	97	100
		T352	0.01	0.27	26.6	97	100
		T353	0.01	0.25	25.3	93	100
	3rd Quarter '04	T351	0.01	0.24	21.6	88	90
		T352	0.01	0.26	23.8	97	90
		T353	0.01	0.32	28.5	116	90
	4th Quarter '04	T351	0.01	0.23	25.0	85	107
		T352	0.01	0.26	28.0	95	107
		T353	0.01	0.27	28.9	99	107
ERDF, Annual Average ± 2 Standard Deviation (2SD)							
EDP Code	mrem/hr ± 2SD		mrem/day ± 2SD		mrem/qtr ± 2SD		mrem/yr ± 2SD
T351	0.01 ± 0.001		0.25 ± 0.03		22.8 ± 2.8		91 ± 11
T352	0.01 ± 0.001		0.26 ± 0.02		23.8 ± 1.4		95 ± 5
T353	0.01 ± 0.003		0.27 ± 0.06		24.9 ± 5.4		100 ± 22

## 5.0 100-N RIVERBANK SPRINGS MONITORING

In 2004, water samples were taken only at the riverbank springs in the 100-N Area. All radiological analyses were performed onsite at the WSCF. Analyses for riverbank springs water included tritium, strontium-90, and gamma-emitting radionuclides.

Riverbank springs and/or shoreline seepage wells along the 100-N Area shoreline are sampled annually to verify that the reported radionuclide releases to the Columbia River are conservative (i.e., not underreported). In the past, radioactive effluent streams from operations in the 100-N Area were sent to the now retired 116-N-1 (1301-N) and 116-N-3 (1325-N) liquid waste disposal facilities (i.e., engineered soil columns). After moving through the soil column to the water table, this wastewater migrated with the groundwater and entered the Columbia River via springs located along the adjacent riverbank region sometimes called N Springs. Historically, the highest concentrations of radionuclides have been in the general vicinity of the monitoring well 199-N-46. Groundwater springs and/or shoreline wells along the N Springs are sampled annually to verify that the reported radionuclide release estimates, based on analyses of samples collected routinely from monitoring well 199-N-46, are not underreported. Locations of the shoreline wells and of the monitoring well, as well as a comprehensive presentation of the analytical data, are illustrated in Figure 5-1.

To calculate releases to the Columbia River, the conservatively high radionuclide activities in samples collected from well 199-N-46 are multiplied by the estimated groundwater discharged into the river. The estimated groundwater flow rate used to calculate 2004 releases from the springs was 42 L/min (11 gal/min). Additional discussion of the release calculations may be found in HNF-EP-0527-14, *Environmental Releases for Calendar Year 2004* (Dyckman 2005).

In October 2004, eight samples were collected from the 13 shoreline wells. Five wells were dry and could not be sampled. The shoreline seepage well samples were collected using a bailer that was carefully lowered into each well water column to avoid sediment suspension, and a 4-L (1-gal) sample was obtained. The sampling methods are discussed in more detail in DTS-OEM-001.

In 2004, strontium-90 was detected in all eight of the riverbank springs samples. The highest concentrations were from wells Y304 (near well 199-N-46), and Y311 (downstream of well 199-N-46). Strontium-90 concentrations did not exceed the DOE DCG value at any well. Tritium and gamma-emitting radionuclide concentrations were below analytical detection limits in all eight samples. The 2004 data results from riverbank springs sampling are summarized in Table 5-1. Historical tritium and strontium-90 sampling results are provided in Tables 5-2 and 5-3.

Figure 5-1. 100-N Area Shoreline Seepage Well Locations.

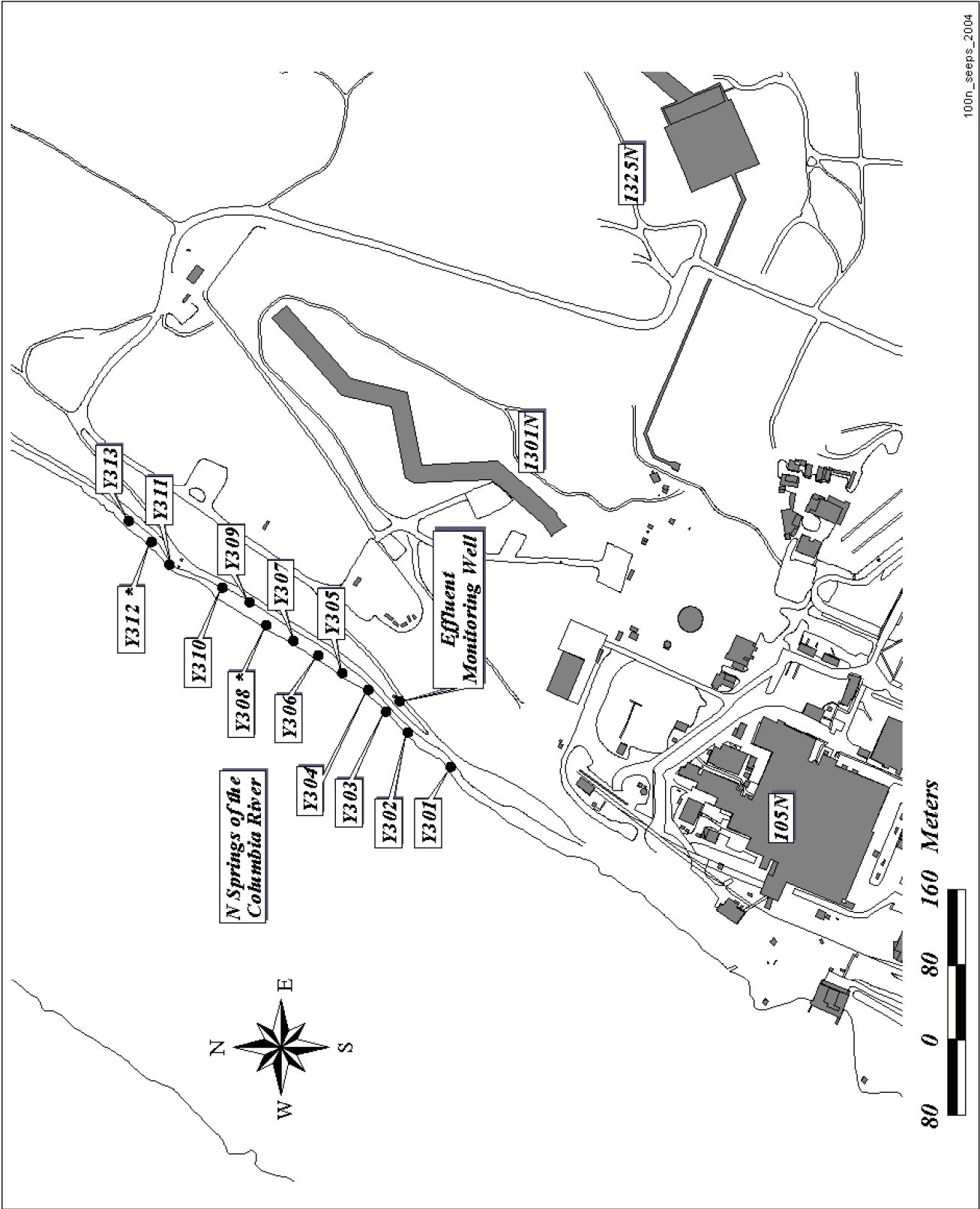


Table 5-1. 2004 Radiological Results for N-Springs Water Samples  
(pCi/L  $\pm$  total analytical uncertainty). (2 sheets total)

Location	Isotope	result $\pm$ uncertainty	RQ*	Location	Isotope	result $\pm$ uncertainty	RQ*
Y301	<sup>144</sup> Ce	-3.9E+01 $\pm$ 5.8E+01	U	Y302	<sup>144</sup> Ce	-2.2E+01 $\pm$ 7.8E+01	U
	<sup>60</sup> Co	7.1E+00 $\pm$ 6.6E+00	U		<sup>60</sup> Co	-1.3E+00 $\pm$ 5.4E+00	U
	<sup>134</sup> Cs	-4.1E+00 $\pm$ 7.0E+00	U		<sup>134</sup> Cs	-4.3E+00 $\pm$ 6.0E+00	U
	<sup>137</sup> Cs	-1.4E+00 $\pm$ 6.1E+00	U		<sup>137</sup> Cs	4.3E+00 $\pm$ 5.7E+00	U
	<sup>152</sup> Eu	-5.6E+00 $\pm$ 1.5E+01	U		<sup>152</sup> Eu	-2.4E+01 $\pm$ 2.4E+01	U
	<sup>154</sup> Eu	3.2E+00 $\pm$ 1.6E+01	U		<sup>154</sup> Eu	-2.2E+00 $\pm$ 1.4E+01	U
	<sup>155</sup> Eu	-6.1E+00 $\pm$ 1.5E+01	U		<sup>155</sup> Eu	-7.6E+00 $\pm$ 2.1E+01	U
	<sup>3</sup> H	-1.9E+02 $\pm$ 1.9E+02	U		<sup>3</sup> H	-2.4E+02 $\pm$ 2.8E+02	U
	<sup>103</sup> Ru	-3.0E+00 $\pm$ 5.2E+00	U		<sup>103</sup> Ru	-1.0E-01 $\pm$ 1.0E+00	U
	<sup>106</sup> Ru	4.8E+00 $\pm$ 4.8E+01	U		<sup>106</sup> Ru	4.5E+00 $\pm$ 4.5E+01	U
	<sup>125</sup> Sb	-3.3E+00 $\pm$ 1.4E+01	U		<sup>125</sup> Sb	6.6E+00 $\pm$ 1.5E+01	U
	<sup>113</sup> Sn	1.0E+00 $\pm$ 6.6E+00	U		<sup>113</sup> Sn	-3.2E+00 $\pm$ 9.7E+00	U
	<sup>90</sup> Sr	2.4E+00 $\pm$ 9.6E-01			<sup>90</sup> Sr	5.9E+00 $\pm$ 5.6E+00	
	<sup>65</sup> Zn	-6.2E+00 $\pm$ 1.2E+01	U		<sup>65</sup> Zn	-1.0E+01 $\pm$ 1.1E+01	U
Y304	<sup>144</sup> Ce	-1.7E+01 $\pm$ 2.9E+01	U	Y305	<sup>144</sup> Ce	2.7E+01 $\pm$ 6.9E+01	U
	<sup>60</sup> Co	6.3E-01 $\pm$ 2.3E+00	U		<sup>60</sup> Co	-3.6E+00 $\pm$ 6.2E+00	U
	<sup>134</sup> Cs	-1.8E+00 $\pm$ 2.2E+00	U		<sup>134</sup> Cs	-3.5E+00 $\pm$ 5.7E+00	U
	<sup>137</sup> Cs	-4.1E-01 $\pm$ 2.0E+00	U		<sup>137</sup> Cs	-4.9E+00 $\pm$ 6.0E+00	U
	<sup>152</sup> Eu	-6.8E-01 $\pm$ 6.3E+00	U		<sup>152</sup> Eu	-7.6E+00 $\pm$ 1.6E+01	U
	<sup>154</sup> Eu	-4.1E+00 $\pm$ 7.0E+00	U		<sup>154</sup> Eu	4.1E+01 $\pm$ 1.1E+01	U
	<sup>155</sup> Eu	-5.6E+00 $\pm$ 6.8E+00	U		<sup>155</sup> Eu	1.3E+00 $\pm$ 1.3E+01	U
	<sup>3</sup> H	-1.8E+02 $\pm$ 3.2E+02	U		<sup>3</sup> H	-1.8E+02 $\pm$ 1.8E+02	U
	<sup>103</sup> Ru	2.0E+00 $\pm$ 2.2E+00	U		<sup>103</sup> Ru	-7.9E-01 $\pm$ 5.1E+00	U
	<sup>106</sup> Ru	-1.4E-01 $\pm$ 1.4E+00	U		<sup>106</sup> Ru	6.1E+00 $\pm$ 4.9E+01	U
	<sup>125</sup> Sb	-4.8E-01 $\pm$ 4.8E+00	U		<sup>125</sup> Sb	-9.8E+00 $\pm$ 1.4E+01	U
	<sup>113</sup> Sn	-1.7E+00 $\pm$ 2.8E+00	U		<sup>113</sup> Sn	-6.5E-01 $\pm$ 6.4E+00	U
	<sup>90</sup> Sr	1.5E+01 $\pm$ 2.3E+00			<sup>90</sup> Sr	2.2E+00 $\pm$ 8.8E-01	
	<sup>65</sup> Zn	-5.5E-01 $\pm$ 5.3E+00	U		<sup>65</sup> Zn	-2.6E+01 $\pm$ 2.6E+01	U
Y306	<sup>144</sup> Ce	1.3E+01 $\pm$ 7.0E+01	U	Y307	<sup>144</sup> Ce	-5.2E+00 $\pm$ 5.2E+01	U
	<sup>60</sup> Co	-2.8E+00 $\pm$ 5.9E+00	U		<sup>60</sup> Co	5.4E+00 $\pm$ 5.8E+00	U
	<sup>134</sup> Cs	3.7E+00 $\pm$ 6.1E+00	U		<sup>134</sup> Cs	-1.9E+00 $\pm$ 6.2E+00	U
	<sup>137</sup> Cs	-3.0E+00 $\pm$ 6.1E+00	U		<sup>137</sup> Cs	2.6E-01 $\pm$ 2.6E+00	U
	<sup>152</sup> Eu	-1.1E+01 $\pm$ 1.8E+01	U		<sup>152</sup> Eu	1.1E+00 $\pm$ 1.1E+01	U
	<sup>154</sup> Eu	3.5E+00 $\pm$ 1.7E+01	U		<sup>154</sup> Eu	4.3E+00 $\pm$ 1.5E+01	U
	<sup>155</sup> Eu	7.1E+00 $\pm$ 1.9E+01	U		<sup>155</sup> Eu	5.5E+00 $\pm$ 1.9E+01	U
	<sup>3</sup> H	-2.2E+02 $\pm$ 2.2E+02	U		<sup>3</sup> H	-2.2E+02 $\pm$ 2.2E+02	U
	<sup>103</sup> Ru	-1.3E+00 $\pm$ 5.9E+00	U		<sup>103</sup> Ru	1.2E+00 $\pm$ 5.6E+00	U
	<sup>106</sup> Ru	-2.4E+00 $\pm$ 2.4E+01	U		<sup>106</sup> Ru	2.9E+01 $\pm$ 5.5E+01	U
	<sup>125</sup> Sb	5.5E+00 $\pm$ 1.6E+01	U		<sup>125</sup> Sb	-7.2E+00 $\pm$ 1.5E+01	U
	<sup>113</sup> Sn	3.7E-01 $\pm$ 3.7E+00	U		<sup>113</sup> Sn	-1.7E+00 $\pm$ 6.8E+00	U
	<sup>90</sup> Sr	1.1E+00 $\pm$ 7.1E-01			<sup>90</sup> Sr	1.3E+00 $\pm$ 9.1E-01	
	<sup>65</sup> Zn	9.8E+00 $\pm$ 1.4E+01	U		<sup>65</sup> Zn	-1.5E+00 $\pm$ 1.3E+01	U

RQ\* = Result Qualifier. U = The analyte was analyzed for but not detected.

Table 5-1. 2004 Radiological Results for N-Springs Water Samples  
(pCi/L  $\pm$  total analytical uncertainty). (2 sheets total)

Location	Isotope	result $\pm$ uncertainty	RQ*	Location	Isotope	result $\pm$ uncertainty	RQ*
Y309	<sup>144</sup> Ce	2.2E+01 $\pm$ 6.0E+01	U	Y311	<sup>144</sup> Ce	3.8E+01 $\pm$ 5.8E+01	U
	<sup>60</sup> Co	2.8E+00 $\pm$ 5.8E+00	U		<sup>60</sup> Co	-2.1E+00 $\pm$ 4.9E+00	U
	<sup>134</sup> Cs	-3.7E+00 $\pm$ 6.2E+00	U		<sup>134</sup> Cs	-2.3E+00 $\pm$ 4.5E+00	U
	<sup>137</sup> Cs	4.8E+00 $\pm$ 5.9E+00	U		<sup>137</sup> Cs	-2.9E+00 $\pm$ 4.6E+00	U
	<sup>152</sup> Eu	9.1E-01 $\pm$ 9.1E+00	U		<sup>152</sup> Eu	-3.3E+00 $\pm$ 1.3E+01	U
	<sup>154</sup> Eu	-1.3E+01 $\pm$ 1.5E+01	U		<sup>154</sup> Eu	3.8E-01 $\pm$ 3.8E+00	U
	<sup>155</sup> Eu	3.7E+00 $\pm$ 1.5E+01	U		<sup>155</sup> Eu	4.5E+00 $\pm$ 1.3E+01	U
	<sup>3</sup> H	-1.7E+02 $\pm$ 1.7E+03	U		<sup>3</sup> H	-1.6E+02 $\pm$ 1.6E+02	U
	<sup>103</sup> Ru	-1.2E+00 $\pm$ 5.2E+00	U		<sup>103</sup> Ru	1.5E+00 $\pm$ 4.4E+00	U
	<sup>106</sup> Ru	7.1E+00 $\pm$ 5.2E+01	U		<sup>106</sup> Ru	-2.2E+00 $\pm$ 2.2E+01	U
	<sup>125</sup> Sb	-4.4E-01 $\pm$ 4.4E+00	U		<sup>125</sup> Sb	2.3E+00 $\pm$ 1.2E+01	U
	<sup>113</sup> Sn	-1.0E+00 $\pm$ 6.6E+00	U		<sup>113</sup> Sn	-4.7E+00 $\pm$ 5.8E+00	U
	<sup>90</sup> Sr	1.0E+00 $\pm$ 8.2E-01			<sup>90</sup> Sr	1.9E+01 $\pm$ 3.8E+00	
	<sup>65</sup> Zn	1.9E+01 $\pm$ 1.3E+01	U		<sup>65</sup> Zn	5.4E+00 $\pm$ 8.4E+00	U

RQ\* = Result Qualifier. U = The analyte was analyzed for but not detected.



Table 5-2. Historical N-Springs Shoreline Tritium Concentrations  
(pCi/L  $\pm$  total analytical uncertainty).

Year	Y301	Y302	Effluent monitoring well	Y303	Y304	Y305	Y306
1987	6.8E+04	7.6E+04	9.5E+04	9.2E+04	9.4E+04	8.8E+04	7.9E+04
1988	5.7E+03	2.8E+04	7.5E+04	6.9E+04	7.4E+04	NS	NS
1989	2.5E+04	2.8E+04	3.9E+04	3.6E+04	5.0E+04	NS	6.8E+04
1990	2.9E+04	3.2E+04	3.8E+04	3.6E+04	NS	NS	3.4E+03
1991	2.2E+02	8.4E+01	3.7E+04	2.6E+03	3.4E+04	NS	4.0E+02
1992	7.2E+02	NS	5.0E+04	9.5E-01	NS	NS	1.5E+02
1993	2.8E+02	1.3E+02	2.7E+04 $\pm$ 2.1E+03	1.4E+02	5.6E+02	1.0E+02	1.8E+02
1994	NS	4.0E+01 $\pm$ 1.9E+02	2.6E+04 $\pm$ 2.1E+03	4.0E+01	NS	NS	1.2E+02 $\pm$ 2.0E+02
1995	NS	NS	5.2E+03	-1.2E+01 $\pm$ 1.2E+02	NS	NS	-4.4E+01 $\pm$ 1.5E+02
1996	2.5E+02	8.5E+02 $\pm$ 2.5E+02	2.0E+04 $\pm$ 1.6E+03	1.6E+04 $\pm$ 1.3E+03	4.2E+03 $\pm$ 5.0E+02	1.6E+02 $\pm$ 2.2E+02	2.2E+02 $\pm$ 2.1E+02
1997	-4.3E+01 $\pm$ 5.6E+01	3.6E+01 $\pm$ 3.2E+01	1.6E+04 $\pm$ 1.3E+03	3.0E+03 $\pm$ 6.0E+02	-6.3E+02 $\pm$ 1.1E+03	-5.7E+01 $\pm$ 9.1E+01	-1.1E+02 $\pm$ 5.4E+02
1998	NS	4.6E+02 $\pm$ 2.1E+02	1.6E+04 $\pm$ 5.1E+03	1.4E+02 $\pm$ 3.6E+01	NS	3.7E+02 $\pm$ 2.6E+02	4.3E+02 $\pm$ 2.2E+02
1999	9.7E+01 $\pm$ 7.4E+01	1.0E+02 $\pm$ 7.0E+01	1.3E+02 $\pm$ 7.9E+01	1.9E+02 $\pm$ 9.7E+01	NS	4.7E+01 $\pm$ 4.7E+01	3.6E+00 $\pm$ 7.6E+00
2000	1.3E+03 $\pm$ 3.3E+02	2.8E+02 $\pm$ 1.5E+02	7.0E+03 $\pm$ 3.1E+03	2.8E+02 $\pm$ 1.5E+02	2.8E+02 $\pm$ 1.4E+02	2.0E+02 $\pm$ 1.4E+02	2.0E+02 $\pm$ 1.4E+02
2001	9.9E-01 $\pm$ 8.9E-01	9.9E-01 $\pm$ 7.9E-01	5.0E+03 $\pm$ 5.1E+02	9.6E+01 $\pm$ 6.7E+01	NS	5.9E+01 $\pm$ 6.2E+01	5.0E+01 $\pm$ 6.5E+01
2002	-3.0E+02 $\pm$ 4.8E+02	-3.2E+02 $\pm$ 5.1E+02	6.8E+02 $\pm$ 6.8E+01 <sup>a</sup>	-4.7E+02 $\pm$ 8.0E+02	NS	-4.9E+02 $\pm$ 4.9E+02	-3.6E+02 $\pm$ 3.6E+02
2003	NS	2.4E+01 $\pm$ 5.4E+01	6.4E+02 $\pm$ 9.5E+02 <sup>a</sup>	4.5E-01 $\pm$ 2.4E+00	NS	1.9E+01 $\pm$ 4.9E+01	-7.5E+01 $\pm$ 1.2E+02
2004	-1.9E+02 $\pm$ 1.9E+02	-2.4E+02 $\pm$ 2.8E+02	2.5E+02 $\pm$ 7.7E+02 <sup>a</sup>	NS	-1.8E+02 $\pm$ 3.2E+02	-1.8E+02 $\pm$ 1.8E+02	-2.2E+02 $\pm$ 2.2E+02

Year	Y307	Y308	Y309	Y310	Y311	Y312	Y313
1987	7.3E+04	4.6E+04	7.5E+04	4.0E+03	5.8E+04	2.1E+04	1.3E+03
1988	1.1E+04	3.0E+04	1.0E+04	NS	2.9E+04	1.9E+04	3.0E+03
1989	NS	7.7E+04	7.0E+04	3.5E+04	4.2E+04	NS	NS
1990	NS	1.4E+04	3.5E+03	9.7E+03	3.8E+04	2.0E+04	NS
1991	8.1E+02	2.1E+03	6.5E+03	7.9E+02	7.1E+02	2.4E+03	9.3E+00
1992	NS	NS	3.0E+02	4.3E+02	6.5E+02	1.7E+02	NS
1993	NS	NS	NS	NS	NS	NS	NS
1994	8.5E+01 $\pm$ 1.9E+02	1.3E+02 $\pm$ 2.0E+02	8.4E+01 $\pm$ 1.9E+02	4.0E+02 $\pm$ 2.1E+02	4.5E+02 $\pm$ 2.1E+02	2.9E+02 $\pm$ 2.0E+02	NS
1995	-2.1E+00 $\pm$ 2.1E+01	-2.3E+01 $\pm$ 1.4E+02	-3.1E+01 $\pm$ 1.4E+02	-1.2E+01 $\pm$ 1.2E+02	3.2E+02 $\pm$ 1.6E+02	5.0E+02 $\pm$ 1.8E+02	NS
1996	1.9E+02 $\pm$ 2.1E+02	2.4E+02 $\pm$ 2.1E+02	NS	NS	2.2E+02 $\pm$ 2.1E+02	NS	NS
1997	-1.4E+02 $\pm$ 1.4E+03	-1.2E+02 $\pm$ 8.2E+02	-6.4E+01 $\pm$ 1.0E+02	-1.1E+02 $\pm$ 5.4E+02	2.6E+01 $\pm$ 2.1E+01	NS	NS
1998	3.5E+02 $\pm$ 2.6E+02	NS	3.5E+02 $\pm$ 2.7E+02	3.0E+02 $\pm$ 2.1E+02	5.6E+02 $\pm$ 2.5E+02	6.2E+02 $\pm$ 2.5E+02	5.2E+02 $\pm$ 2.6E+02
1999	2.7E+02 $\pm$ 1.1E+02	1.1E+02 $\pm$ 8.8E+01	NS	1.3E+02 $\pm$ 8.5E+01	1.8E+02 $\pm$ 9.9E+01	1.5E+02 $\pm$ 9.8E+01	NS
2000	3.0E+02 $\pm$ 1.5E+02	2.4E+02 $\pm$ 1.4E+02	1.9E+02 $\pm$ 1.3E+02	2.4E+02 $\pm$ 1.4E+02	4.0E+02 $\pm$ 1.6E+02	3.7E+02 $\pm$ 1.7E+02	2.5E+02 $\pm$ 1.4E+02
2001	9.7E+01 $\pm$ 9.9E+01	NS	1.9E+02 $\pm$ 1.1E+02	8.8E+01 $\pm$ 9.7E+01	5.3E+01 $\pm$ 8.5E+01	9.9E-01 $\pm$ 2.4E+00	NS
2002	-4.3E+02 $\pm$ 4.3E+02	-3.2E+02 $\pm$ 3.8E+02	-3.5E+02 $\pm$ 3.9E+02	-3.4E+02 $\pm$ 3.4E+02	-2.6E+02 $\pm$ 3.6E+02	-2.3E+02 $\pm$ 4.3E+02	NS
2003	4.5E-01 $\pm$ 3.6E+00	-1.8E+00 $\pm$ 7.7E+00	-1.4E+02 $\pm$ 1.7E+02	NS	1.9E+01 $\pm$ 2.1E+01	-5.9E+01 $\pm$ 5.9E+02	-1.2E+02 $\pm$ 1.3E+02
2004	-2.2E+02 $\pm$ 2.2E+02	NS	-1.7E+02 $\pm$ 1.7E+03	NS	-1.6E+02 $\pm$ 1.6E+02	NS	NS

NS - Not Sampled

<sup>a</sup>Average of two or more samples  $\pm$  2 standard deviations

Table 5-3. Historical N-Springs Shoreline Strontium-90 Concentrations  
(pCi/L  $\pm$  total analytical uncertainty).

Year	Y301	Y302	Effluent monitoring well	Y303	Y304	Y305	Y306
1987	1.7E+03	2.7E+03	6.1E+03	8.3E+03	4.1E+03	9.5E+02	7.2E+02
1988	8.7E+02	3.0E+03	7.9E+03	9.1E+03	3.5E+03	NS	NS
1989	9.8E+02	2.1E+03	6.5E+03	5.4E+03	3.8E+03	NS	8.9E+02
1990	2.4E+03	2.9E+03	4.9E+03	7.1E+03	NS	NS	1.5E+02
1991	1.6E+01	2.4E+01	6.9E+03	1.4E+03	3.2E+03	NS	8.6E+01
1992	NS	NS	6.3E+03	1.5E+02	NS	NS	9.6E+00
1993	1.2E+01	8.3E+01	7.4E+03 $\pm$ 1.3E+03	1.2E+02	4.1E+03	4.1E+01	1.3E+01
1994	NS	1.1E+02 $\pm$ 2.6E+01	6.6E+03 $\pm$ 1.4E+03	1.2E+02	NS	NS	6.4E+00 $\pm$ 1.7E+00
1995	NS	NS	5.7E+03 $\pm$ 1.4E+03	3.0E+02 $\pm$ 5.1E+01	NS	NS	7.0E+00 $\pm$ 1.4E+00
1996	5.8E+01	2.6E+02 $\pm$ 6.5E+01	1.4E+04 $\pm$ 4.1E+03	5.8E+03 $\pm$ 1.6E+03	9.5E+02 $\pm$ 2.6E+02	3.7E+01 $\pm$ 1.0E+01	1.6E+01 $\pm$ 4.2E+00
1997	3.1E+01 $\pm$ 4.7E+00	2.0E+02 $\pm$ 2.8E+01	1.0E+04 $\pm$ 3.5E+03	3.2E+03 $\pm$ 3.8E+02	1.7E+02 $\pm$ 2.2E+01	2.6E+01 $\pm$ 4.7E+00	3.1E+00 $\pm$ 1.6E+00
1998	NS	1.1E+02 $\pm$ 1.3E+01	1.4E+04 $\pm$ 2.1E+03	1.9E+03 $\pm$ 2.3E+02	NS	1.7E+01 $\pm$ 2.6E+00	7.7E+00 $\pm$ 1.5E+00
1999	7.1E+00 $\pm$ 1.4E+00	4.9E+01 $\pm$ 7.4E+00	3.2E+03 $\pm$ 4.8E+02	1.3E+03 $\pm$ 2.0E+02	NS	3.0E+01 $\pm$ 4.5E+00	8.1E+00 $\pm$ 1.6E+00
2000	8.3E+00 $\pm$ 1.7E+00	1.1E+01 $\pm$ 1.6E+00	1.3E+04 $\pm$ 4.0E+03	1.3E+02 $\pm$ 2.6E+01	1.8E+02 $\pm$ 2.7E+01	7.1E+00 $\pm$ 1.4E+00	4.0E+00 $\pm$ 1.0E+00
2001	4.3E+00 $\pm$ 8.6E-01	1.9E+01 $\pm$ 2.8E+00	9.7E+03 $\pm$ 2.2E+03	4.5E+01 $\pm$ 6.8E+00	NS	9.6E+00 $\pm$ 1.9E+00	3.3E+00 $\pm$ 8.2E-01
2002	5.2E+00 $\pm$ 1.0E+00	2.2E+01 $\pm$ 4.4E+00	4.8E+03 $\pm$ 4.8E+04 <sup>a</sup>	8.2E+01 $\pm$ 1.6E+01	NS	5.2E+00 $\pm$ 1.0E+00	1.6E+00 $\pm$ 5.6E-01
2003	NS	2.3E+01 $\pm$ 3.4E+00	4.1E+03 $\pm$ 4.2E+02 <sup>a</sup>	5.9E+00 $\pm$ 1.5E+00	NS	3.8E+00 $\pm$ 1.3E+00	2.0E+00 $\pm$ 7.0E-01
2004	2.4E+00 $\pm$ 9.6E-01	5.9E+00 $\pm$ 5.6E+00	2.2E+03 $\pm$ 1.7E+03 <sup>a</sup>	NS	1.5E+01 $\pm$ 2.3E+00	2.2E+00 $\pm$ 8.8E-01	1.1E+00 $\pm$ 7.1E-01

Year	Y307	Y308	Y309	Y310	Y311	Y312	Y313
1987	1.3E+01	4.2E+01	2.4E+02	5.7E+01	6.6E+02	5.8E+01	5.0E+01
1988	1.5E+01	3.2E+01	4.1E+01	NS	3.4E+02	4.0E+01	5.8E+01
1989	NS	7.8E+01	2.9E+02	1.6E+02	9.5E+02	NS	NS
1990	NS	9.0E+01	4.4E+01	3.1E+01	5.8E+02	5.4E+01	NS
1991	1.4E+01	2.8E+01	1.0E+02	1.5E+01	4.0E+02	8.9E+00	8.1E+00
1992	NS	NS	8.1E+00	6.7E+00	1.1E+02	7.1E+00	NS
1993	NS	NS	NS	NS	NS	NS	NS
1994	3.8E+00 $\pm$ 8.7E-01	1.2E+01 $\pm$ 2.5E+00	3.4E+00 $\pm$ 9.2E-01	3.8E+00 $\pm$ 1.0E+00	5.1E+01 $\pm$ 1.1E+01	1.8E+01 $\pm$ 4.3E+00	NS
1995	3.8E+00 $\pm$ 8.0E-01	1.4E+01 $\pm$ 2.7E+00	5.5E+00 $\pm$ 1.2E+00	7.0E+00 $\pm$ 1.4E+00	7.1E+01 $\pm$ 1.3E+01	1.9E+01 $\pm$ 3.6E+00	NS
1996	6.5E+00 $\pm$ 1.8E+00	2.2E+01 $\pm$ 5.7E+00	NS	NS	1.7E+02 $\pm$ 4.9E+01	NS	NS
1997	3.6E-01 $\pm$ 1.9E+00	1.1E+01 $\pm$ 2.2E+00	5.6E+00 $\pm$ 1.7E+00	7.6E-01 $\pm$ 2.0E+00	1.5E+02 $\pm$ 2.0E+01	NS	NS
1998	1.5E+01 $\pm$ 2.3E+00	NS	5.1E+00 $\pm$ 1.0E+00	2.9E+00 $\pm$ 8.7E-01	1.1E+02 $\pm$ 1.4E+01	1.8E+01 $\pm$ 2.3E+00	3.6E+00 $\pm$ 1.1E+00
1999	1.9E+00 $\pm$ 7.6E-01	2.5E+00 $\pm$ 7.5E-01	NS	4.0E+00 $\pm$ 8.8E-01	4.3E+01 $\pm$ 6.5E+00	9.2E+00 $\pm$ 1.5E+00	NS
2000	3.3E+00 $\pm$ 8.2E-01	4.5E+00 $\pm$ 1.1E+00	2.2E+00 $\pm$ 6.6E-01	7.0E-01 $\pm$ 5.6E-01	4.8E+01 $\pm$ 1.2E+01	3.8E+00 $\pm$ 7.6E-01	2.0E-01 $\pm$ 4.4E-01
2001	3.4E+00 $\pm$ 8.5E-01	NS	2.5E+00 $\pm$ 7.5E-01	2.8E+00 $\pm$ 8.4E-01	3.4E+01 $\pm$ 5.1E+00	6.0E+00 $\pm$ 1.2E+00	NS
2002	6.0E-01 $\pm$ 5.1E-01	6.9E+00 $\pm$ 1.4E+00	1.9E+00 $\pm$ 5.7E-01	1.2E+00 $\pm$ 6.6E-01	3.1E+01 $\pm$ 4.7E+00	8.6E+00 $\pm$ 1.7E+00	NS
2003	3.8E+00 $\pm$ 9.5E-01	8.4E+00 $\pm$ 1.7E+00	1.7E+00 $\pm$ 6.8E-01	NS	2.1E+01 $\pm$ 3.1E+00	7.4E+00 $\pm$ 1.5E+00	-1.0E-01 $\pm$ 1.0E+00
2004	1.3E+00 $\pm$ 9.1E-01	NS	1.0E+00 $\pm$ 8.2E-01	NS	1.9E+01 $\pm$ 3.8E+00	NS	NS

NS - Not Sampled

<sup>a</sup>Average of two or more samples  $\pm$  2 standard deviations

## 6.0 RADIOLOGICAL SURVEYS

In 2004, there were approximately 3,628 hectares (8,965 acres) of posted outdoor contamination areas, 637 hectares (1,574 acres) of posted underground radioactive materials areas and 33 hectares (82 acres) of remediated areas at the Hanford Site. Survey locations are illustrated in Figures 6-1 through 6-10. These areas were typically associated with cribs, trenches, burial grounds, tank farms, and covered ponds and ditches.

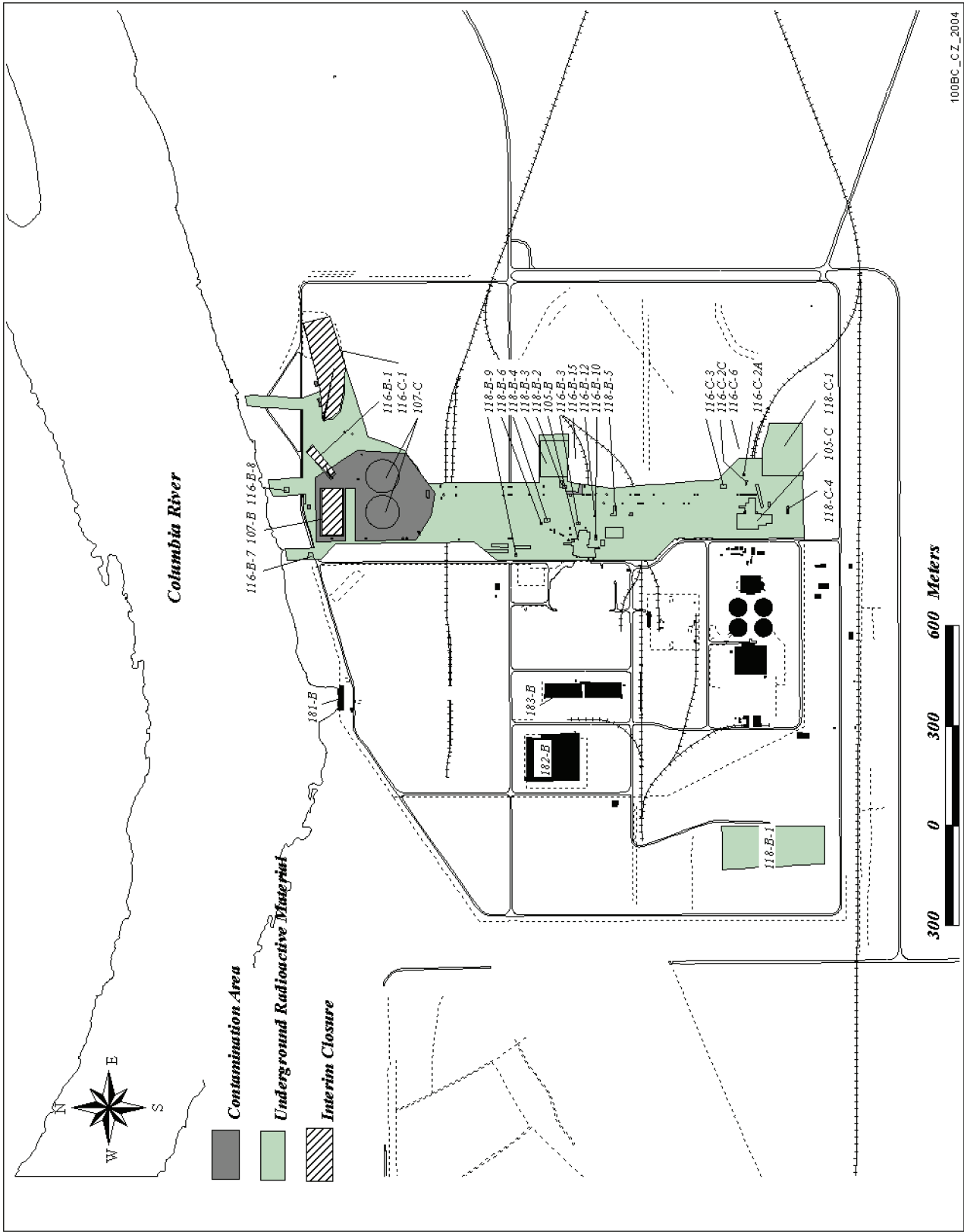
The posted contamination areas vary in number and size between years because of an ongoing effort to clean, stabilize, and remediate areas of known contamination. During this time, new areas of contamination are also being identified. During 2004, twelve small areas totaling less than one acre, were reclassified from underground radioactive materials areas to contamination/soil contamination areas. Several waste sites in the 100 Areas [20 hectares (49 acres)] and one waste site in the 300 Area [13 hectares (32 acres)] were remediated and released from posting. A listing of these waste sites is provided in Table 6-1.

It was estimated that the external dose rate at 80% of the identified outdoor contamination areas was less than 1 mrem/hr, although direct dose rate readings from isolated radioactive specks (a diameter less than 0.6 cm [0.25 in.]) could have been considerably higher. Contamination levels of this magnitude did not significantly add to dose rates for the public or Hanford Site workers in 2004.

Table 6-1. Waste Sites Remediated and Released From Posting During 2004.

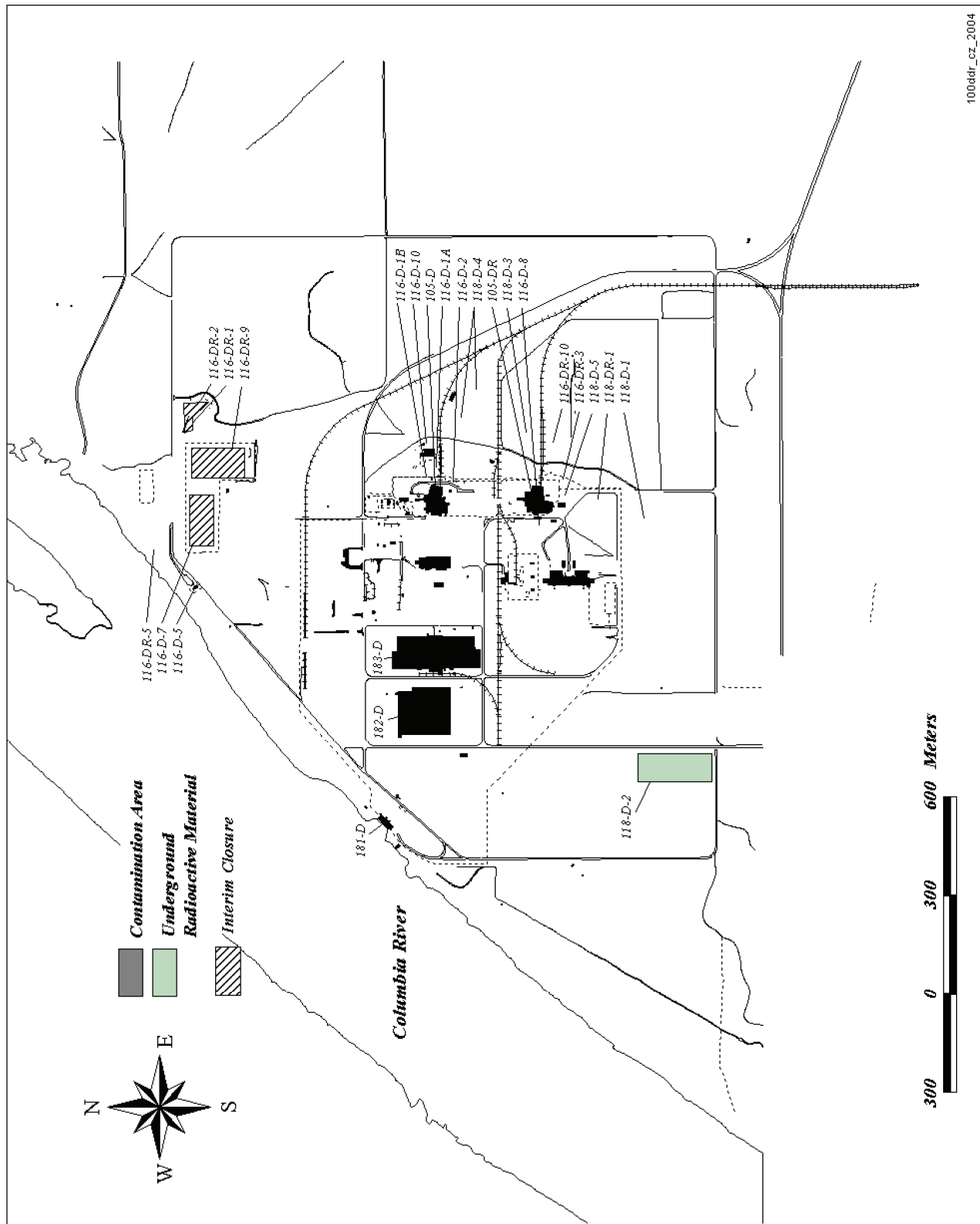
<b>Area</b>	<b>Waste Site</b>	<b>Area</b>	<b>Waste Site</b>
<b>100-B/C</b>	116-B-7	<b>100-H</b>	116-H-1
	116-B-8		116-H-7
	116-B-10		
	116-B-15	<b>100-K</b>	116-K-2
	118-B-3		118-K-1
<b>100-D/DR</b>			116-KE-4
	116-D-5		116-KE-5
	118-D-4		118-KE-2
	116-DR-3		116-KW-3
	116-DR-5		116-KW-4
<b>100-F</b>	116-F-2	<b>100-N</b>	1325-N
	116-F-5		
	116-F-9	<b>300</b>	316-1
	116-F-14		

Figure 6-1. 2004 Radiological Survey Locations, 100-B/C Area.



100BC\_CZ\_2004

Figure 6-2. 2004 Radiological Survey Locations, 100-D/DR Area.



100ddr\_c2\_2004

Figure 6-3. 2004 Radiological Survey Locations, 100-F Area.

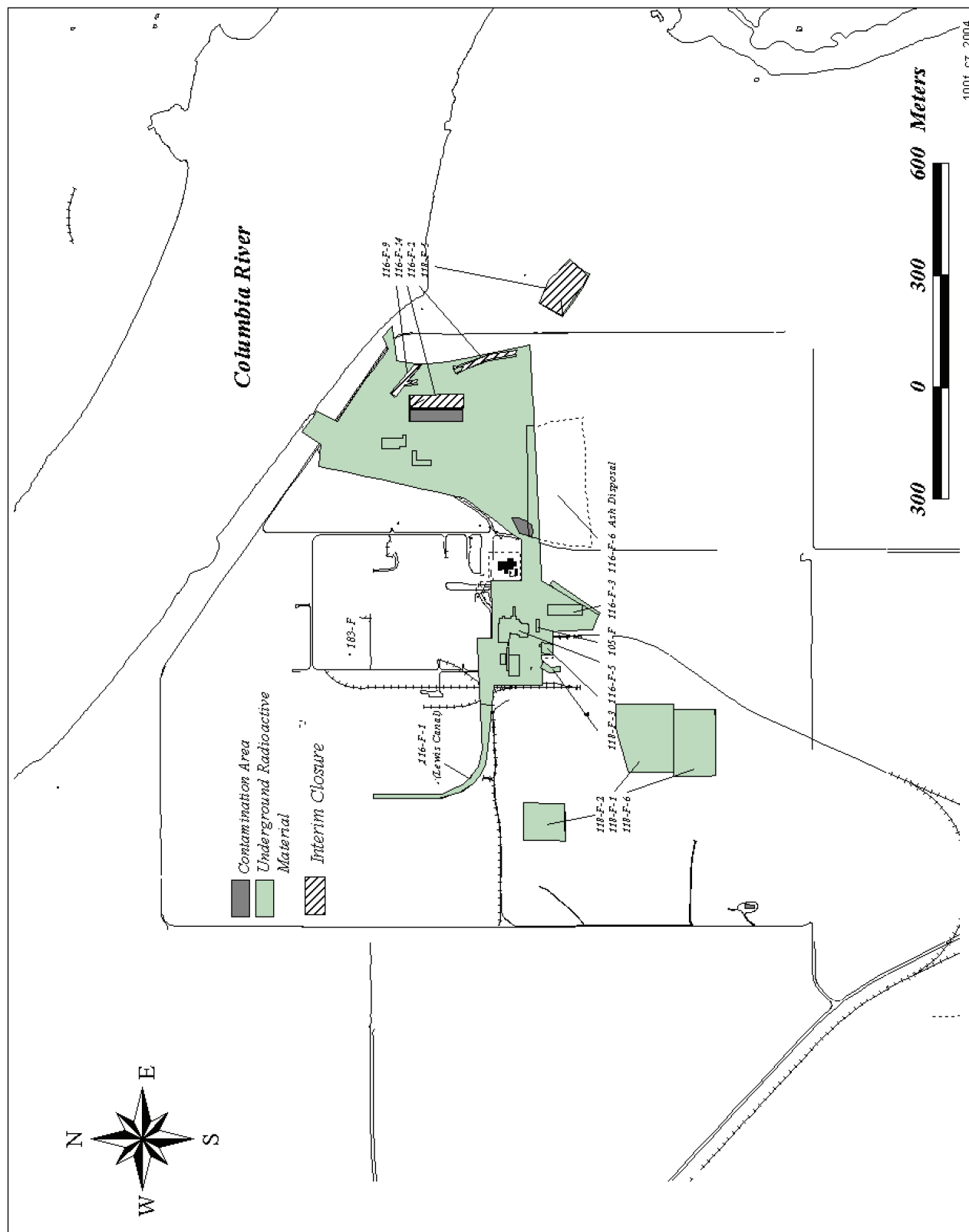


Figure 6-4. 2004 Radiological Survey Locations, 100-H Area.

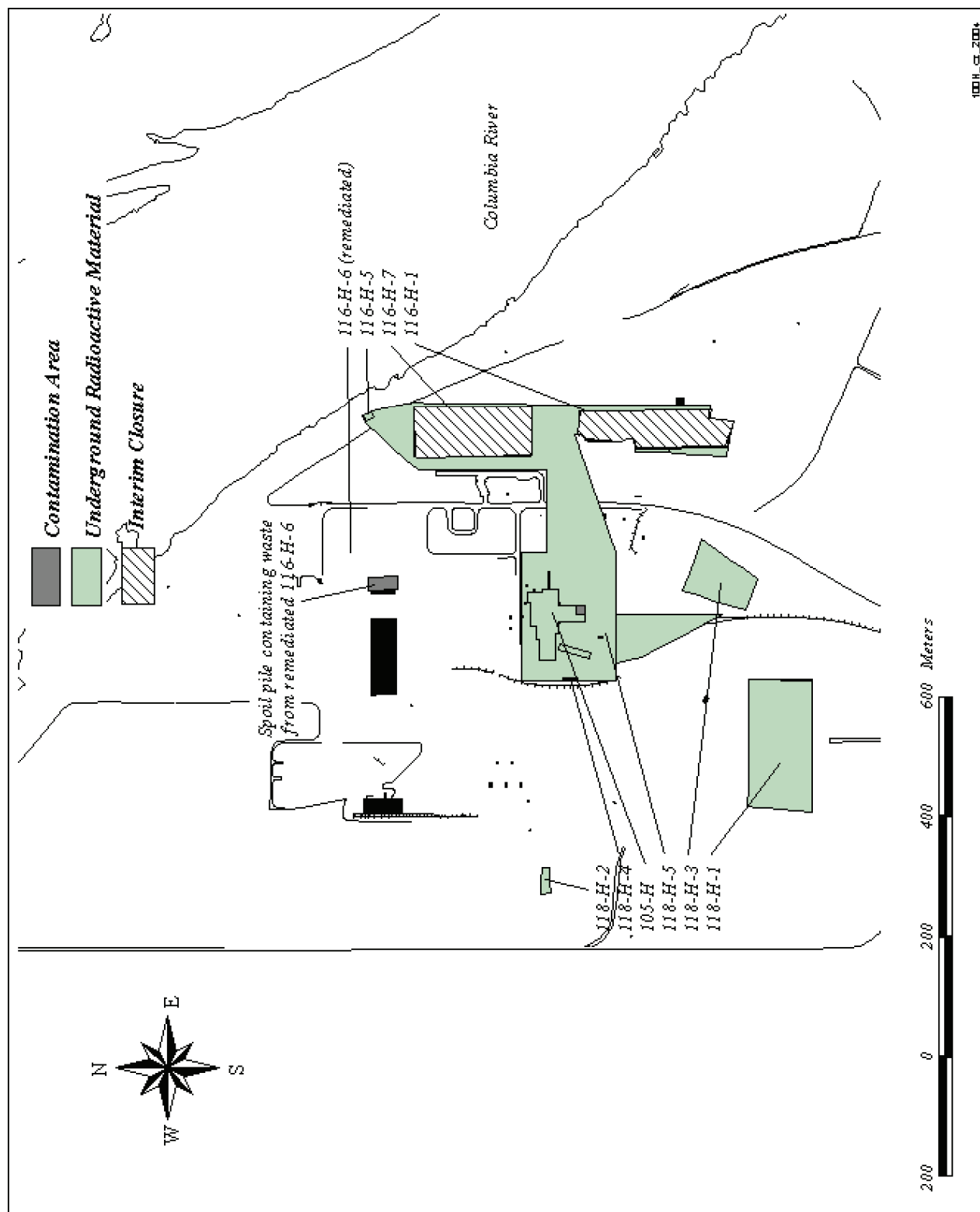


Figure 6-5. 2004 Radiological Survey Locations, 100-K Area.

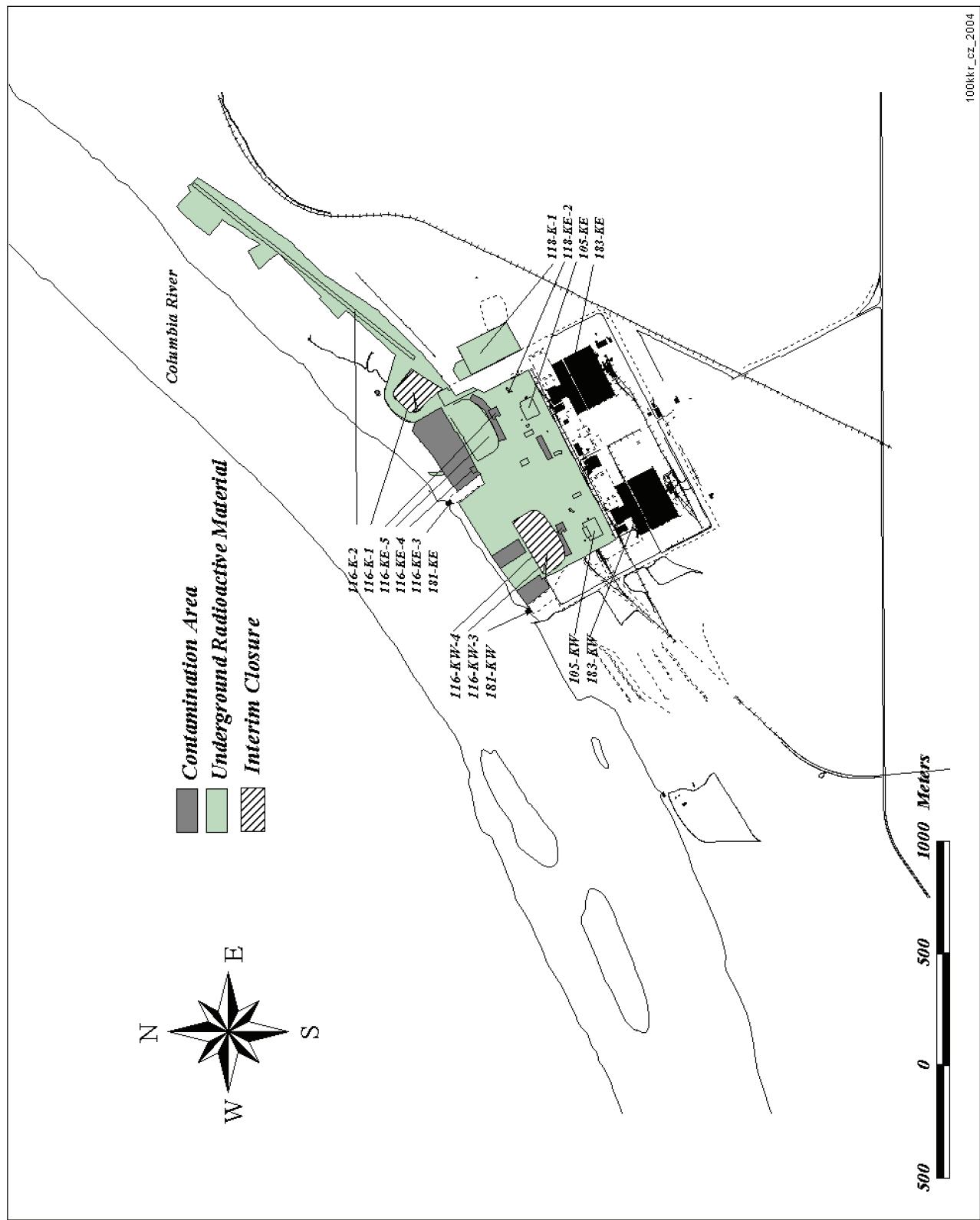




Figure 6-6. 2004 Radiological Survey Locations, 100-N Area.

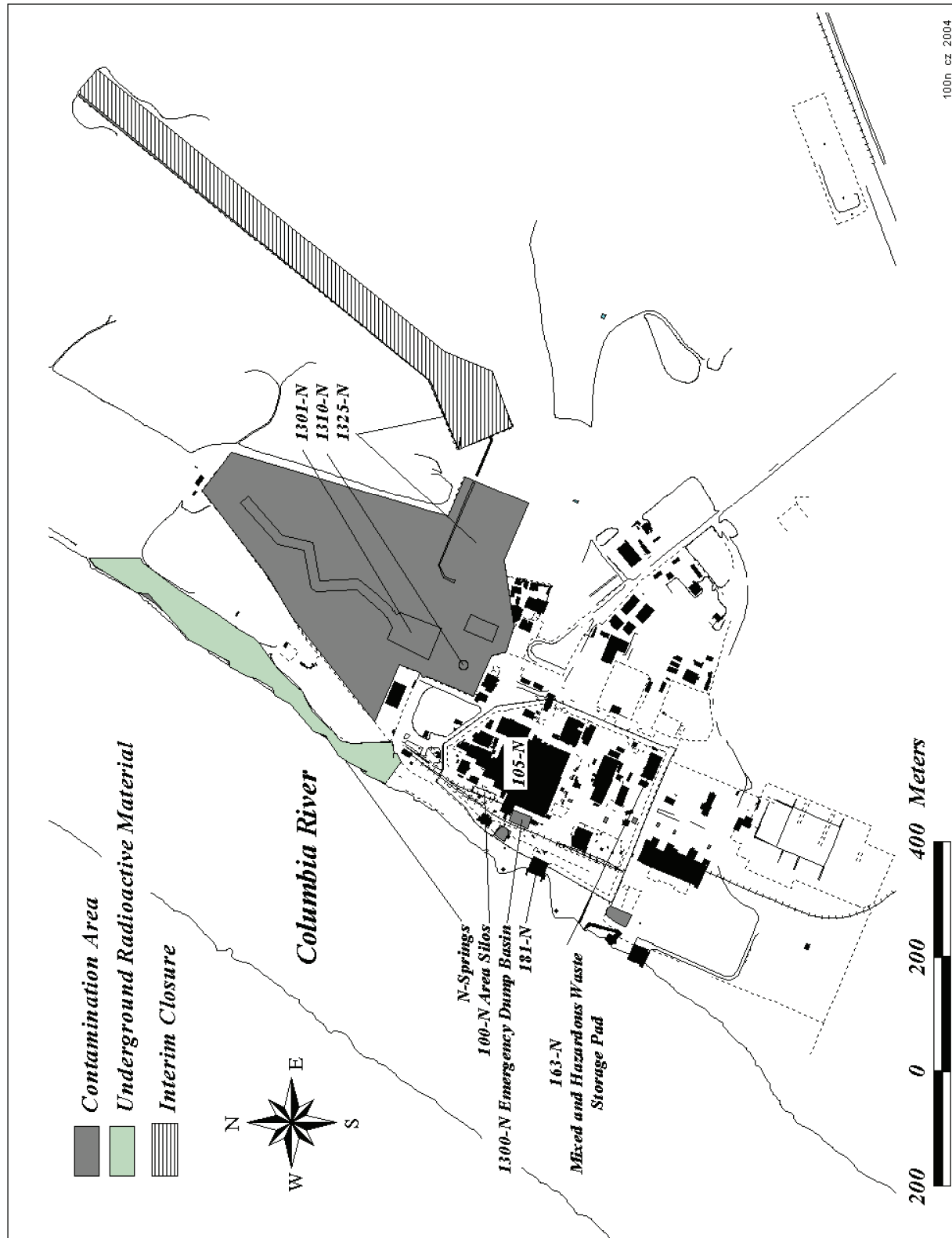


Figure 6-7. 2004 Radiological Survey Locations, 200 East Area.

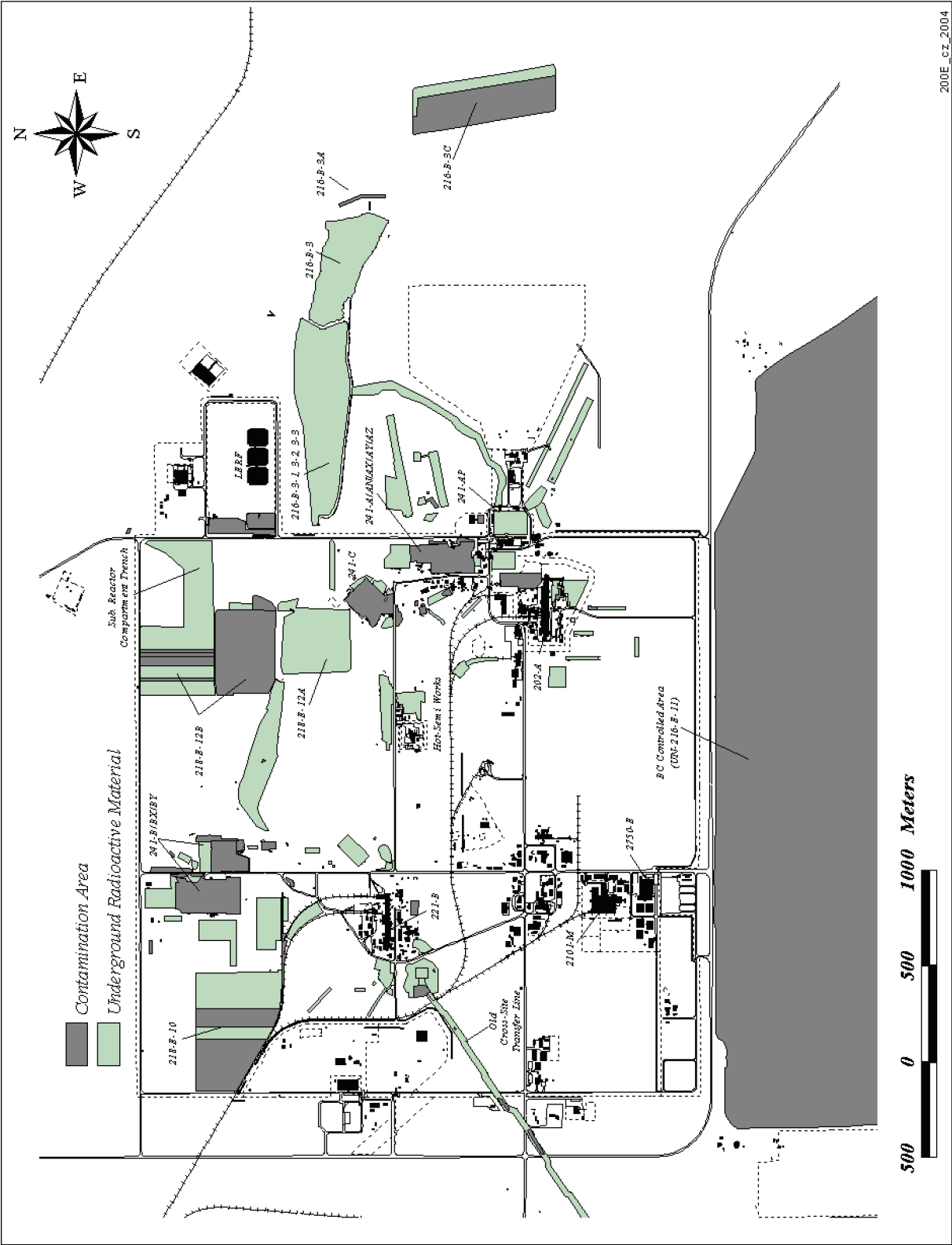




Figure 6-9. 2004 Radiological Survey Locations, 300 Area.

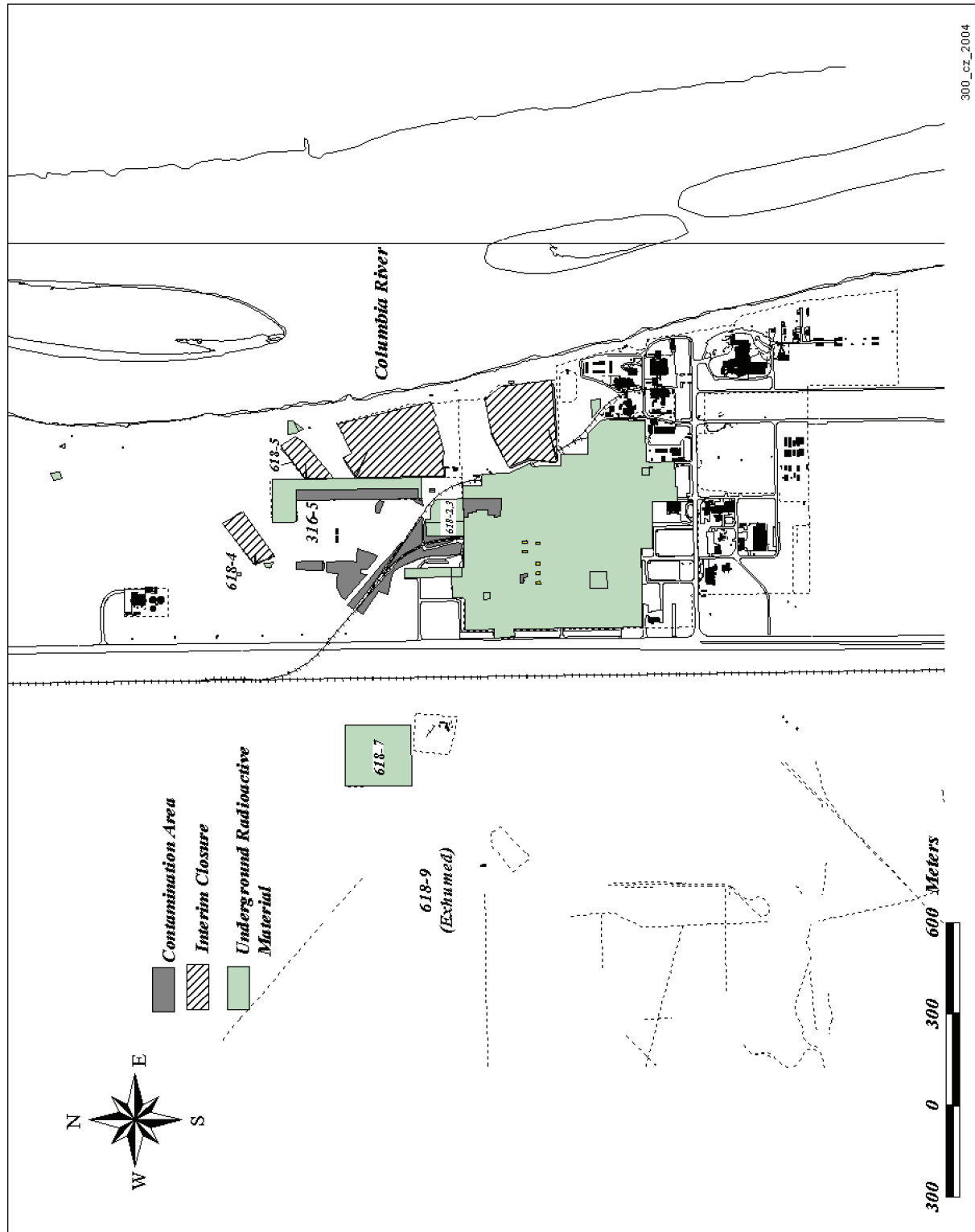
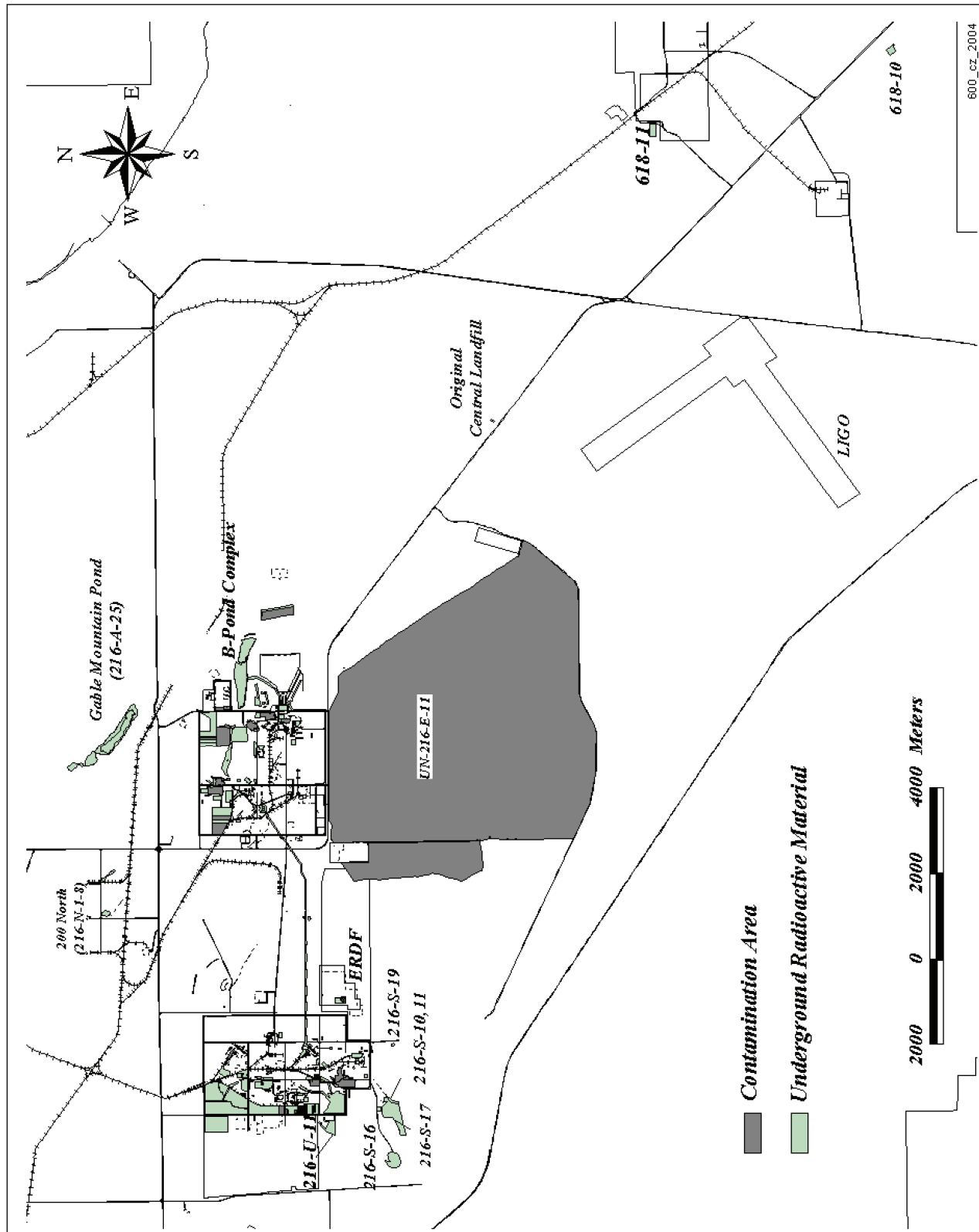


Figure 6-10. 2004 Radiological Survey Locations, 600 Area.



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## **7.0 INVESTIGATIVE SAMPLING**

Examples of investigative samples collected in 2004 included: vegetation, animals, and animal feces. Investigative samples were collected where known or suspected radioactive contamination was present, or to verify radiological conditions at project sites. In 2004, five samples were analyzed for radionuclides at the 222-S Laboratory. Analytical results are provided in Table 7-1. Another 97 contaminated environmental samples were reported and disposed without isotopic analyses (although field instrument readings were recorded) during surveillance and/or cleanup operations. These results are provided in Table 7-2.

### **7.1 Soil**

In 2004, there were 19 instances of radiological contamination in which soil was identified as the carrier of contamination. Of these, 13 were identified only as specks, or soil specks. Often, specks observed under high magnification are found to be small pieces of decomposed vegetation, most often tumbleweeds. External radioactivity levels ranged from a low of approximately 18,000 disintegrations per minute (dpm)/100 cm<sup>2</sup> to greater than 1,000,000 dpm/100cm<sup>2</sup>. Contaminated areas were radiologically posted or cleaned up. The number of contamination incidents, the range of radiation dose rate levels, and radionuclide concentrations observed in 2004 were generally within historical ranges.

Contaminated soil was found on top of UPR-200-E-78, the graveled area around the 241-BX-155 diversion box in the 200 East Area. The soil was sent to the laboratory and the results of these analyses can be found in Table 7-1.

### **7.2 Vegetation**

In 2004, there were 60 instances in which vegetation was identified as the carrier of radiological contamination. One vegetation sample, a contaminated tumbleweed found on top of UPR-200-E-77 (the graveled area northeast of the 241-B-154 diversion box in the 200 East Area) was submitted to the laboratory. The radioisotopic analysis results for this sample are provided in Table 7-1.

One instance of contaminated vegetation had field readings in excess of 540,000 dpm/100cm<sup>2</sup>. The radioactivity levels and range of radionuclide concentrations were all within historical ranges.

The increased number of incidents from 32 in 2003 to 60 in 2004 can be attributed to favorable growing conditions (moisture) and a possible resistance to the herbicide. Nevertheless, contaminated tumbleweeds that grew in recent years continue to be identified by radiological surveys. It is expected that as contaminated vegetation from past years is identified and cleaned up, subsequent years will show the results of program improvements.

### 7.3 Animals

Animals were collected either as part of an integrated pest management program or as a result of radiological surveys finding contaminated wildlife-related material (e.g., feces, nests, etc.). Animals were collected directly from or near facilities in an effort to monitor and track effectiveness of preventive measures designed to deter animal intrusion.

In 2004, twenty instances of contaminated animals or animal-related contamination were identified. The highest radionuclide concentrations in 2004 were observed in rabbit feces collected in the 200 East Area. The numbers of animals found to be contaminated with radioactivity, the radioactivity levels, and the range of radionuclide concentrations were within historical ranges.

The following samples were submitted to the laboratory and the analytical results are provided in Table 7-1:

A contaminated starling carcass found inside the 105-KE control room in the 100-K Area;

A contaminated rabbit feces found in the soil outside the 272-S paint shop in the 200 West Area;

Contaminated mouse feces found on top of the cross site transfer line, UPR-600-20, east of the 221-U facility in the 200 West Area.

### 7.4 Special Characterization Sampling

Listed below are special characterization projects conducted or completed during 2004 to ascertain the radiological, and in some cases, physical condition of specific sites or operations:

- A preoperational monitoring plan (RPP-6877, Rev. 1) was developed in support of the Waste Vitrification initiative. As part of this plan, an ongoing environmental survey is being conducted on the proposed location for the Integrated Disposal Facility, formerly the Immobilized Low-Activity Waste Disposal Facility, in the 200 East Area. Tasks completed in 2004 include soil, vegetation, and small mammal sampling. Following completion of all the tasks outlined in the monitoring plan, the data collected will be published in a final report. The report is currently scheduled for publication in 2006.
- Soil, vegetation, small mammal and ground-dwelling invertebrate samples were collected at the location of the former Gable Mountain Pond, 216-B-3 Pond, and the 216-B-2-2 Ditch in 2004 to identify potential exposure pathways to biota and to support remedial action decisions (Mitchell et al. 2004).



Table 7-1. Investigative Sample Results, 2004. (2 sheets total)

Matrix	Location	Date	Field Reading <sup>(a)</sup>	Isotope	Result <sup>(b)</sup> ± Analytical (pCi/Sample) Uncertainty
Starling	105-KE Control Room	03/01/04	90,000 dpm/100cm <sup>2</sup>	<sup>60</sup> Co	<5.6E-02
				<sup>89,90</sup> Sr	1.5E+02 ± 2.3E+00
				<sup>134</sup> Cs	<8.3E-02
				<sup>137</sup> Cs	5.2E+01 ± 8.7E-01
				<sup>152</sup> Eu	<2.4E-01
				<sup>154</sup> Eu	<1.5E-01
				<sup>155</sup> Eu	<3.0E-01
				Total U	<7.0E+01
				<sup>238</sup> Pu	1.0E+01 ± 2.8E+00
				<sup>239,240</sup> Pu	7.3E+01 ± 2.1E+00
Matrix	Location	Date	Field Reading <sup>(a)</sup>	Isotope	Result <sup>(b)</sup> ± Analytical (pCi/gram) Uncertainty
Mouse Feces	UPR-600-20 @ 221-U	03/01/04	650,000 dpm/100cm <sup>2</sup>	<sup>60</sup> Co	<8.7E+03
				<sup>89,90</sup> Sr	1.8E+00 ± 1.7E+00
				<sup>134</sup> Cs	<1.2E+04
				<sup>137</sup> Cs	7.3E+06 ± 1.2E+04
				<sup>152</sup> Eu	<2.7E+04
				<sup>154</sup> Eu	<2.2E+04
				<sup>155</sup> Eu	<2.3E+04
				Total U	<1.0E+07
				<sup>238</sup> Pu	<6.0E+02 ± 1.0E+02
				<sup>239,240</sup> Pu	9.9E+03 ± 2.1E+00
Matrix	Location	Date	Field Reading <sup>(a)</sup>	Isotope	Result <sup>(b)</sup> ± Analytical (pCi/gram) Uncertainty
Rabbit Pellet	272-S Paint Shop	08/08/03	100,000 dpm/100cm <sup>2</sup>	<sup>60</sup> Co	<9.2E+02
				<sup>89,90</sup> Sr	4.3E+05 ± 3.9E+00
				<sup>134</sup> Cs	<1.5E+03
				<sup>137</sup> Cs	7.7E+05 ± 1.2E+00
				<sup>152</sup> Eu	<2.9E+03
				<sup>154</sup> Eu	<3.3E+03
				<sup>155</sup> Eu	<2.4E+03
				Total U	<1.1E+06
				<sup>238</sup> Pu	<4.3E+02 ± 9.0E+00
				<sup>239,240</sup> Pu	5.4E+02 ± 7.5E+00

(a) dpm = disintegrations per minute

(b) A "<" symbol indicates that the analyte was analyzed for but not detected. Uncertainty values were not reported by the laboratory for all results. To convert to international metric system units (SI), multiply pCi/g by 0.03704 to obtain Bq/g.

Table 7-1. Investigative Sample Results, 2004. (2 sheets total)

Matrix	Location	Date	Field Reading <sup>(a)</sup>	Isotope	Result <sup>(b)</sup> (pCi/gram) ± Analytical Uncertainty
Soil	UPR-200-E-78	09/03/03	600,000 dpm/100cm <sup>2</sup>	<sup>60</sup> Co	<3.9E-02
				<sup>89,90</sup> Sr	2.7E+03 ± 4.4E-01
				<sup>134</sup> Cs	<4.4E-02
				<sup>137</sup> Cs	1.90E-01 ± 2.7E+01
				<sup>152</sup> Eu	<9.1E-02
				<sup>154</sup> Eu	<1.2E-01
				<sup>155</sup> Eu	<9.2E-02
				Total U	<2.4E+01
				<sup>238</sup> Pu	<3.6E-01 ± 1.1E+01
				<sup>239,240</sup> Pu	<3.6E+00 ± 2.8E+00
Matrix	Location	Date	Field Reading <sup>(a)</sup>	Isotope	Result <sup>(b)</sup> (pCi/gram) ± Analytical Uncertainty
Tumbleweed	UPR-200-E-77	09/04/03	60,000 dpm/100cm <sup>2</sup>	<sup>60</sup> Co	<2.5E+00
				<sup>89,90</sup> Sr	1.2E+00 ± 4.2E+00
				<sup>134</sup> Cs	<2.1E+00
				<sup>137</sup> Cs	<3.7E+00
				<sup>152</sup> Eu	<4.1E+00
				<sup>154</sup> Eu	<8.3E+00
				<sup>155</sup> Eu	<4.0E+00
				Total U	<1.2E+03
				<sup>238</sup> Pu	1.7E+00 ± 6.9E+00
				<sup>239,240</sup> Pu	1.3E+00 ± 8.2E+00

(a) dpm = disintegrations per minute

(b) A "<" symbol indicates that the analyte was analyzed for but not detected. Uncertainty values were not reported by the laboratory for all results. To convert to international metric system units (SI), multiply pCi/g by 0.03704 to obtain Bq/g.

Table 7-2. Investigative Samples Not Analyzed, 2004. (2 sheets total)

DATE	SAMPLE MATRIX	LOCATION	FIELD READING (Beta/Gamma)
02/02/04	Specks	North end of 241-C Tank Farm	300,000dpm/100cm <sup>2</sup>
02/03/04	Mud Dauber Wasp Nest	Crane #17T-5673 in 2711-E Shop	1,500dpm/100cm <sup>2</sup>
02/03/04	Paint chips	233-S Demolition Site	63,000dpm/100cm <sup>2</sup> Alpha
02/04/04	Tumbleweeds (30)	218-E-12B	100,000dpm/100cm <sup>2</sup>
02/05/04	Tumbleweeds (24)	218-E-12B	180,000dpm/100cm <sup>2</sup>
02/06/04	Tumbleweeds (65)	218-E-12B	480,000dpm/100cm <sup>2</sup>
02/12/04	Paint chips	233-S Demolition Site	210dpm/100cm <sup>2</sup> Alpha
02/18/04	Tumbleweeds (2)	UPR-600-20 (UN-216-E-41)Cross Site Transfer Line	6,000dpm/100cm <sup>2</sup>
02/20/04	Tumbleweeds (6)	UPR-200-W-38 Waste Line Break @ 241-TX-154	11,000dpm/100cm <sup>2</sup>
03/01/04	Mouse Fece	UPR-600-20 (UN-216-E-41)Cross Site Transfer Line	649,000dpm/100cm <sup>2</sup>
03/04/04	Rabbit Feces	200-W-54 @ 241-S/SX/SY	10,000dpm/100cm <sup>2</sup>
03/12/04	Starling	105-KE Control Room 11	90,000dpm/100cm <sup>2</sup>
03/18/04	Switch Gear	Load Lugger @ 272-WA	82,000dpm/100cm <sup>2</sup>
03/20/04	Tumbleweeds (3)	216-S-21 Crib (between 216-S-21 & 216-S-4)	30,000dpm/100cm <sup>2</sup>
03/22/04	Specks	241-BX-155 Access Rd. between Atlanta & Baltimore	>1,000,000dpm/100cm <sup>2</sup>
03/23/04	Rabbit Feces	In CA south of 272-S	200,000dpm/100cm <sup>2</sup>
03/27/04	Tumbleweed (1)	CHG RMA-060 "Rock slinger"	21,000dpm/100cm <sup>2</sup>
03/31/04	Rabbit Brush	216-B-59 Trench	102,000dpm/100cm <sup>2</sup>
03/31/04	Rabbit Feces	216-B-59 Trench	60,000dpm/100cm <sup>2</sup>
04/01/04	Tumbleweed (1)	216-A-18 Crib	150,000dpm/100cm <sup>2</sup>
04/02/04	Mouse	NR-2-1 RMA conex, 100-N	8,000dpm/100cm <sup>2</sup>
04/05/04	Tumbleweeds (2)	218-E-12A Burial Ground	85,000dpm/100cm <sup>2</sup>
04/06/04	Tumbleweeds	218-E-12A Burial Ground	42,000dpm/100cm <sup>2</sup>
04/06/04	Tumbleweeds (1)	218-E-12B Burial Ground	294,000dpm/100cm <sup>2</sup>
04/08/04	Tumbleweeds (57)	218-E-12A Burial Ground	420,000dpm/100cm <sup>2</sup>
04/13/04	Bird Feces	306-W Building	20,000dpm/100cm <sup>2</sup>
04/13/04	Soil	216-B-8 Crib	18,000dpm/100cm <sup>2</sup>
04/15/04	Soil	North side of 8th Street in 200-E-139	149,000dpm/100cm <sup>2</sup>
04/22/04	Tumbleweeds	20'X30' Area of 216-B-63	72,000dpm/100cm <sup>2</sup>
04/23/04	Mud Dauber Wasp Nest	105-H Rental Change Trailer	440,000dpm/100cm <sup>2</sup>
04/29/04	Speck	North side of DACS Trailer @ 241-SY	65,000dpm/100cm <sup>2</sup>
05/04/04	Steam line support poles	Adjacent to the 314 Building	58,000dpm/100cm <sup>2</sup>
05/05/04	2-Red Ant Hills	218-E-2 Burial Ground	150,000dpm/100cm <sup>2</sup>
05/10/04	Mud Dauber Wasp Nest	Vent Louvers 332 Building	4,000dpm/100cm <sup>2</sup>
05/10/04	Soil Specks	Road South of Atlanta Ave and West of Baltimore	150,000dpm/100cm <sup>2</sup>
05/12/04	Soil	215-A-36B Crib	240,000dpm/100cm <sup>2</sup>
05/17/04	Specks	Outside west Fenceline of 241-S	136,000dpm/100cm <sup>2</sup>
05/18/04	Wood Debris	221-B Plant Laydown Area	6,000dpm/100cm <sup>2</sup>
06/01/04	Shoes	233-S Demolition Site	2,100dpm/100cm <sup>2</sup> Alpha
06/02/04	Mouse Nest	Inside 2251-E Building south of 221-B Plant	4,000dpm/100cm <sup>2</sup>
06/02/04	Soil Specks	Outside west gate of 241-A Tank Farm	150,000dpm/100cm <sup>2</sup>
06/08/04	Paint Chip	Outside of 241-U Tank Farm Perimeter	160,000dpm/100cm <sup>2</sup>
06/22/04	Soil	In excavation outside 234-SZ Plant	28,000dpm/100cm <sup>2</sup> Alpha
06/24/04	Jumper Jigs	Outside the 277-W Fabrication Shop	9,000dpm/100cm <sup>2</sup>
06/30/04	Tumbleweeds	UPR-600-20 (SCA W of 241-ER-151)	6,000dpm/100cm <sup>2</sup>
07/03/04	Specks	UPR-600-20 (SCA W of 241-ER-151)	550,000dpm/100cm <sup>2</sup>
07/12/04	Tumbleweeds	200-E-112, 241-B Process Sewer	240,000dpm/100cm <sup>2</sup>
07/13/04	Tumbleweeds	200-E-112, 241-B Process Sewer	18,000dpm/100cm <sup>2</sup>
07/21/04	Tumbleweed	216-B-25 Covered Trench BC Control Area	30,000dpm/100cm <sup>2</sup>
07/29/04	Specks	241-CR Vault	>1,000,000dpm/100cm <sup>2</sup>
08/03/04	Tumbleweed	200-W-63	72,000dpm/100cm <sup>2</sup>
08/05/04	speck	241-S/SX/SY Tank Farm	250,000dpm/100cm <sup>2</sup>
08/11/04	Tumbleweeds (3)	241-U-151 Diversion Box	120,000dpm/100cm <sup>2</sup>
08/19/04	Tumbleweed Fragment	200-E-121 (East of 241-BX/BY)	10,000dpm/100cm <sup>2</sup>
08/25/04	Tumbleweeds (30)	216-E-12B	100,000dpm/100cm <sup>2</sup>

Table 7-2. Investigative Samples Not Analyzed, 2004. (2 sheets total)

09/03/04	Gravel	241-B-151 Diversion Box (UPR-200-E-77)	550,000dpm/100cm <sup>2</sup>
09/07/04	Vegetation/Grout	241-B-151 Diversion Box (UPR-200-E-77)	30,000dpm/100cm <sup>2</sup>
09/08/04	Ant Hill Speck	241-ER-151 Diversion Box	70,000dpm/100cm <sup>2</sup>
09/09/04	Speck	241-S Tank Farm	86,000dpm/100cm <sup>2</sup>
09/17/04	Tumbleweeds (20)	216-S-16 Pond	42,000dpm/100cm <sup>2</sup>
09/17/04	Mud Dauber Wasp Nest	1712-N Insulator Shop	140,000dpm/100cm <sup>2</sup>
09/21/04	Mud Dauber Wasp Nest	13-N Storage Building	167,000dpm/100cm <sup>2</sup>
09/22/04	Tumbleweed	218-E-12B Burial Ground	90,000dpm/100cm <sup>2</sup>
09/27/04	Tumbleweeds (100)	216-U-1 & 2 Cribs	198,000dpm/100cm <sup>2</sup>
09/27/04	Rabbit Feces	241-C Tank Farm	>1,000,000dpm/100cm <sup>2</sup>
09/28/04	Tumbleweeds	200-E-111 URM Pipeline	30,000dpm/100cm <sup>2</sup>
09/29/04	Specks	241-C Tank Farm	100,000dpm/100cm <sup>2</sup>
10/01/04	Mouse	241-U Tank Farm	300,000dpm/100cm <sup>2</sup>
10/07/04	Soil	216-A-4 Crib	184,000dpm/100cm <sup>2</sup>
10/11/04	Mouse	Unknown	30,000dpm/100cm <sup>2</sup>
10/11/04	Nylon Rope	Vehicle G63-09249 inside 6290 Bldg. Rigging Loft	5,500dpm/100cm <sup>2</sup>
10/14/04	Radioactive Sources	218-W-4A Burial Ground	15,000dpm/100cm <sup>2</sup>
10/14/04	Sagebrush (1)	200-E-111 URM Pipeline	42,000dpm/100cm <sup>2</sup>
10/18/04	Tumbleweeds (20)	UPR-200-E-88 TC-4 RR Spur	36,000dpm/100cm <sup>2</sup>
10/20/04	Tumbleweeds	218-W-4A Burial Ground	24,000dpm/100cm <sup>2</sup>
10/21/04	Tumbleweeds (2)	200-E-111 URM Pipeline	54,000dpm/100cm <sup>2</sup>
10/22/04	Mouse Feces	North side of 241-BX/BY Tank Farm	25,000dpm/100cm <sup>2</sup>
10/27/04	Tumbleweeds	216-U-14 Ditch South End	18,000dpm/100cm <sup>2</sup>
10/28/04	Rabbit Feces	241-C Tank Farm	400,000dpm/100cm <sup>2</sup>
10/29/04	Tumbleweeds	218-E-12B Burial Ground	120,000dpm/100cm <sup>2</sup>
11/06/04	Tumbleweeds	218-E-1 Burial Ground	84,000dpm/100cm <sup>2</sup>
11/08/04	Tumbleweed (1)	216-S-5 Crib	18,000dpm/100cm <sup>2</sup>
11/08/04	Tumbleweeds	241-B Tank Farm	150,000dpm/100cm <sup>2</sup>
11/11/04	Tumbleweed (1)	241-C Tank Farm	90,000dpm/100cm <sup>2</sup>
11/11/04	Tumbleweeds	218-E-12B Burial Ground	540,000dpm/100cm <sup>2</sup>
11/14/04	Specks	241-C Tank Farm	500,000dpm/100cm <sup>2</sup>
11/14/04	Tumbleweeds (6)	URM Transfer Line 241-TX-152 to 241-U-152	15,000dpm/100cm <sup>2</sup>
11/15/04	Tumbleweed Fragments	218-E-12B Burial Ground	300,000dpm/100cm <sup>2</sup>
11/18/04	Speck	241-ER-151 Diversion Box	100,000dpm/100cm <sup>2</sup>
11/20/04	Tumbleweeds	216-A-34 Crib	114,000dpm/100cm <sup>2</sup>
11/21/04	Tumbleweeds	200-E-112, 241-B Process Sewer	6,000dpm/100cm <sup>2</sup>
11/21/04	Tumbleweeds	216-A-8 Crib	144,000dpm/100cm <sup>2</sup>
12/01/04	Tumbleweeds	216-U-10 Pond	120,000dpm/100cm <sup>2</sup>
12/03/04	Tumbleweeds	216-U-10 Pond	10,000dpm/100cm <sup>2</sup>
12/04/04	Tumbleweeds	216-U-10 Pond	5,000dpm/100cm <sup>2</sup>
12/06/04	Tumbleweeds	216-S-6 Crib	90,000dpm/100cm <sup>2</sup>
12/06/04	Tumbleweeds	216-S-17 Pond	32,000dpm/100cm <sup>2</sup>
12/07/04	Tumbleweeds	216-S-17 Pond	90,000dpm/100cm <sup>2</sup>
12/08/04	Shackle Pin	6290 Shop Building	2,000dpm/100cm <sup>2</sup>
12/08/04	Tumbleweed Fragments	Outside NE corner of 241-U Tank Farm	55,000dpm/100cm <sup>2</sup>
12/08/04	Tumbleweeds	216-S-5 Crib	18,000dpm/100cm <sup>2</sup>
12/09/04	Tumbleweeds	UPR-600-20	16,500dpm/100cm <sup>2</sup>
12/10/04	Tumbleweeds	218-E-12A Burial Ground	84,000dpm/100cm <sup>2</sup>
12/12/04	Rabbit Brush	216-A Diversion Box	30,000dpm/100cm <sup>2</sup>
12/12/04	Tumbleweeds	216-A-34 Crib	12,000dpm/100cm <sup>2</sup>
12/12/04	Tumbleweeds	216-A-8 Crib	30,000dpm/100cm <sup>2</sup>
12/12/04	Tumbleweeds	218-W-4B Burial Ground	45,000dpm/100cm <sup>2</sup>
12/12/04	Tumbleweeds	216-A-24 Crib	30,000dpm/100cm <sup>2</sup>
12/14/04	Specks (2)	outside of 241-BY Tank Farm Perimeter	300,000dpm/100cm <sup>2</sup>
12/14/04	Tumbleweeds	200-E-127 (PUREX to 216-A-25 Pipeline)	12,000dpm/100cm <sup>2</sup>
12/19/04	Tumbleweeds	218-E-2 & 218-E-9 Burial Grounds	18,000dpm/100cm <sup>2</sup>

## **8.0 QUALITY ASSURANCE**

QA may be defined as the actions necessary to provide confidence that an item, process, or program meets or exceeds the user's requirements and expectations. The near-facility environmental monitoring QA program consists of procedures and guides to demonstrate that environmental monitoring techniques and analyses are performed within established limits of acceptance. This is documented in HNF-EP-0538-9, *Near-Facility Environmental Monitoring Quality Assurance Project Plan* (McKinney 2004).

Written operating procedures are an integral part of near-facility environmental monitoring QA. Procedures for field operations are provided in internal manual DTS-OEM-001. This section briefly describes the essential components of the near-facility environmental monitoring QA program.

### **8.1 DOCUMENTATION**

Record keeping is a vital part of any environmental monitoring program. Maintenance of environmental data is important from a QA standpoint, from a regulatory standpoint, and for trend analyses and optimization of environmental monitoring procedures. Each phase of near-facility environmental monitoring is documented. This documentation includes environmental sample logbooks, quarterly reports, annual reports, and occurrence reports.

### **8.2 SAMPLE REPLICATION**

Replicate sampling and subsequent analyses are the primary means of assessing sample variability. Duplicate samples of air, water, soil, sediment, and vegetation are collected.

### **8.3 DATA ANALYSIS**

Environmental data are reviewed to determine compliance with applicable federal and company guides. The data are analyzed both graphically and by standard statistical tests to determine trends and impacts on the environment. Newly acquired data are compared with historical data and natural background levels. Routine environmental data are stored on both magnetic media (i.e., in a computer environment) and hard-copy printouts.

### **8.4 TRAINING**

To ensure quality and consistency in sample collection and handling, all personnel performing such work received formal training. All radiological control technicians are required to complete a certification program. In addition, those radiological control technicians assigned to environmental monitoring receive special classroom orientation and on-the-job training by

experienced personnel. Duratek Technical Services Environmental Monitoring and Investigations personnel, in addition to their formal training received while obtaining professional degrees, have received training in courses taught through Washington State University, the Harvard School of Public Health, and various other institutions.

## **8.5 SAMPLE FREQUENCY**

1. Ambient air sample filters are collected biweekly.
2. Radiological surveys of roads are performed quarterly, bimonthly, or annually.
3. The TLDs are exchanged quarterly.
4. Radiological surveys of waste sites are performed quarterly, semiannually, or annually depending on the operating status, condition, and history of the site.
5. Soil, vegetation, and surface water samples are collected annually.

## **8.6 ANALYTICAL PROCEDURES**

Three laboratories provided routine analytical support to the near-facility environmental monitoring: PNNL, the WSCF, and the 222-S Analytical Laboratory. Samples are analyzed in accordance with prescribed procedures and quality control guides that are described briefly in the following paragraphs.

### **8.6.1 Pacific Northwest National Laboratory Radiation Standards and Engineering**

**8.6.1.1 Thermoluminescent Dosimeters.** External radiation levels are measured using TLDs. The Hanford Site uses the Harshaw 8807 dosimeter and the Harshaw 8800 reader. The TLDs are calibrated, packaged, and read by the PNNL Radiation Calibration Laboratory, Radiation Standards and Engineering Department. All TLD work is performed in accordance with formal, written procedures.

### **8.6.2 222-S and Waste Sampling and Characterization Facility Analytical Laboratories**

The 222-S and WSCF laboratories also provide analytical support to near-facility environmental monitoring. Formal, written laboratory procedures are used in analyzing samples. The 222-S Laboratory is normally used for samples containing higher-than-normal environmental levels of radioactivity. The WSCF is used for the samples containing typical environmental levels of radioactivity. The WSCF also participates in an annual Quality Assurance Task Force (QATF) intercomparison program coordinated by the Radiation Protection division of the WDOH.

## 9.0 GLOSSARY

**Accessible Soils:** Hanford soils that are not behind security fences must meet a 10 mrem/yr effective dose equivalent (EDE) limit from Hanford Site operations to the most exposed member of the public.

**Average Soil Contamination:** Contamination generally dispersed through the soil. Numerically, the radioactivity content averaged over a suitable mass of soil.

**Background Radiation:** Refers to regional levels of radioactivity produced by sources other than those of specific interest (e.g., the nuclear activities at the Hanford Site).

**Becquerel (Bq):** The standard international unit of radioactivity. One Becquerel is one disintegration per second or:  $Bq = 2.7 \text{ E-11 Ci}$

**Biological Transport:** Means of biological transport may include one or more of the following processes:

- Movement of subsurface radioactivity to the surface by physiological vegetative processes.
- Dispersion of such vegetation by the wind.
- Contaminated urine and feces deposited by animals that have gained access to and ingested radioactive materials.
- Contaminated animals themselves that have ingested radioactive materials directly or ingested other contaminated animals or plants.
- Physical displacement of radioactive materials by burrowing animals.
- Nests built using contaminated materials.

**Biota:** The plant and animal life of a specific region.

**Burial Ground:** A land area specifically designated to receive contaminated solid or solidified liquid waste packages and equipment. The contaminated articles are usually placed in trenches and covered with overburden.

**Byproduct:** A material that is not one of the primary products of a production process and is not solely or separately produced by the production process. Examples are process residues such as slag or distillation column bottoms. The term does not include a coproduct that is produced for the general public's use and is ordinarily used in the form in which it is produced by the process.

**Calibration:** Determining the deviation of an instrument from a standard traceable to the National Bureau of Standards or other recognized agency and reporting the deviations and/or eliminating them by adjustment.

**Chemical Processing:** Chemical treatment of material to separate desired components selectively. At the Hanford Site, plutonium, uranium, and fission products were chemically separated from irradiated fuels.

**Committed Dose Equivalent:** The predicted total dose equivalent to a tissue or organ over a 50-year period after a known intake of a radionuclide into the body. It does not include contributions from external dose. Committed dose equivalent is expressed in units of rem (or sievert).

**Committed Effective Dose Equivalent:** The sum of the committed dose equivalents to various tissues in the body, each multiplied by the appropriate weighing factor. Committed effective dose equivalent is expressed in units of rem (or sievert).

**Composite Sample:** A number of random samples initially collected from a waste and combined into a single sample; this sample is analyzed for the contaminants of concern.

***Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA):*** Commonly known as "Superfund," CERCLA was enacted to respond to uncontrolled releases of hazardous substances to the environment, primarily at inactive sites that were not adequately addressed by the *Resource Conservation and Recovery Act of 1976* (RCRA). CERCLA also applies to actively managed facilities and any onshore or offshore facility.

**Controlled Area:** An area where access is controlled to protect individuals from exposure to radiation and/or radioactive materials.

**Contamination Area:** Any area where contamination levels are greater than the values specified in Chapter 2, Table 2-2 of HNF-5173, *PHMC Radiological Control Manual* (FH 2004) but less than or equal to 100 times those values.

**Crib:** An underground structure designed to receive liquid waste that percolates into the soil directly or percolates into the soil after having traveled through a connected tile field.

**Decommissioning:** Actions taken to reduce the potential health and safety impacts of DOE-controlled contaminated facilities. Actions could include stabilizing, reducing, or removing radioactivity or demolishing the contaminated facilities.

**Decontamination:** The removal of radioactive or hazardous contamination from facilities, equipment, or soils by washing, heating, chemical or electrochemical treating, mechanical cleaning, or other techniques.



**Derived Concentration Guide for Public Exposure (DCG-Public):** The concentration of a radionuclide in air or water that, under conditions of continuous exposure for one year by one exposure mode (e.g., ingestion of water, submersion in air, or inhalation of air), would result in an EDE equal to the annual dose limit applicable to the group exposed. For exposure of the public, the DCG is the radionuclide concentration in air or water that would result in an EDE of 100 mrem (1 mSv) to a person having the characteristics of the reference manual.

**Diffuse Source:** A source or sources of radioactive or chemical contaminants released into the environment that do not have a defined point or origin of release (a nonpoint source). Such sources are also known as area sources.

**Disposal Facility:** Any facility or part of a facility where hazardous and/or radioactive waste is intentionally placed or where any land or water wastes will remain after closure.

**Ditch:** An open surface site for transport of liquid wastes to a pond or trench structure designed for percolation.

**Ecology:** The Washington State Department of Ecology.

**Effective Dose Equivalent:** The summation of the products of the dose equivalent received by specified tissues of the body and a tissue-specific weighing factor. This sum is a risk-equivalent value and can be used to estimate the health-effects risk of the exposed individual. The tissue-specific weighing factor represents the fraction of the total health risk resulting from uniform whole-body irradiation that would be contributed by that particular tissue. The EDE includes the committed EDE from internal deposition of radionuclides and the EDE caused by penetrating radiation from sources outside the body. EDE is expressed in units of rem (or sievert).

**Effluent:** An airborne or liquid discharge from a facility after all engineered waste treatment and effluent controls have been performed. The term includes onsite discharges to the atmosphere, lagoons, ponds, cribs, injection wells, French drains, or ditches. The term does not include solid waste stored or removed for disposal or waste that is contained in retention basins or tanks before treatment and/or disposal.

**Emissions Unit:** Regarding air pollutant emissions, any part of a stationary source that emits or would have the potential to emit any pollutant subject to regulation.

**Environmental Monitoring Plan:** A two-part document prepared for each site, facility, or process that uses, generates, releases, or manages significant pollutants or hazardous materials.

**Environmental Sites Database (ESD):** A database of environmental sites that is administered by the ERC.

**External Radiation:** Radiation originating from a source outside the body.

**Facility:** A processing plant, tank farm, shop, laboratory, powerhouse, or laundry. Including all contiguous land and structures, other appurtenances, and improvements on land used for recycling, reusing, reclaiming, transferring, storing, and treating of dangerous waste (including treatment, storage, and disposal sites as well as groundwater wells). (40 CFR 264, "Standards for Owners and Operators of Hazardous Waste Treatment Storage and Disposal Facilities," and WAC 173-303-040.)

**Facility-Specific Environmental Monitoring:** Routine environmental monitoring of all environmental media (air, biota, etc.) around facility parameters.

**Field Blank:** Aliquots of analyte-free water or solvents brought to the field in sealed containers and transported to the laboratory with the sample container. Field blanks include trip blanks and equipment blanks.

**Field Duplicate:** Field duplicates are collected at specified frequencies and are used to document precision. The field duplicate precision depends on the variance of waste composition, sampling techniques, and analytical technique.

**Fugitive Emissions:** Material that is generated incidental to an operation, process, or activity and that is released or dispersed into the open air. Fugitive emissions occur via pathways that do not allow routine measurement at the point of release.

**Grab Sample:** A single sample removed from a sample medium over a short time interval.

**Groundwater:** Water that exists below the water table, also referred to as the zone of saturation. However, the capillary fringe directly above can be completely saturated if the sediment is fine enough. To avoid this ambiguous term, the use of phreatic water, which is water that enters freely into wells under both confined and unconfined conditions is suggested. Phreatic water is a term originally applied only to water that occurs in the upper part of the zone of saturation under water table conditions (unconfined groundwater or well water), but has come to be applied to all water in the zone of saturation, thus making it an exact synonym of groundwater. Above the water table is the vadose zone, where water pressures are less than atmospheric pressure. This zone still contains water, but the water is held to the soil particles or other groundwater material by capillary force. Thus, while this water still can move within the vadose zone, it cannot move out of the zone into a well or other place is exposed to atmospheric pressure. The dividing line between water in the vadose zone and phreatic water is the atmospheric pressure between the two, with the pressure of vadose water being below atmospheric pressure and that of phreatic water (i.e., groundwater) above atmospheric pressure.

**High-Efficiency Particulate Air (HEPA) Filter:** To qualify as a HEPA filter, a filter must achieve an efficiency of 99.97% under laboratory conditions and 99.95% after installation for the removal of airborne particulates greater than  $3 \times 10^{-5}$  cm (0.3 microns).

**High-Level Nuclear Waste:** Spent nuclear fuel or radioactive waste resulting directly from the dissolution and reprocessing of spent nuclear fuel. Secondary waste streams resulting from the dissolution and reprocessing of spent nuclear fuel are not considered high-level waste.

**Immobile Radionuclides:** All those radionuclides that are sorbed onto Hanford Site soils and usually would not migrate through the vadose zone or the groundwater below the future control zone.

**Inaccessible Soils:** Areas from which the general public is excluded (by fences, posting, patrols, or distance), but that are still subject to meteorological effects, are subject to a 10 mrem/yr operational EDE limit.

**Inactive Crib:** A crib that has been designated as permanently out of service.

**Inactive Radioactive Waste Site:** Any waste site that is no longer needed for current operational programs and that is not currently an active waste disposal site.

**Inactive Waste Sites:** Inactive waste sites include units such as burial grounds, unplanned release sites, cribs, ditches, ponds, trenches, and basins, abandoned storage areas, drains, single-shell tank piping, transfer pits, and jumper boxes.

**Less Than Detectable:** An analytical term for a concentration in a sample that is lower than the minimum detection capabilities of that analytical equipment or process.

**Low-Level Waste:** Any gaseous, liquid, or solid radioactive waste not classified as high-level waste, transuranic waste, or spent nuclear fuel, as defined by DOE Order 435.1, *Radioactive Waste Management*.

**Mean:** Average value of a series of measurements.

**Minimum Detection Limit:** Smallest amount or concentration of a radionuclide or nonradioactive element that can be reliably detected in a sample.

**Mixed Waste:** Dangerous waste that also contains enough radioactivity to be classified as radioactive waste.

**Monitoring System:** Instrumentation that provides measurement of an airborne or liquid waste stream parameters. The system includes a detector and associated readout components. A continuous monitoring system measures the stream parameters on a near-real-time basis or as specified in applicable Environmental Protection Agency regulations, 40 CFR 52, "Approval and Promulgation of Implementation Plans," Appendix E; 40 CFR 51, "Requirements for Preparation, Adoption, and Submittal of Implementation Plans," Appendix P, or as defined in applicable American National Standards Institute standards. A radiation monitoring system is a system in which radiation or radioactivity is the measured parameter. An integrating monitoring system totals the instantaneously measured parameter over some time period. A sampling system does not measure or read out an instantaneous stream parameter.

**Near Facility Environmental Monitoring:** The collection and analysis of samples of air, water, soil, biota, and other media near nuclear facilities on DOE sites and their environs and the measurement of external radiation to demonstrate compliance with applicable standards and assess radiation exposures to employees and members of the public, and the near-field environment.

**Nonroutine Activities:** Any actions on a large-scale (>2 hectares [5 acres]), including stabilization, soil removal, fixative or sealant application, other surface treatments, or other activities that could affect future remediation activities in an inactive waste site.

**Not Detected:** A reporting term which describes any or all of the following: the overall analytical error was greater than the radionuclide concentration itself; or, after allowing for the subtraction of the background level of the radionuclide, the resulting concentration was less than zero; or, no radio analytical peak was detected during the analysis.

**Operations:** In this report, this term loosely refers to Fluor Project Hanford activities including chemical processing, waste management, and decommissioning.

**Pesticide:** As defined in 40 CFR 162 (“State Registration of Pesticide Products”), the term pesticide covers all pest-control chemicals such as herbicides, rodenticides, and insecticides.

**Plutonium Processing and Handling Facility:** Any facility constructed primarily to process plutonium (including plutonium-238) and that handles in-process plutonium.

**Plutonium Storage Facility:** Any facility constructed to store strategic (category I) quantities of plutonium.

**Point Source:** A single defined point (origin) of an airborne release, such as a vent or stack.

**Pond:** A surface impoundment used to contain or percolate low-level liquid radioactive waste, mixed waste, or hazardous waste.

**Quality Assurance:** A process designed to maintain the quality of the results of a program within established limits of acceptance.

**Radiation Survey:** Evaluation of an area or object with portable instruments to identify radioactive materials and radiation fields present.

**Radioactive Byproduct:** Any radioactive material (except special nuclear material) yielded in or made radioactive by exposure to the radiation incident to the process of producing or using special nuclear material. The nonradioactive hazardous component of the waste material will be subject to regulation under the RCRA.

**Radiological Control Area:** An area where access is controlled to protect individuals from exposure to radiation and/or radioactive materials. Radiological control areas include, but are not limited to, areas posted as radiation areas, surface contamination, and underground radioactive materials, to describe the radiological condition of the area within.

**Radiological Posting:** Information in the form of signs and barriers to inform people of radiological conditions that warrant avoidance or special precautions for entry.

**Representative Sample:** The average stream parameter being measured occurs in the sample in the same average proportion that it occurs in the environmental discharge.

**Retired Waste Site:** A waste site that is isolated and no longer available to receive waste in any form.

**Routine Activities:** Any actions on a small-scale (<2 hectares [5 acres]), including radioactive hot-spot removal, vegetation removal, fencing, posting, herbicide spraying, stabilization, or immediate spill response) in an inactive waste site. In general, these routine actions shall not interfere with RCRA/CERCLA response or site investigations.

**Sampling System:** Instrumentation and equipment that remove a part of a liquid or airborne waste stream for subsequent quantitative determination of stream parameters. The system generally employs such devices as filters, other sample collection media, or effluent traps of some kind. A continuous sampling system removes a part of the stream continuously except during sample change, maintenance, repair, or other necessary outages. A grab sampling system removes an instantaneous part of the stream or removes a part of the stream over a time period.

**Sediment Column:** The sediment beneath a crib. It can mean either all the sediment beneath the bottom of the crib extending to the water table or all sediment beneath a crib contaminated by radioactive materials.

**Site:** The location of a significant event, a prehistoric or historic occupation or activity, or a building or structure (whether standing, ruined, or vanished) where the location itself maintains historical or archeological value, regardless of the value of any existing structure.

**Soil at depth:** Soil below 91 cm (36 in.).

**Soil Contamination:** Contaminated soil not releasable in accordance with DOE Order 5400.5.

**Solid Waste:** Any discarded material that is not excluded by WAC 173-303-017(2) or that is not excluded by a variance granted under WAC 173-303-017(5). Materials are solid waste if they are: (1) abandoned by being disposed of, burned, or incinerated, or (2) accumulated, stored, or treated (but not recycled) before (or in lieu of) being abandoned by being disposed of, burned, or incinerated. In addition, a solid waste includes any material considered to be inherently waste-like.

**Speck Contamination:** Single grains of soil, rust particles, feces, or pieces of vegetation.

**Spot Contamination:** A spot or quantity of contamination less than 1 cm<sup>3</sup> (0.06 in.) in volume, or areal contamination less than 15 cm<sup>2</sup> (2.3 in.<sup>2</sup>) in area.

**Stabilization:** The process of covering surface contaminated areas with clean backfill or topsoil.

**Standard:** A specified set of rules or conditions concerned with the classification of components; delineation of procedures; definition of terms; designation of materials, performance, design, or operations; or measurements of quality in describing materials, products, systems, services, or practices. A standard is more general than a procedure or specification and more specific than a criterion.

**Standard Deviation:** A measure of the range of values about the mean.

**Standard Error of the Mean:** A measure of the uncertainty in the estimated mean of averaged values.

**Surface Soil:** Soil from 0 cm (0 in.) to 5 cm (2 in.) deep.

**Surplus Facilities:** Surplus facilities include all facilities that have been accepted into a decommissioning program.

**Survey:** A method to detect the release, disposal, or presence of radioactive materials or hazardous substances under a specific set of conditions to determine actual or potential hazards. Such an evaluation may include, but is not limited to, tests, physical examinations, and measurements of radiation or concentrations of materials.

**Suspect Waste Site:** A site, believed to have been previously unknown or undocumented, that, because of characteristics present at the site or historical information about the site, is suspected of containing waste (i.e., non-dangerous, hazardous, dangerous, mixed, and radioactive).

**Tank Farm:** An area of large underground tanks designed to store high-level liquid waste.

**Thermoluminescent Dosimeter:** A chip or series of chips used for measuring external gamma radiation. It consists of a material capable of absorbing energy imparted by ionizing radiation, then emitting light as a result of thermal stimulation. A measure of that light is proportional to the radioactivity absorbed.

**Total Analytical Uncertainty:** All analytical measurements include some degree of uncertainty as a consequence of a series of unavoidable and unintentional inaccuracies related to the collection and analysis of samples. Examples of these inaccuracies can include errors associated with reading and recording results, sample handling and processing, instrument calibrations, numerical rounding, and randomness of radioactive decay. The total analytical uncertainty value implies that approximately 95% of the time a recount or reanalysis of the sample would give a value somewhere in the range between the initial reported value plus or minus the total analytical uncertainty.

**Trip Blank:** A type of field blank used to accompany sample containers to and from the field and to detect contamination or cross-contamination that occurs during sample handling and transportation.

**Uncontaminated Soil:** A soil or a land area that requires no controls or restrictions in any way for radiation protection purposes and/or meets the contamination limit specifications.

**Underground Radioactive Material:** A radiological posting status where subsurface radioactivity is present but where surface contamination does not exceed the soil standards.

**Unity Rule:** If more than one radionuclide is present, the sum of the fractions represented by each radionuclide concentration divided by its respective limiting concentration (administrative control value) shall not exceed unity. This rule could also apply to parameters other than radionuclide concentration.

**Unplanned Release Site:** An area that was contaminated by an unplanned release of radioactive contamination, making it a radiological control area.

**Unrestricted Release:** Values below which unrestricted release of soils will occur will be defined in an applicable record of decision.

**U.S. Environmental Protection Agency:** The federal agency chartered with carrying out and monitoring the environmental regulations.

**Waste Information Data System:** A database that identifies waste management units on the Hanford Site. It is a subset of the ESD.

**Waste Management:** The activity involved with storing, disposing of, shipping, handling, and monitoring all radioactive waste.

**Waste Sites:** Any facility used for the planned disposal of hazardous, radioactive, toxic, or nonradioactive/nontoxic waste.

**Water Table:** The upper boundary of an unconfined aquifer below which saturated groundwater occurs.

**Table 9-1. Radionuclide Nomenclature.**

<b>Radionuclide</b>	<b>Symbol</b>	<b>Half-Life</b>	<b>Radionuclide</b>	<b>Symbol</b>	<b>Half-Life</b>
Tritium	<sup>3</sup> H	12.3 yr	Cesium-134	<sup>134</sup> Cs	2.1 yr
Beryllium-7	<sup>7</sup> Be	53.28 d	Cesium-137	<sup>137</sup> Cs	30.3 yr
Carbon-14	<sup>14</sup> C	5.72E+03 yr	Cerium-141	<sup>141</sup> Ce	32.5 d
Sodium-22	<sup>22</sup> Na	2.6 yr	Cerium-144	<sup>144</sup> Ce	284.6 d
Potassium-40	<sup>40</sup> K	1.26 E+09 yr	Promethium-147	<sup>147</sup> Pm	13.4 min
Argon-41	<sup>41</sup> Ar	1.8 h	Europium-152	<sup>152</sup> Eu	13.5 yr
Chromium-51	<sup>51</sup> Cr	27.7 d	Europium-154	<sup>154</sup> Eu	8.6 yr
Manganese-54	<sup>54</sup> Mn	312 d	Europium-155	<sup>155</sup> Eu	4.7 yr
Cobalt-58	<sup>58</sup> Co	71 d	Thallium-208	<sup>208</sup> Tl	3.1 min
Iron-59	<sup>59</sup> Fe	45 d	Bismuth-212	<sup>212</sup> Bi	60.6 min
Cobalt-60	<sup>60</sup> Co	5.3 yr	Lead-212	<sup>212</sup> Pb	10.6 h
Nickel-63	<sup>63</sup> Ni	100 yr	Polonium-212	<sup>212</sup> Po	0.3 x 10 <sup>-6</sup> s
Zinc-65	<sup>65</sup> Zn	243.8 d	Polonium-216	<sup>216</sup> Po	0.15 s
Krypton-85	<sup>85</sup> Kr	10.7 yr	Radon-220	<sup>220</sup> Rn	55.6 s
Strontium-89	<sup>89</sup> Sr	50.5 d	Radium-226	<sup>226</sup> Ra	1.60 E+03 yr
Strontium-90	<sup>90</sup> Sr	29.1 yr	Radium-228	<sup>228</sup> Ra	5.75 yr
Niobium-95	<sup>95</sup> Nb	35.0 d	Thorium-232	<sup>232</sup> Th	1.40 E+10 yr
Zirconium-95	<sup>95</sup> Zr	64.0 d	Uranium Total	U or Uranium	4.50 E+09 yr
Technetium-99	<sup>99</sup> Tc	2.12 E+05 yr	Uranium-234	<sup>234</sup> U	2.40 E+05 yr
Ruthenium-103	<sup>103</sup> Ru	39.4 d	Uranium-235	<sup>235</sup> U	7.00 E+08 yr
Ruthenium-106	<sup>106</sup> Ru	1.0 yr	Uranium-236	<sup>236</sup> U	2.30 E+07 yr
Tin-113	<sup>113</sup> Sn	115 d	Uranium-238	<sup>238</sup> U	4.50 E+09 yr
Antimony-124	<sup>124</sup> Sb	60 d	Plutonium-238	<sup>238</sup> Pu	87.7 yr
Antimony-125	<sup>125</sup> Sb	2.7 yr	Plutonium-239/240	<sup>239,240</sup> Pu	2.40 E+04 yr
Iodine-129	<sup>129</sup> I	1.7 E+07 yr	Plutonium-241	<sup>241</sup> Pu	14.4 yr
Iodine-131	<sup>131</sup> I	8.0 d	Americium-241	<sup>241</sup> Am	433 yr
Barium-133	<sup>133</sup> Ba	10.53 yr			



## 10.0 STANDARDS

Table 10-1. U.S. Department of Energy Derived Concentration Guides.<sup>a</sup>

Radionuclide	DCG		Radionuclide	DCG	
	Air (pCi/m <sup>3</sup> )	Liquid (pCi/L)		Air (pCi/m <sup>3</sup> )	Liquid (pCi/L)
<sup>3</sup> H	1.0E+05	2.0E+06	<sup>147</sup> Pm	3.0E+02	1.0E+05
<sup>14</sup> C	6.0E+03	7.0E+04	<sup>152</sup> Eu	5.0E+01	2.0E+04
<sup>40</sup> K	9.0E+02	7.0E+03	<sup>154</sup> Eu	5.0E+01	2.0E+04
<sup>41</sup> Ar	1.0E+04	0.0E+00	<sup>155</sup> Eu	3.0E+02	1.0E+05
<sup>51</sup> Cr	6.0E+04	1.0E+06	<sup>208</sup> Tl	5.0E+03	0.0E+00
<sup>54</sup> Mn	2.0E+03	5.0E+04	<sup>212</sup> Bi	6.0E+02	1.0E+05
<sup>59</sup> Fe	8.0E+02	2.0E+04	<sup>214</sup> Bi	2.0E+03	6.0E+05
<sup>58</sup> Co	2.0E+03	4.0E+04	<sup>212</sup> Pb	8.0E+01	3.0E+03
<sup>60</sup> Co	8.0E+01	5.0E+03	<sup>214</sup> Pb	2.0E+03	2.0E+05
<sup>65</sup> Zn	6.0E+02	9.0E+03	<sup>212</sup> Po	1.0E+00	8.0E+01
<sup>85</sup> Kr	3.0E+06	0.0E+00	<sup>216</sup> Po	1.0E+00	8.0E+01
<sup>89</sup> Sr	3.0E+02	2.0E+04	<sup>220</sup> Rn	3.0E+03	0.0E+00
<sup>90</sup> Sr	9.0E+00	1.0E+03	<sup>224</sup> Ra	4.0E+00	4.0E+02
<sup>95</sup> Zr	6.0E+02	4.0E+04	<sup>226</sup> Ra	1.0E+00	1.0E+02
<sup>95</sup> Nb	3.0E+03	6.0E+04	<sup>228</sup> Ac	4.0E+01	6.0E+04
<sup>99</sup> Tc	2.0E+03	1.0E+05	<sup>232</sup> Th	7.0E-03	5.0E+01
<sup>103</sup> Ru	2.0E+03	5.0E+04	Total U	1.0E-01	6.0E+02
<sup>106</sup> Ru	3.0E+01	6.0E+03	<sup>234</sup> U	9.0E-02	5.0E+02
<sup>113</sup> Sn	1.0E+03	5.0E+04	<sup>235</sup> U	1.0E-01	6.0E+02
<sup>124</sup> Sb	6.0E+02	1.0E+04	<sup>236</sup> U	1.0E-01	5.0E+02
<sup>125</sup> Sb	1.0E+03	5.0E+04	<sup>238</sup> U	1.0E-01	6.0E+02
<sup>129</sup> I	7.0E+01	5.0E+02	<sup>238</sup> Pu	3.0E-02	4.0E+01
<sup>131</sup> I	4.0E+02	3.0E+03	<sup>239,240</sup> Pu	2.0E-02	3.0E+01
<sup>134</sup> Cs	2.0E+02	2.0E+03	<sup>241</sup> Pu	1.0E+00	2.0E+03
<sup>137</sup> Cs	4.0E+02	3.0E+03	<sup>241</sup> Am	2.0E-02	3.0E+01
<sup>141</sup> Ce	1.0E+03	5.0E+04	Total Alpha	2.0E-02	3.0E+01
<sup>144</sup> Ce	3.0E+01	7.0E+03	Total Beta	9.0E+00	1.0E+03

<sup>a</sup>From DOE Order 5400.5.

DCG = derived concentration guides

Table 10-2. EPA Concentration Levels for Environmental Compliance.<sup>a</sup>  
(Radionuclide Concentrations [pCi/m<sup>3</sup>] in Air)

Radionuclide	Concentration	Radionuclide	Concentration
<sup>3</sup> H	1.5E+03	<sup>137</sup> Cs	1.9E-02
<sup>14</sup> C	1.0E+01	<sup>141</sup> Ce	6.3E+00
<sup>40</sup> K	2.7E-02	<sup>144</sup> Ce	6.2E-01
<sup>41</sup> Ar	1.7E+03	<sup>147</sup> Pm	1.1E+01
<sup>51</sup> Cr	3.1E+01	<sup>152</sup> Eu	2.0E-02
<sup>54</sup> Mn	2.8E-01	<sup>154</sup> Eu	2.3E-02
<sup>59</sup> Fe	6.7E-01	<sup>155</sup> Eu	5.9E-01
<sup>58</sup> Co	6.7E-01	<sup>212</sup> Bi	5.6E+01
<sup>60</sup> Co	1.7E-02	<sup>214</sup> Bi	1.4E+02
<sup>65</sup> Zn	9.1E-02	<sup>212</sup> Pb	6.3E+00
<sup>85</sup> Kr	1.0E+06	<sup>214</sup> Pb	1.2E+02
<sup>89</sup> Sr	1.8E+00	<sup>224</sup> Ra	1.5E-01
<sup>90</sup> Sr	1.9E-02	<sup>226</sup> Ra	3.3E-03
<sup>95</sup> Zr	6.7E-01	<sup>228</sup> Ac	3.7E+00
<sup>95</sup> Nb	2.2E+00	<sup>232</sup> Th	6.2E-04
<sup>99</sup> Tc	1.4E-01	<sup>234</sup> U	7.7E-03
<sup>103</sup> Ru	2.6E+00	<sup>235</sup> U	7.1E-03
<sup>106</sup> Ru	3.4E-01	<sup>236</sup> U	7.7E-03
<sup>113</sup> Sn	1.4E+00	<sup>238</sup> U	8.3E-03
<sup>124</sup> Sb	5.3E-01	<sup>238</sup> Pu	2.1E-03
<sup>125</sup> Sb	1.6E-01	<sup>239/240</sup> Pu	2.0E-03
<sup>129</sup> I	9.1E-03	<sup>241</sup> Pu	1.0E-01
<sup>131</sup> I	2.1E-01	<sup>241</sup> Am	1.9E-03
<sup>134</sup> Cs	2.7E-02		

a - from 40 CFR 61, Subpart I, Appendix E, Table 2

Table 10-3. Inaccessible Soil Concentrations (pCi/g).

Radionuclide	100 B,D,K,N	100 F, H	200 West Area	200 East Area	300 Area	400 Area
<sup>3</sup> H	1.4 E+08	7.4 E+07	3.7 E+08	2.0 E+08	9.5 E+06	1.4 E+07
<sup>14</sup> C	6.2 E+05	6.2 E+05	6.2 E+05	6.2 E+05	6.2 E+05	6.2 E+05
<sup>55</sup> Fe	9.7 E+06	9.7 E+06	3.6 E+10	1.9 E+10	1.0 E+07	1.4 E+09
<sup>58</sup> Co	9.8 E+06	9.8 E+06	8.1 E+09	4.3 E+09	1.2 E+07	3.1 E+08
<sup>60</sup> Co	9.9 E+05	9.9 E+05	5.7 E+08	3.0 E+08	1.0 E+06	9.9 E+06
<sup>63</sup> Ni	1.5 E+08	1.5 E+08	6.9 E+09	6.9 E+09	1.5 E+08	2.2 E+08
<sup>90</sup> Sr*	8.3 E+05	8.3 E+05	2.2 E+08	1.2 E+08	8.3 E+05	8.4 E+06
<sup>99</sup> Tc	1.3 E+07	1.3 E+07	1.3 E+07	1.3 E+07	1.3 E+07	1.3 E+07
<sup>106</sup> Ru*	2.0 E+07	2.0 E+07	5.7 E+08	3.0 E+08	1.5 E+07	2.2 E+07
<sup>125</sup> Sb*	9.1 E+06	9.1 E+06	5.7 E+09	3.0 E+09	9.2 E+06	1.1 E+08
<sup>129</sup> I	2.8 E+05	2.8 E+05	2.8 E+05	2.8 E+05	2.2 E+05	2.8 E+05
<sup>134</sup> Cs	1.7 E+04	1.7 E+04	2.5 E+08	1.4 E+08	2.4 E+04	9.7 E+06
<sup>137</sup> Ce*	1.7 E+04	1.7 E+04	3.5 E+08	1.8 E+08	1.7 E+04	1.3 E+07
<sup>144</sup> Cs*	1.4 E+06	1.4 E+06	7.4 E+08	4.0 E+08	1.9 E+06	2.8 E+07
<sup>147</sup> Pm	3.4 E+07	3.4 E+07	7.4 E+09	4.0 E+09	3.5 E+07	2.8 E+08
<sup>152</sup> Eu	4.5 E+06	4.5 E+06	1.2 E+09	6.2 E+08	4.6 E+06	4.5 E+07
<sup>154</sup> Eu	3.3 E+06	3.3 E+06	8.8 E+08	4.7 E+08	3.3 E+06	3.4 E+07
<sup>155</sup> Eu	2.3 E+07	2.3 E+07	6.9 E+09	3.7 E+09	2.4 E+07	2.6 E+08
<sup>226</sup> Ra*	1.3 E+05	1.3 E+05	2.1 E+05	2.1 E+05	1.3 E+05	1.4 E+05
<sup>227</sup> Ac*	2.4 E+03	2.4 E+03	5.4 E+04	2.9 E+04	1.4 E+03	2.1 E+03
<sup>232</sup> Th*	2.0 E+04	2.0 E+04	2.0 E+04	2.0 E+04	4.7 E+03	7.1 E+03
<sup>232</sup> U*	5.5 E+04	5.5 E+04	1.4 E+05	1.4 E+05	9.9 E+03	1.5 E+04
<sup>233</sup> U	4.5 E+05	4.5 E+05	4.5 E+05	4.5 E+05	6.7 E+04	1.0 E+05
<sup>234</sup> U	4.6 E+05	4.6 E+05	4.6 E+05	4.6 E+05	6.9 E+04	1.0 E+05
<sup>235</sup> U*	4.9 E+05	4.9 E+05	4.9 E+05	4.9 E+05	7.3 E+04	1.1 E+05
<sup>236</sup> U	4.9 E+05	4.9 E+05	4.9 E+05	4.9 E+05	7.1 E+04	1.1 E+05
<sup>238</sup> U*	4.7 E+05	4.7 E+05	4.7 E+05	4.7 E+05	7.7 E+04	1.2 E+05
<sup>237</sup> Np*	8.9 E+02	8.9 E+02	8.9 E+02	8.9 E+02	8.9 E+02	8.9 E+02
<sup>238</sup> Pu	1.3 E+04	1.3 E+04	8.8 E+05	4.7 E+05	1.3 E+04	3.4 E+04
<sup>239</sup> Pu	1.2 E+04	1.2 E+04	1.2 E+04	1.2 E+04	1.2 E+04	1.2 E+04
<sup>240</sup> Pu	1.2 E+04	1.2 E+04	1.4 E+04	1.4 E+04	1.2 E+04	1.2 E+04
<sup>241</sup> Pu	6.1 E+05	6.1 E+05	4.2 E+07	2.2 E+07	6.1 E+05	1.2 E+06
<sup>241</sup> Am	2.5 E+04	2.5 E+04	7.4 E+05	4.0 E+05	1.9 E+04	2.8 E+04

Note: Asterisks mark nuclides with progeny that are assumed to be present in equilibrium amounts. However, <sup>234</sup>U was not included in the <sup>238</sup>U limits. For supporting references see WHC-SD-EN-TI-070, *Soil Concentration Limits for Accessible and Inaccessible Areas*.

Table 10-4. Accessible Soil Concentrations (pCi/g).

Radionuclide	100 B,D,K,N	100 F, H	200 West Area	200 East Area	300 Area	400 Area
<sup>3</sup> H	1.4 E+08	7.4 E+07	3.7 E+08	2.0 E+08	9.5 E+06	1.4 E+07
<sup>14</sup> C	6.2 E+05	6.2 E+05	6.2 E+05	6.2 E+05	6.2 E+05	6.2 E+05
<sup>55</sup> Fe	5.3 E+05	5.3 E+05	5.3 E+05	5.3 E+05	5.3 E+05	5.3 E+05
<sup>58</sup> Co	1.8 E+01	1.8 E+01	1.8 E+01	1.8 E+01	1.8 E+01	1.8 E+01
<sup>60</sup> Co	7.1 E+00	7.1 E+00	7.1 E+00	7.1 E+00	7.1 E+00	7.1 E+00
<sup>63</sup> Ni	2.5 E+07	2.5 E+07	2.5 E+07	2.5 E+07	2.5 E+07	2.5 E+07
<sup>90</sup> Sr*	2.8 E+03	2.8 E+03	2.8 E+03	2.8 E+03	2.8 E+03	2.8 E+03
<sup>99</sup> Tc	1.0 E+06	1.0 E+06	1.0 E+06	1.0 E+06	1.0 E+06	1.0 E+06
<sup>106</sup> Ru*	7.7 E+01	7.7 E+01	7.7 E+01	7.7 E+01	7.7 E+01	7.7 E+01
<sup>125</sup> Sb*	3.7 E+01	3.7 E+01	3.7 E+01	3.7 E+01	3.7 E+01	3.7 E+01
<sup>129</sup> I	1.0 E+04	1.0 E+04	1.0 E+04	1.0 E+04	1.0 E+04	1.0 E+04
<sup>134</sup> Cs	1.0 E+01	1.0 E+01	1.0 E+01	1.0 E+01	1.0 E+01	1.0 E+01
<sup>137</sup> Cs*	3.0 E+01	3.0 E+01	3.0 E+01	3.0 E+01	3.0 E+01	3.0 E+01
<sup>144</sup> Ce*	3.3 E+02	3.3 E+02	3.3 E+02	3.3 E+02	3.3 E+02	3.3 E+02
<sup>147</sup> Pm	1.1 E+06	1.1 E+06	1.1 E+06	1.1 E+06	1.1 E+06	1.1 E+06
<sup>152</sup> Eu	1.5 E+01	1.5 E+01	1.5 E+01	1.5 E+01	1.5 E+01	1.5 E+01
<sup>154</sup> Eu	1.4 E+01	1.4 E+01	1.4 E+01	1.4 E+01	1.4 E+01	1.4 E+01
<sup>155</sup> Eu	6.3 E+02	6.3 E+02	6.3 E+02	6.3 E+02	6.3 E+02	6.3 E+02
<sup>226</sup> Ra*	1.0 E+01	1.0 E+01	1.0 E+01	1.0 E+01	1.0 E+01	1.0 E+01
<sup>227</sup> Ac*	1.0 E+01	1.0 E+01	1.0 E+01	1.0 E+01	1.0 E+01	1.0 E+01
<sup>232</sup> Th*	5.9 E+00	5.9 E+00	5.9 E+00	5.9 E+00	5.9 E+00	5.9 E+00
<sup>232</sup> U*	1.0 E+01	1.0 E+01	1.0 E+01	1.0 E+01	1.0 E+01	1.0 E+01
<sup>233</sup> U	6.3 E+02	6.3 E+02	6.3 E+02	6.3 E+02	6.3 E+02	6.3 E+02
<sup>234</sup> U	6.3 E+02	6.3 E+02	6.3 E+02	6.3 E+02	6.3 E+02	6.3 E+02
<sup>235</sup> U*	1.7 E+02	1.7 E+02	1.7 E+02	1.7 E+02	1.7 E+02	1.7 E+02
<sup>236</sup> U	6.7 E+02	6.7 E+02	6.7 E+02	6.7 E+02	6.7 E+02	6.7 E+02
<sup>238</sup> U*	3.7 E+02	3.7 E+02	3.7 E+02	3.7 E+02	3.7 E+02	3.7 E+02
<sup>237</sup> Np*	4.8 E+01	4.8 E+01	4.8 E+01	4.8 E+01	4.8 E+01	4.8 E+01
<sup>238</sup> Pu	2.1 E+02	2.1 E+02	2.1 E+02	2.1 E+02	2.1 E+02	2.1 E+02
<sup>239</sup> Pu	1.9 E+02	1.9 E+02	1.9 E+02	1.9 E+02	1.9 E+02	1.9 E+02
<sup>240</sup> Pu	1.9 E+02	1.9 E+02	1.9 E+02	1.9 E+02	1.9 E+02	1.9 E+02
<sup>241</sup> Pu	1.0 E+04	1.0 E+04	1.0 E+04	1.0 E+04	1.0 E+04	1.0 E+04
<sup>241</sup> Am	1.8 E+02	1.8 E+02	1.8 E+02	1.8 E+02	1.8 E+02	1.8 E+02

Note: Asterisks mark nuclides with progeny that are assumed to be present in equilibrium amounts. However, <sup>234</sup>U was not included in the <sup>238</sup>U limits. For supporting references see WHC-SD-EN-TI-070, *Soil Concentration Limits for Accessible and Inaccessible Areas*.

## 11.0 DATA SUMMARY METHODS

Measuring any physical quantity has some degree of inherent uncertainty. This uncertainty results from the combination of all possible inaccuracies in the measurements process, including such factors as the reading of the result, the calibration of the measuring device, and numerical rounding errors.

In this report, individual radioactive measurements are accompanied by a plus or minus ( $\pm$ ) value, which represents the total propagated analytical uncertainty (or two-sigma counting error). The two-sigma counting error gives information on what the measurement might be if the same sample were counted again under identical conditions. The two-sigma counting error implies that approximately 95% of the time, a recount of the same sample would give a value within plus or minus the two-sigma counting error at the value reported.

Values in the tables that are less than the minimum detectable activity indicate that the reported result might have come from a sample with no radioactivity. Such values are considered below the detection limits of the measuring instrument. Also note that each radioactive measurement must have the random background radioactivity of the measuring instrument subtracted; therefore, negative results are possible, especially when the sample has very little radioactivity.

Reported averages also are accompanied by a plus or minus ( $\pm$ ) value, which represents two standard deviations from the mean. If the data fluctuate randomly, this is a measure of the uncertainty in the estimated average of the data because of this randomness.

Where averages of averages are reported, the plus or minus ( $\pm$ ) value represents two standard errors of the mean.

The mean,  $\bar{X}$ , is computed as:

$$\bar{X} = \frac{1}{n} \sum_{i=1}^n X_i$$

where  $X_i$  is the  $i$ th measurement and  $n$  is the number of measurements.

The standard error of the mean was computed as:

$$SE = \sqrt{\frac{S^2}{n}}$$

where  $S^2$ , the variance of the  $n$  measurements, was computed as:

$$S_M^2 = \frac{1}{n-1} \sum_{i=1}^n (X_i - \bar{X})^2$$

This estimator,  $S^2$ , includes the variance among the samples and the counting variance. The estimated  $S^2$  occasionally may be less than the average counting variance.

## 12.0 REFERENCES

- 10 CFR 835, "Occupational Radiation Protection," *Code of Federal Regulations*, as amended.
- 40 CFR 51, "Requirements for Preparation, Adoption, and Submittal of Implementation Plans," *Code of Federal Regulations*, as amended.
- 40 CFR 52, "Approval and Promulgation of Implementation Plans," *Code of Federal Regulations*, as amended.
- 40 CFR 61, Subpart H, "National Emission Standards for Emissions of Radionuclides Other Than Radon From Department of Energy Facilities," *Code of Federal Regulations*, as amended.
- 40 CFR 162, "State Registration of Pesticide Products," *Code of Federal Regulations*, as amended.
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WAC 173-303, "Dangerous Waste Regulations," *Washington Administrative Code*, as amended.

WAC 246-247, "Radiation Protection—Air Emissions," *Washington Administrative Code*, as amended.



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