Environmental Monitoring Master Sampling Schedule

January - December 1989

L.E. Bisping

January 1989

**Prepared for the U.S. Department of Energy
under Contract DE-AC06-76RLO 1830**

**Pacific Northwest Laboratory
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ENVIRONMENTAL MONITORING
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Pacific Northwest Laboratory
Richland, Washington 99352

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ABSTRACT

Environmental monitoring of the Hanford Site is conducted by the Pacific Northwest Laboratory (PNL)(a) for the U.S. Department of Energy (DOE). This document contains the planned schedule for routine sample collection for calendar year 1989 for the Surface and Ground-Water Environmental Monitoring Projects. This schedule is subject to modification during the year in response to changes in Site operations, program requirements, and the nature of the observed results. Operational limitations such as weather, mechanical failures, sample availability, etc., may also require schedule modifications. Changes will be documented in the respective project files, but this plan will not be reissued.

The purpose of these monitoring projects is to evaluate levels of radioactive and nonradioactive pollutants in the Hanford environs, as required in DOE Order 5480.1B, "Environmental Protection, Safety, and Health Protection Program for Department of Energy Operations," and in DOE Order 5484.1, "Environmental Protection, Safety, and Health Protection Information Reporting Requirements." The sampling locations and sampling methods, with few exceptions, will be the same as those described in PNL's annual monitoring report to the DOE, Environmental Monitoring at Hanford for 1987, PNL-6464.

This schedule includes routine ground-water sampling performed by PNL for Westinghouse Hanford Company, but does not include samples that may be collected in 1989 to support special studies or special contractor projects, or for quality control. The sampling schedule for Site-wide chemical monitoring is not included here, because it varies each quarter as needed, based on past results and operating needs. This schedule does not include Resource Conservation and Recovery Act (RCRA, 42 U.S.C. 6901 et seq.) ground-water sampling performed by PNL for Hanford Site contractors, nor does it include sampling that may be done by other DOE Hanford contractors.

(a) Pacific Northwest Laboratory is operated by Battelle Memorial Institute for the U.S. Department of Energy under Contract DE-AC06-76RL0 1830.

Questions can be directed to Richard Jaquish, Manager, Surface Environmental Monitoring Project, and Robert Bryce, Manager, Ground-Water Monitoring Project.

ABBREVIATIONS

FREQUENCY SYMBOLS USED

A - Annually
BM - Bimonthly (every 2 mo)
BW - Biweekly (every 2 wk)
M - Monthly
M Comp - Monthly Composite
NRA - Not Routinely Analyzed
Q - Quarterly
SA - Semiannually
W - Weekly

ANALYSIS SYMBOLS USED

Generally, standard elements, chemical, and isotope designations are used to indicate the analyses performed. Other analyses designations used are:

Alpha - gross alpha activity of sample
Beta - gross beta activity of sample
BOD - biological oxygen demand
DO - dissolved oxygen
Gamma Scan - analysis of photon energy spectrum for individual photon-emitting radionuclides, including ^{22}Na , ^{60}Co , ^{65}Zn , ^{106}Ru , ^{131}I , and ^{137}Cs
U - natural uranium
WQ - water quality analyses, including pH, conductance, Ca, Mg, Na, CO_3 , HCO_3 , K, B, $\text{NO}_3\text{-N}$, Cl, $\text{SO}_4\text{-S}$, and dissolved solids.
Isotopic Uranium - ^{234}U , ^{235}U , ^{238}U
Isotopic Plutonium - ^{238}Pu , $^{239}\text{-}^{240}\text{Pu}$

PORTABLE INSTRUMENTS SYMBOLS USED

GM - Geiger-Mueller counter
LLM - Ludlum micro R meter

PART 1. HANFORD SURFACE ENVIRONMENTAL MONITORING

1.0 SAMPLES FOR RADIOLOGICAL ANALYSES

1.1 AIR - PARTICULATE FILTER

Location	Individual Samples			Composite Group	Composited Samples		
	Sample Number	Frequency	Analyses		Sample Number	Frequency	Analyses
<u>Onsite</u>							
100-K	0058	EW	Beta	100 Area	1763	M	Gamma Scan 89Sr, 90Sr, Pu, (a) U(b)
100-N (WPPSS)	1529	EW	Beta			Q	
100-D	1074	EW	Beta, Alpha				
100-Area Fire Station	0164	EW	Beta				
Rt. 11A-Mile 9	0249	EW	Beta, Alpha	200 North	0613	M	Gamma Scan 89Sr, 90Sr, Pu (a)
N of 200-E	0061	EW	Beta, Alpha			Q	
E of 200-E	0030	EW	Beta, Alpha	200 East	1749	M	Gamma Scan 89Sr, 90Sr, Pu, (a) U(b)
200-ESE	0043	EW	Beta, Alpha			Q	
S of 200-E	0031	EW	Beta, Alpha				
B Pond	0039	EW	Beta, Alpha	B Pond	1738	M	Gamma Scan 89Sr, 90Sr, Pu, (a) U(b)
B Pond No. 2	0039	EW	NRA			Q	
SW of B/C Criba	0250	EW	Beta, Alpha	200 W South and East	0614	M	Gamma Scan 89Sr, 90Sr, Pu, (a) U(b)
Army Loop Camp	0248	EW	Beta, Alpha			Q	
200 Tel. Exchange	0052	EW	Beta, Alpha				
200 W SE	0026	EW	Beta, Alpha	200 West	1739	M	Gamma Scan 89Sr, 90Sr, Pu, (a) U(b)
200 W SE No. 2	0027	EW	NRA			Q	
3014-A Bldg.	1793	EW	Beta	300 Area	1741	M	Gamma Scan 89Sr, 90Sr, Pu, (a) U(b)
300 South Gate	0150	EW	Beta, Alpha			Q	
300 Trench	1544	EW	Beta, Alpha				
300 NE	0022	EW	Beta, Alpha	300 NE	1740	M	Gamma Scan 89Sr, 90Sr, Pu, (a) U(b)
300 NE No. 2	0023	EW	NRA			Q	
400-E	0308	EW	Beta, Alpha	400 Area	0486	M	Gamma Scan 89Sr, 90Sr, Pu (a)
400-W	0455	EW	Beta, Alpha			Q	
400-S	0458	EW	Beta, Alpha				
400-N	0457	EW	Beta, Alpha				
Hanford Townsite	0057	EW	Beta, Alpha	Hanford	0600	M	Archive
Hanford No. 2	0036	EW	NRA				

1.1 AIR - PARTICULATE FILTER (contd)

Location	Individual Samples			Composite Group	Composited Samples		
	Sample Number	Frequency	Analyses		Sample Number	Frequency	Analyses
<u>Onsite (contd)</u>							
Wye Barricade	0024	BW	Beta, Alpha	Wye Barricade	0001	M Q	Gamma Scan ^{89}Sr , ^{90}Sr , Pu, (a) U(b)
Wye Barricade No. 2	0030	BW	NRA				
<u>Perimeter</u>							
Berg Ranch	1405	BW	Beta, Alpha	Northeast Perimeter	0002	M Q	Gamma Scan ^{89}Sr , ^{90}Sr , Pu (a)
Sagehill Met. Tower	0047	BW	Beta, Alpha				
Ringold Met. Tower	0048	BW	Beta, Alpha				
W End of Fir Road	0301	BW	Beta, Alpha	East Perimeter	0003	M Q	Gamma Scan ^{89}Sr , ^{90}Sr , Pu, (a) U(b)
Pettett Farm	0351	BW	Beta, Alpha				
Byers Landing	0247	BW	Beta, Alpha	Southeast Perimeter	0004	M Q	Gamma Scan ^{89}Sr , ^{90}Sr , Pu, (a) U(b)
RRC CP 84	0182	BW	Beta, Alpha				
Horn Rapids Substation	0050	BW	Beta	Prosser Barricade	0006	M Q	Gamma Scan ^{89}Sr , ^{90}Sr , Pu (a)
Prosser Barricade	0055	BW	Beta, Alpha				
ERC	0029	BW	Beta	ERC	0012	M	Archive
ERC No. 2	0025	BW	NRA				
Rattlesnake Springs	0072	BW	Beta	West Perimeter	0007	M Q	Gamma Scan ^{89}Sr , ^{90}Sr , Pu (a)
Yakima Barricade	1050	BW	Beta, Alpha				
Vernita Bridge S End	1051	BW	Beta	Northeast Perimeter	0008	M Q	Gamma Scan ^{89}Sr , ^{90}Sr , Pu (a)
Wahluke Slope	1051	BW	Beta, Alpha				
<u>Community</u>							
Othello	1052	BW	Beta	Northeast Communities	0009	M Q	Gamma Scan ^{89}Sr , ^{90}Sr , Pu (a)
Connell	1053	BW	Beta				
Pasco	1054	BW	Beta	Tri-Cities	0010	M Q	Gamma Scan ^{89}Sr , ^{90}Sr , Pu (a)
Richland	0054	BW	Beta, Alpha				
Kennewick	1055	BW	Beta				
Benton City	0029	BW	Beta, Alpha	Benton City	0011	M Q	Gamma Scan ^{89}Sr , ^{90}Sr , Pu (a)
Prosser	0025	BW	Beta				

1.1 AIR - PARTICULATE FILTER (contd)

Location	Individual Samples			Composite Group	Composited Samples		
	Sample Number	Frequency	Analyses		Sample Number	Frequency	Analyses
<u>Community (contd)</u>							
Eltopia	1120	BW	Beta	Eltopia	0617	M	Gamma Scan
Eltopia No. 2	0088	BW	NRA			Q	⁸⁹ Sr, ⁹⁰ Sr, Pu (a)
Mattawa	0626	BW	Beta	Mattawa	0618	M	Gamma Scan
Mattawa No. 2	0034	BW	NRA			Q	⁸⁹ Sr, ⁹⁰ Sr, Pu (a)
<u>Distant</u>							
Moses Lake	0960	BW	Beta	Outer Northeast	1742	M	Gamma Scan
Washucna	0959	BW	Beta			Q	⁸⁹ Sr, ⁹⁰ Sr, Pu (a)
Walla Walla	0262	BW	Beta	Outer Southeast	1744	M	Gamma Scan
McNary Dam	0958	BW	Beta			Q	⁸⁹ Sr, ⁹⁰ Sr, Pu (a)
Sunnyside	0964	BW	Beta, Alpha	Sunnyside	1748	M	Gamma Scan
Sunnyside No. 2	0032	BW	NRA			Q	⁸⁹ Sr, ⁹⁰ Sr, Pu, (a) U(b)
Yakima	0624	BW	Beta, Alpha	Yakima	0623	M	Gamma Scan
Yakima No. 2	0040	BW	NRA			Q	⁸⁹ Sr, ⁹⁰ Sr, Pu, (a) U(b)

(a) Isotopic Plutonium.

(b) Isotopic Uranium.

1.2 AIR - GASES AND VAPOR

Location	131I		129I		3H		14C		85Kr	
	Sample Number	Frequency	Sample Number	Frequency (a)	HTO Sample Number	Frequency	CO Sample Number	Frequency	Sample Number	Frequency
<u>Onsite</u>										
100-K	1581	M (NRA)								
100-M (WPPSS)	1681	BW			0283	M				
100-D	1582	BW			8335	M	0914	BW		
100-Area Fire Station	8155	M (NRA)								
Rt. 11A-Mile 9	0254	M (NRA)								
N of 200-E	0251	M (NRA)								
E of 200-E	0289	BW								
200-ESE	1684	BW	0008	Q Comp	8201	M	0913	BW	1534	M
S of 200-E	0270	BW								
SW of B/C Cribs	0658	M (NRA)								
Army Loop Camp	0253	M (NRA)								
200 Tel. Exchange	0252	M (NRA)			0275	M				
3814-A Bldg.	1795	BW								
300 South Gate	8151	M (NRA)								
300 Trench	8239	M (NRA)			0900	M	0832	BW	1507	M
400-E	8309	BW			8428	M				
400-W	8458	M (NRA)								
400-S	8459	M (NRA)								
400-N	8480	M (NRA)								
Hanford Townsite	1686	M (NRA)								
Wye Barricade	1584	M (NRA)								
<u>Perimeter</u>										
Berg Ranch	1872	M (NRA)			0287	M				
Sagehill Met. Tower	0257	BW			0905	M			1509	M
Ringold Met. Tower	0258	M (NRA)	0004	Q Comp	0906	M			1504	M
W End of Fir Road	8392	BW			8393	M			1503	M
Pettett Farm	8352	BW								
Byers Landing	0248	BW	0005	Q Comp	0273	M				
RRC CP 84	8183	M (NRA)								
Horn Rapids Substation	0280	M (NRA)								
Prosser Barricade	8248	BW			0908	M			1502	M

1.2 AIR - GASES AND VAPOR (contd)

Location	131Y		129Y		3H		14C		85Kr	
	Sample Number	Frequency	Sample Number	Frequency (a)	HTO Sample Number	Frequency	CO Sample Number	Frequency	Sample Number	Frequency
<u>Perimeter (contd)</u>										
ERC	1585	M (NRA)								
Rattlesnake Springs	1586	M (NRA)								
Yakima Barricade	1667	M (NRA)			0902	M				
Vernita Bridge S End	1668	M (NRA)								
Wahluke Slope	1671	M (NRA)			0266	M				
<u>Community</u>										
Othello	1673	M (NRA)							1511	M
Connell	1674	M (NRA)								
Mattawa	1666	M (NRA)								
Eltopia	0827	M (NRA)							0635	M
Pasco	1676	M (NRA)							0636	M
Richland	0231	EW			0207	M				
Kennewick	0628	M (NRA)								
Benton City	1670	EW								
Prosser	0629	M (NRA)								
<u>Distant</u>										
Moses Lake	1682	M (NRA)								
Washlucna	1683	M (NRA)								
Walla Walla	0261	M (NRA)								
McNary Dam	1684	M (NRA)								
Sunnyside	1680	EW			0910	M	0922	EW	1505	M
Yakima	0630	EW			0631	M	0633	EW	0634	M
Yakima No. 2			0001	Q Comp						

(a) Samples are collected monthly and composited for quarterly analyses.

1.3 WATER - COLUMBIA RIVER

<u>Location</u>	<u>Sample Type</u>	<u>Sample Number</u>	<u>Frequency</u>	<u>Analyses</u>
Priest Rapids Dam	Cumulative (collected weekly)	1285	M Comp	Alpha, Beta, Lo ³ H, Gamma Scan, ⁸⁹ Sr, ⁹⁰ Sr, ⁹⁹ Tc, U(a)
	Particulate (filter)	6395	BW Q Comp	Gamma Scan Pu(b)
	Soluble (resin)	6394	BW Q Comp	Gamma Scan ¹²⁹ I, Pu(b)
Richland	Cumulative (collected weekly)	1000	M Comp	Alpha, Beta, Lo ³ H, Gamma Scan, ⁸⁹ Sr, ⁹⁰ Sr, ⁹⁹ Tc, U(a)
	Particulate (filter)	6463	BW Q Comp	Gamma Scan Pu(b)
	Soluble (resin)	6464	BW Q Comp	Gamma Scan ¹²⁹ I, Pu(b)
Richland No. 2	Cumulative (collected weekly)	1001	W	Alpha, Beta
300 Area	Particulate (filter)	6385	BW Q Comp	Gamma Scan Pu(b)
	Soluble (resin)	6384	BW Q Comp	Gamma Scan ¹²⁹ I, Pu(b)

(a) Isotopic Uranium.

(b) Isotopic Plutonium.

1.4 WATER - COLUMBIA RIVER (NONRADIOLOGICAL)

<u>Location</u>	<u>Sample Type</u>	<u>Sample Number</u>	<u>Frequency</u>	<u>Analyses(a)</u>
Vernita	Grab	1373 (1816)(b)	M	NO ₃ , BOD, Coliforms, Fecal Coliforms, pH
			Q	WQ-NASQAN
Below Priest Rapids Dam	Thermograph	1268	Continuous	Temperature
Richland	Grab	1385 (1041)(b)	M	NO ₃ , BOD, Coliforms, Fecal Coliforms, pH
			Q	WQ-NASQAN
	Thermograph	1083	Continuous	Temperature

(a) Monthly analyses are performed by the Hanford Environmental Health Foundation (HEHF). Numerous water quality (WQ) analyses performed by the United States Geological Survey (USGS) in conjunction with the National Stream Quality Accounting Network (NASQAN) Program. Thermograph stations operated and maintained by the USGS.

(b) Analytical results are retrieved from the environmental data base using this sample number.

1.5 WATER - ONSITE POND

<u>Location</u>	<u>Sample Type</u>	<u>Sample Number</u>	<u>Frequency</u>	<u>Analyses</u>
West Lake	Grab	6133	Q	Alpha, Beta, ³ H, ⁹⁰ Sr, U, (a) Gamma Scan
B Pond	Grab	0815	Q	Alpha, Beta, ³ H, ⁹⁰ Sr, Gamma Scan
FFTF Pond	Grab	5487	Q	Alpha, Beta, ³ H, Gamma Scan

(a) Isotopic Uranium.

1.6 WATER - IRRIGATION

<u>Location</u>	<u>Sample Type</u>	<u>Sample Number</u>	<u>Number of Samples</u>	<u>Collection Period</u>	<u>Analyses</u>
Riverview Canal	Grab	8098	3	May-Sept	⁹⁰ Sr, Gamma Scan

1.7 WATER - DRINKING

Location	Type	Sample Number	Frequency	Analyses
<u>Onsite</u>				
100-B River	Grab	6518	Q	Alpha, Beta, ^3H , ^{89}Sr , ^{90}Sr , Gamma Scan
100-D River	Grab	1219	Q (a)	Alpha, Beta, ^3H , ^{89}Sr , ^{90}Sr , ^{131}I , Gamma Scan
Yakima Barricade	Grab	6543	Q	Alpha, Beta, ^3H , ^{90}Sr , Gamma Scan
Observatory	Grab	6381	Q	Alpha, Beta, ^3H , ^{90}Sr , Gamma Scan
FFTF	Grab	1220	Q A	Alpha, Beta, ^3H , ^{90}Sr , Gamma Scan ^{129}I
300 Area	Cumulative	6243	Q Comp (b)	Alpha, Beta, Lo ^3H , ^{89}Sr , ^{90}Sr , ^{99}Tc , U, (c) Gamma Scan
Firing Range	Grab	0099	Q	Alpha, Beta, ^3H , ^{90}Sr , Gamma Scan
ALE Headquarters	Grab	6299	Q	Alpha, Beta, ^3H , ^{90}Sr , Gamma Scan
<u>Offsite</u>				
Ringold Hatchery	Grab	0995	Q A	Alpha, Beta, ^3H , U, (c) Gamma Scan ^{129}I , WQ (d)
W15	Grab	0997	Q A	Alpha, Beta, ^3H , U, (c) Gamma Scan ^{129}I , WQ (d)
White Bluffs Assoc.	Grab	0998	Q A	Alpha, Beta, ^3H , U, (c) Gamma Scan ^{129}I , WQ (d)
Alexander Farm	Grab	0999	Q A	Alpha, Beta, ^3H , U, (c) Gamma Scan ^{129}I , WQ (d)

(a) Composite of five consecutive daily grab samples.

(b) Composite of monthly cumulative samples.

(c) Isotopic Uranium.

(d) Water quality analysis performed by HEHF.

1.8 FOODSTUFFS - ANIMAL PRODUCTS

1.8.1 Whole Milk

<u>Location</u>	<u>Sample Number</u>	<u>Frequency</u>	<u>Analyses</u>
Wahluke Area Composite (a)	0305	M Q SA	^{131}I , Gamma Scan, ^3H ^{90}Sr ^{129}I
Sagehen Area Composite (a)	0308	SW M Q SA	^{131}I , Gamma Scan ^3H ^{90}Sr ^{129}I
Riverview Area	0075	M Q SA	^{131}I , Gamma Scan, ^3H ^{90}Sr ^{129}I
Benton City Area	6510	M Q SA	^{131}I , Gamma Scan, ^3H ^{90}Sr ^{129}I
Sunnyside Area	6355	SW M Q SA	^{131}I , Gamma Scan ^3H ^{90}Sr ^{129}I
Moses Lake Area	0307	M Q SA	^{131}I , Gamma Scan, ^3H ^{90}Sr ^{129}I

(a) Sample composited from three sources in each area.

1.8.2 Poultry and Eggs

<u>Location</u>	<u>Sample Type</u>	<u>Sample Number</u>	<u>Frequency</u>	<u>Analyses</u>
Sagehen Area	Chicken	6386	SA	^{90}Sr , Gamma Scan
	Eggs	6387	SA	^{90}Sr , Gamma Scan
Sunnyside Area	Chicken	6371	SA	^{90}Sr , Gamma Scan
	Eggs	6370	SA	^{90}Sr , Gamma Scan

1.8.3 Beef

<u>Location</u>	<u>Sample Number</u>	<u>Frequency</u>	<u>Analysis</u>
Sagehen Area	5418	A	⁹⁰ Sr, Gamma Scan
Riverview Area	1292	A	⁹⁰ Sr, Gamma Scan
Horn Rapids Area	5515	A	⁹⁰ Sr, Gamma Scan
Sunnyside Area	0322	A	⁹⁰ Sr, Gamma Scan

1.9 FOODSTUFFS - PRODUCE

1.9.1 Leafy Vegetables

<u>Location</u>	<u>Sample Number</u>	<u>Frequency</u> ^(a)	<u>Analyses</u>
Wahluke Area	0308	A	⁹⁰ Sr, Gamma Scan
Sage Moor Area	0419	A	⁹⁰ Sr, Gamma Scan
Riverview Area	1809	A	⁹⁰ Sr, Gamma Scan, FDA ^(b)
Benton City Area	1812	A	⁹⁰ Sr, Gamma Scan
Sunnyside Area	0372	A	⁹⁰ Sr, Gamma Scan
Moses Lake Area	0407	A	⁹⁰ Sr, Gamma Scan, FDA ^(b)

(a) Three samples collected within each area.

(b) Duplicate samples sent to U.S. Food and Drug Administration.

1.9.2 Vegetables

<u>Location</u>	<u>Sample Type</u>	<u>Sample Number</u>	<u>Frequency</u> ^(a)	<u>Analyses</u>
Riverview Area	Potatoes	0009	A	⁹⁰ Sr, Gamma Scan, FDA ^(b)
	Tomatoes	0011	A	⁹⁰ Sr, Gamma Scan
	Carrots	0013	A	⁹⁰ Sr, Gamma Scan
Sage Moor Area	Potatoes	0638	A	⁹⁰ Sr, Pu, ^(c) Gamma Scan, FDA ^(b)
Sunnyside Area	Potatoes	0537	A	⁹⁰ Sr, Pu, ^(c) Gamma Scan, FDA ^(b)
Wahluke Area	Potatoes	0639	A	⁹⁰ Sr, Gamma Scan

(a) Three samples of each type collected within each area.

(b) Duplicate samples sent to U.S. Food and Drug Administration.

(c) Isotopic Plutonium.

1.9.3 Fruit

<u>Location</u>	<u>Sample Type</u>	<u>Sample Number</u>	<u>Frequency</u> ^(a)	<u>Analyses</u>
Sage Moor Area	Apples	0565	A	³ H, ⁹⁰ Sr, Pu, ^(b) Gamma Scan, FDA ^(c)
	Cherries	0543	A	³ H, ⁹⁰ Sr, Gamma Scan
	Grapes	0417	A	³ H, ⁹⁰ Sr, Gamma Scan
Cold Creek Area	Apples	0304	A	³ H, ⁹⁰ Sr, Gamma Scan
	Grapes	0303	A	³ H, ⁹⁰ Sr, Gamma Scan
Sunnyside Area	Apples	0440	A	³ H, ⁹⁰ Sr, Pu, ^(b) Gamma Scan
	Cherries	0453	A	³ H, ⁹⁰ Sr, Gamma Scan
	Grapes	0454	A	³ H, ⁹⁰ Sr, Gamma Scan
Riverview Area	Apples	0641	A	³ H, ⁹⁰ Sr, Gamma Scan, FDA ^(c)
	Grapes	0642	A	³ H, ⁹⁰ Sr, Gamma Scan
	Melons	0012	A	³ H, ⁹⁰ Sr, Gamma Scan
Mattawa Area	Apples	0503	A	³ H, ⁹⁰ Sr, Gamma Scan
	Grapes	0504	A	³ H, ⁹⁰ Sr, Gamma Scan
Wahlake Area	Apples	0640	A	³ H, ⁹⁰ Sr, Gamma Scan, FDA ^(c)

(a) Three samples of each type collected within each area.

(b) Isotopic Plutonium.

(c) Duplicate samples sent to the U.S. Food and Drug Administration.

1.10 FOODSTUFFS - FARM PRODUCTS

1.10.1 Wine

<u>Location</u>	<u>Sample Type</u>	<u>Sample Number</u>	<u>Frequency</u> ^(a)	<u>Analyses</u>
Columbia Basin	White	0544	A	³ H, Gamma Scan
	Red	0545	A	³ H, Gamma Scan
Yakima Valley	White	0546	A	³ H, Gamma Scan
	Red	0547	A	³ H, Gamma Scan

(a) Three samples of each type collected within each area.

1.10.2 Wheat and Alfalfa

<u>Location</u>	<u>Sample Type</u>	<u>Sample Number</u>	<u>Frequency</u> ^(a)	<u>Analyses</u>
Wahluke Area	Wheat	0320	A	⁹⁰ Sr, Gamma Scan
	Alfalfa	0311	A	⁹⁰ Sr, Gamma Scan
Sagehen Area	Wheat	0319	A	⁹⁰ Sr, Pu, (b) Gamma Scan, FDA ^(c)
	Alfalfa	0312	A	⁹⁰ Sr, Gamma Scan
Riverview Area	Wheat	0318	A	⁹⁰ Sr, Gamma Scan
	Alfalfa	0313	A	⁹⁰ Sr, Gamma Scan
Benton City Area	Wheat	0317	A	⁹⁰ Sr, Gamma Scan
	Alfalfa	0314	A	⁹⁰ Sr, Gamma Scan
Sunnyside Area	Wheat	0316	A	⁹⁰ Sr, Pu, (b) Gamma Scan,
	Alfalfa	0315	A	⁹⁰ Sr, Gamma Scan
Moscow Lake Area	Wheat	0321	A	⁹⁰ Sr, Gamma Scan, FDA ^(c)
	Alfalfa	0310	A	⁹⁰ Sr, Gamma Scan

(a) Three samples of each type collected within each area.

(b) Isotopic Plutonium.

(c) Duplicate samples sent to the U.S. Food and Drug Administration.

1.11 WILDLIFE

1.11.1 Fish

<u>Location</u>	<u>Species/ Sample</u>	<u>Sample Number</u>	<u>Number of Samples</u>	<u>Collection Period</u>	<u>Analyses</u>
Priest Rapids Dam to Vermite Bridge	Whitefish				
	Fillet	0320	5	Oct-Dec	⁹⁰ Sr, Gamma Scan
	Carcass	0493	5	Oct-Dec	⁹⁰ Sr
100-D	Whitefish				
	Fillet	0431	10	Oct-Dec	⁹⁰ Sr, Gamma Scan
	Carcass	0490	10	Oct-Dec	⁹⁰ Sr
100-F Slough	Bass				
	Fillet	0389	5	May-June	⁹⁰ Sr, Gamma Scan
	Carcass	0338	5	May-June	⁹⁰ Sr

1.11.2 Ducks

<u>Location</u>	<u>Species/(a) Sample(b)</u>	<u>Sample Number</u>	<u>Number of Samples</u>	<u>Collection Period</u>	<u>Analyses</u>
100-N Area	Mallard				
	Muscle	0458	4	September	⁹⁰ Sr, Gamma Scan
	Liver	0457	4	September	NRA
	Bone	0458	4	September	NRA
B Pond	Mallard				
	Muscle	0444	20	September	Gamma Scan
	Liver	0445	20	September	NRA
	Bone	0440	20	September	NRA
West Lake	Mallard				
	Muscle	0188	4	September	⁹⁰ Sr, Gamma Scan
	Liver	0198	4	September	NRA
	Bone	0199	4	September	NRA
300-Area Trenches	Mallard				
	Muscle	0453	4	September	Gamma Scan
	Liver	0454	4	September	NRA
	Bone	0455	4	September	NRA

(a) Mallard preferred; other puddle ducks acceptable if mallard is unavailable.

(b) Retain liver and bone to be analyzed for isotopic plutonium and ⁹⁰Sr, respectively, if ¹³⁷Cs exceeds 100 pCi/g (wet weight) in the muscle.

1.11.3 Game Birds

<u>Location</u>	<u>Species/(a) Sample(b)</u>	<u>Sample Number</u>	<u>Number of Samples</u>	<u>Collection Period</u>	<u>Analyses</u>
100-N Trench	Pheasant				
	Muscle	0470	3	October	Gamma Scan
	Liver	0480	3	October	NRA
	Bone	0481	3	October	NRA
100-D to 100-F	Pheasant				
	Muscle	0473	10	October	Gamma Scan
	Liver	0474	10	October	NRA
	Bone	0475	10	October	NRA
200-E Area	Pheasant				
	Muscle	0487	3	October	Gamma Scan
	Liver	0488	3	October	NRA
	Bone	0489	3	October	NRA
200-W Area	Pheasant				
	Muscle	0470	3	October	Gamma Scan
	Liver	0471	3	October	NRA
	Bone	0472	3	October	NRA
300 Area	Pheasant				
	Muscle	0484	3	October	Gamma Scan
	Liver	0485	3	October	NRA
	Bone	0486	3	October	NRA

(a) Pheasant preferred; chukar or quail acceptable if pheasant is unavailable.

(b) Retain liver and bone to be analyzed for isotopic plutonium and ⁹⁰Sr, respectively, if ¹³⁷Cs exceeds 100 pCi/g (wet weight) in muscle.

1.11.4 Deer

<u>Location</u>	<u>Species/ Sample</u>	<u>Sample Number</u>	<u>Number of Samples</u>	<u>Collection Period</u>	<u>Analysis</u>
200 Ponds	Mule				
	Muscle	0300	2	October	Gamma Scan
	Liver	0370	2	October	Pu ^(a)
	Bone	0371	2	October	⁹⁰ Sr
Road Kill at Onsite Locations (b)	Mule				
	Muscle	ATL ^(c)	0	Annual	Gamma Scan
	Liver	ATL	0	Annual	Pu ^(a)

(a) Isotopic Plutonium

(b) As available.

(c) ATL - according to location.

1.11.5 Rabbits

<u>Location</u>	<u>Type/ Sample</u>	<u>Sample Number</u>	<u>Number of Samples</u>	<u>Collection Period</u>	<u>Analysis</u>
100-W River Bank	Cottontail				
	Muscle	0146	4	April	Gamma Scan
	Liver	0146	4	April	Pu ^(a)
	Bone	0452	4	April	⁹⁰ Sr
200-E Area	Jack Rabbit				
	Muscle	1769	4	April	Gamma Scan
	Liver	1770	4	April	Pu ^(a)
	Bone	0432	4	April	⁹⁰ Sr
200-W Area	Jack Rabbit				
	Muscle	1780	4	April	Gamma Scan
	Liver	1790	4	April	Pu ^(a)
	Bone	0413	4	April	⁹⁰ Sr

(a) Isotopic Plutonium.

1.12 SOIL

Location	Sample Number	Frequency	Analyses
NE of 100-N Area	0590	A	Gamma Scan, ^{90}Sr , U, (a) Pu (b)
E of 100-N Area	0578	A	Gamma Scan, ^{90}Sr , U, (a) Pu (b)
100-Area Fire Station	0580	A	Gamma Scan, ^{90}Sr , U, (a) Pu (b)
200-ENC	0582	A	Gamma Scan, ^{90}Sr , U, (a) Pu (b)
E of 200-E ^(c)	0581	A	Gamma Scan, ^{90}Sr , U, (a) Pu (b)
200-ESE ^(c)	0522	A	Gamma Scan, ^{90}Sr , U, (a) Pu, (b) ^{241}Am
S of 200-E ^(c)	0582	A	Gamma Scan, ^{90}Sr , U, (a) Pu (b)
SW of B/C Crib ^(c)	0583	A	Gamma Scan, ^{90}Sr , U, (a) Pu, (b) ^{241}Am
E of 200-W Gate	0578	A	Gamma Scan, ^{90}Sr , U, (a) Pu, (b) ^{241}Am
S of 200-W	0584	A	Gamma Scan, ^{90}Sr , U, (a) Pu (b)
Rattlesnake Springs ^(c)	0503	A	Gamma Scan, ^{90}Sr , U, (a) Pu (b)
Yakima Barricade ^(c)	0504	A	Gamma Scan, ^{90}Sr , U, (a) Pu (b)
400-E	0582	A	Gamma Scan, ^{90}Sr , U, (a) Pu (b)
SE Side of FFTF	0577	A	Gamma Scan, ^{90}Sr , U, (a) Pu (b)
N of 300 Area	0522	A	Gamma Scan, ^{90}Sr , U, (a) Pu (b)
S of 300 Area	0523	A	Gamma Scan, ^{90}Sr , U, (a) Pu (b)
Hanford Townsite	0517	A	Gamma Scan, ^{90}Sr , U, (a) Pu (b)
Wye Barricade ^(c)	0518	A	Gamma Scan, ^{90}Sr , U, (a) Pu (b)
Promiser Barricade ^(c)	0525	A	Gamma Scan, ^{90}Sr , U, (a) Pu (b)
Othello	0505	A	Gamma Scan, ^{90}Sr , U, (a) Pu (b)
Connell	0503	A	Gamma Scan, ^{90}Sr , U, (a) Pu (b)
East of ALE Field Lab	0578	A	Gamma Scan, ^{90}Sr , U, (a) Pu (b)
N End Vernita Bridge	0506	A	Gamma Scan, ^{90}Sr , U, (a) Pu (b)
Wahluke Slope ^(c)	0507	A	Gamma Scan, ^{90}Sr , U, (a) Pu (b)
Berg Ranch ^(c)	0508	A	Gamma Scan, ^{90}Sr , U, (a) Pu (b)
Ringold	0509	A	Gamma Scan, ^{90}Sr , U, (a) Pu (b)
W End of Fir Road	0560	A	Gamma Scan, ^{90}Sr , U, (a) Pu (b)
Taylor Flats No. 2	0521	A	Gamma Scan, ^{90}Sr , U, (a) Pu (b)
Sagehen Farm	0558	A	Gamma Scan, ^{90}Sr , U, (a) Pu, (b) ^{241}Am
Byers Landing ^(c)	0511	A	Gamma Scan, ^{90}Sr , U, (a) Pu (b)
Riverview - Harris	0561	A	Gamma Scan, ^{90}Sr , U, (a) Pu (b)
Benton City	0500	A	Gamma Scan, ^{90}Sr , U, (a) Pu (b)
Sunnyside	0557	A	Gamma Scan, ^{90}Sr , U, (a) Pu, (b) ^{241}Am
McNary Dam	0504	A	Gamma Scan, ^{90}Sr , U, (a) Pu (b)
Walla Walla	0502	A	Gamma Scan, ^{90}Sr , U, (a) Pu (b)
Moses Lake	0500	A	Gamma Scan, ^{90}Sr , U, (a) Pu (b)
Wahluke	0501	A	Gamma Scan, ^{90}Sr , U, (a) Pu (b)
Yakima	0512	A	Gamma Scan, ^{90}Sr , U, (a) Pu (b)

(a) ^{235}U -LEPD, ^{238}U -LEPD.

(b) Isotopic Plutonium.

(c) Located at air sampling station.

1.13 VEGETATION

<u>Location</u>	<u>Sample Number</u>	<u>Frequency</u>	<u>Analyses</u>
NE of 100-N Area	0591	A	Gamma Scan, ⁹⁰ Sr, U, Pu (a)
E of 100-N Area	0579	A	Gamma Scan, ⁹⁰ Sr, U, Pu (a)
100-Area Fire Station	0585	A	Gamma Scan, ⁹⁰ Sr, U, Pu (a)
200-ENC	0560	A	Gamma Scan, ⁹⁰ Sr, U, Pu (a)
E of 200-E ^(b)	0586	A	Gamma Scan, ⁹⁰ Sr, U, Pu (a)
200-ESE ^(b)	0058	A	Gamma Scan, ⁹⁰ Sr, U, Pu (a)
S of 200-E ^(b)	0587	A	Gamma Scan, ⁹⁰ Sr, U, Pu (a)
SW of B/C Crib ^(b)	0580	A	Gamma Scan, ⁹⁰ Sr, U, Pu (a)
E of 200-W Gate	0283	A	Gamma Scan, ⁹⁰ Sr, U, Pu (a)
S of 200-W	0589	A	Gamma Scan, ⁹⁰ Sr, U, Pu (a)
Rattlesnake Springs ^(b)	0049	A	Gamma Scan, ⁹⁰ Sr, U, Pu (a)
Yakima Barricade ^(b)	0050	A	Gamma Scan, ⁹⁰ Sr, U, Pu (a)
400-E	0285	A	Gamma Scan, ⁹⁰ Sr, U, Pu (a)
SE Side of FFTF	0286	A	Gamma Scan, ⁹⁰ Sr, U, Pu (a)
N of 300 Area	0320	A	Gamma Scan, ⁹⁰ Sr, U, Pu (a)
S of 300 Area	0320	A	Gamma Scan, ⁹⁰ Sr, U, Pu (a)
Hanford Townsite	0063	A	Gamma Scan, ⁹⁰ Sr, U, Pu (a)
Wye Barricade ^(b)	0062	A	Gamma Scan, ⁹⁰ Sr, U, Pu (a)
Prosser Barricade ^(b)	0227	A	Gamma Scan, ⁹⁰ Sr, U, Pu (a)
Othello	0511	A	Gamma Scan, ⁹⁰ Sr, U, Pu (a)
Connell	0509	A	Gamma Scan, ⁹⁰ Sr, U, Pu (a)
East of ALE Field Lab	0287	A	Gamma Scan, ⁹⁰ Sr, U, Pu (a)
N End Vernita Bridge	0051	A	Gamma Scan, ⁹⁰ Sr, U, Pu (a)
Wahluke Slope ^(b)	0053	A	Gamma Scan, ⁹⁰ Sr, U, Pu (a)
Berg Ranch ^(b)	0054	A	Gamma Scan, ⁹⁰ Sr, U, Pu (a)
Ringold	0055	A	Gamma Scan, ⁹⁰ Sr, U, Pu (a)
W End of Fir Road	0360	A	Gamma Scan, ⁹⁰ Sr, U, Pu (a)
Taylor Flats No. 2	0423	A	Gamma Scan, ⁹⁰ Sr, U, Pu (a)
Sagehen Farm	0364	A	Gamma Scan, ⁹⁰ Sr, U, Pu (a)
Byers Landing ^(b)	0057	A	Gamma Scan, ⁹⁰ Sr, U, Pu (a)
Riverview - Harris	0367	A	Gamma Scan, ⁹⁰ Sr, U, Pu (a)
Benton City	0048	A	Gamma Scan, ⁹⁰ Sr, U, Pu (a)
Sunnyside	0360	A	Gamma Scan, ⁹⁰ Sr, U, Pu (a)
McNary Dam	0510	A	Gamma Scan, ⁹⁰ Sr, U, Pu (a)
Walla Walla	0508	A	Gamma Scan, ⁹⁰ Sr, U, Pu (a)
Moses Lake	0506	A	Gamma Scan, ⁹⁰ Sr, U, Pu (a)
Washnucna	0507	A	Gamma Scan, ⁹⁰ Sr, U, Pu (a)
Yakima	0513	A	Gamma Scan, ⁹⁰ Sr, U, Pu (a)

(a) Isotopic Plutonium.

(b) Located at air sampling station.

1.14 SEDIMENT

<u>Location</u>	<u>Sample Number</u>	<u>Frequency</u>	<u>Analysis</u>
McNary Dam	0595	A	Gamma Scan, ^{90}Sr , U, (a) Pu (b)
	-0 Oregon Shore		
	-1 1/3 from Oregon Shore		
	-2 2/3 from Oregon Shore		
	-3 Washington Shore		
Priest Rapids Dam	0596	A	Gamma Scan, ^{90}Sr , U, (a) Pu (b)
	-0 Grant County Shore		
	-1 1/3 from Grant County Shore		
	-2 2/3 from Grant County Shore		
	-3 Yakima County Shore		
White Bluffs Slough	0592	A	Gamma Scan, ^{90}Sr , U, (a) Pu (b)
100 F Slough	0593	A	Gamma Scan, ^{90}Sr , U, (a) Pu (b)
Hanford Slough	0594	A	Gamma Scan, ^{90}Sr , U, (a) Pu (b)
Richland	0597	A	Gamma Scan, ^{90}Sr , U, (a) Pu (b)

(a) ^{235}U -LEPD, ^{238}U -LEPD.

(b) Isotopic Plutonium.

2.0 DIRECT RADIATION MEASUREMENTS

2.1 THERMOLUMINESCENT DOSIMETERS (TLDs)

2.1.1 Terrestrial Locations

<u>Location</u>	<u>Sample Number 400 Series</u>	<u>Frequency</u>	<u>Sample Number 700 Series</u>	<u>Frequency</u>	<u>Measurement</u>
<u>Onsite</u>					
100-K ^(a)	1476	M			Ambient Dose
100-N (WPPSS) ^(a)	1476	M	1397	Q	Ambient Dose
100-D ^(a)	1477	M	1398	Q	Ambient Dose
100-Area Fire Station ^(a)	8184	M			Ambient Dose
Rt. 11A-Mile 9 ^(a)	0327	M			Ambient Dose, DSHS ^(b)
N of 200-E ^(a)	0324	M			Ambient Dose, DSHS ^(b)
200 Tel. Exchange ^(a)	0326	M			Ambient Dose, DSHS ^(b)
200 W SE ^(a)	1709	M			Ambient Dose
SW of B/C Cribs ^(a)	0328	M			Ambient Dose, DSHS ^(b)
S of 200-E ^(a)	1619	M			Ambient Dose, DSHS ^(b)
B Pond ^(a)	1711	M			Ambient Dose
Army Loop Camp ^(a)	0326	M			Ambient Dose, DSHS ^(b)
E of 200-E ^(a)	1618	M			Ambient Dose, DSHS ^(b)
200-ESE ^(a)	1488	M	1399	Q	Ambient Dose, DSHS ^(b)
3705 Building	1486	M			Ambient Dose
3614-A Bldg. ^(a)	1698	M			Ambient Dose
300 Southwest Gate	8183	M			Ambient Dose
300 South Gate ^(a)	8182	M			Ambient Dose
300 Trench ^(a)	1699	M			Ambient Dose
300 NE ^(a)	1714	M			Ambient Dose
400-E ^(a)	1729	M	1400	Q	Ambient Dose
400-W ^(a)	8468	M			Ambient Dose
400-S ^(a)	8469	M			Ambient Dose
400-N ^(a)	8470	M			Ambient Dose
FFTF North	8177	M			Ambient Dose
FFTF Southeast	8178	M			Ambient Dose
Hanford Townsite ^(a)	1480	M			Ambient Dose
Wye Barricade ^(a)	1483	M	1395	Q	Ambient Dose, DSHS ^(b)
US Ecology NE Corner	0126	Q	0118	Q	Ambient Dose, DSHS ^(b)
US Ecology SE Corner	0128	Q	0119	Q	Ambient Dose, DSHS ^(b)
US Ecology NW Corner	0127	Q	0120	Q	Ambient Dose, DSHS ^(b)
US Ecology SW Corner	0128	Q	0121	Q	Ambient Dose, DSHS ^(b)
WPPSS 1 S of WNP 2	0129	Q	0122	Q	Ambient Dose, DSHS ^(b)

2.1.1 Terrestrial Locations (contd)

Location	Sample Number 400 Series	Frequency	Sample Number 700 Series	Frequency	Measurement
<u>Perimeter</u>					
Berg Ranch ^(a)	1491	M			Ambient Dose
Sagehill Met. Tower ^(a)	0927	M			Ambient Dose
Ringold Met. Tower ^(a)	0928	M	0930	Q	Ambient Dose
W End of Fir Road ^(a)	6350	M			Ambient Dose
Pettett Farm ^(a)	6353	M	0931	Q	Ambient Dose
Sagemoor Farm	6354	M			Ambient Dose
Byers Landing ^(a)	1498	M			Ambient Dose
RRC CP 64 ^(a)	6171	M			Ambient Dose
Horn Rapids Rd - Mile 12	0926	M			Ambient Dose
Horn Rapids Substation	0920	M			Ambient Dose
Prosser Barricade ^(a)	6170	M			Ambient Dose
ERC ^(a)	1484	M			Ambient Dose
Rattlesnake Springs ^(a)	1485	M			Ambient Dose
Yakima Barricade ^(a)	1482	M	1396	Q	Ambient Dose, DSHS ^(b)
S End Vernita Bridge ^(a)	1481	M			Ambient Dose
Wahluke Slope ^(a)	1490	M			Ambient Dose
WPPSS 4 WPPSS Warehouse	0132	Q	0123	Q	Ambient Dose, DSHS ^(b)
WPPSS 8 Fir Road	0133	Q	0124	Q	Ambient Dose, DSHS ^(b)
<u>Community</u>					
Othello ^(a)	1493	M	1376	Q	Ambient Dose
Connell ^(a)	1494	M	1377	Q	Ambient Dose, DSHS ^(b)
Peaco ^(a)	1488	M	1378	Q	Ambient Dose
Kennewick ^(a)	1489	M	1379	Q	Ambient Dose
Richland ^(a)	1487	M	1380	Q	Ambient Dose, DSHS ^(b)
Benton City ^(a)	1499	M	1381	Q	Ambient Dose
Prosser ^(a)	1643	M	1382	Q	Ambient Dose
Eltopia ^(a)	1496	M	1383	Q	Ambient Dose
Mattawa ^(a)	1642	M	1384	Q	Ambient Dose
<u>Distant</u>					
Moses Lake ^(a)	1693	M	1385	Q	Ambient Dose, DSHS ^(b)
Washburn ^(a)	1694	M	1386	Q	Ambient Dose
Walla Walla ^(a)	1695	M	1387	Q	Ambient Dose
McNary Dam ^(a)	1696	M			Ambient Dose
Sunnyside ^(a)	1500	M	1388	Q	Ambient Dose, DSHS ^(b)
Yakima ^(a)	1644	M	1389	Q	Ambient Dose

(a) Located at air sampling station.

(b) Washington Department of Social and Health Services TLDS also at these locations.

2.1.2 Columbia River Shoreline Locations

<u>Location</u>	<u>Sample Number 400 Series</u>	<u>Frequency</u>	<u>Sample Number 700 Series</u>	<u>Frequency</u>	<u>Measurement</u>
Coyote Rapids	6135	Q			Immersion Dose
Richland Pumpouse	1715	Q			Immersion Dose
Above 100-B Area	6471	Q			Ambient Dose
Below 100-B Retention Basin	6472	Q			Ambient Dose
Above 100-K Boat Ramp	6260	Q			Ambient Dose
Below 100-N Outfall	6536	M			Ambient Dose
Below 100-N Stack	6537	M			Ambient Dose
Above Tip 100-N Berm	6538	M			Ambient Dose
100-N Trench Spring	6590	M	1397	Q	Ambient Dose
Below 100-D Area	6475	Q			Ambient Dose
Below Opposite 100-D	6261	Q			Ambient Dose
Lower End Locke Island	6262	Q			Ambient Dose
White Bluffs Ferry Landing	6263	Q			Ambient Dose
White Bluffs Slough	6476	Q			Ambient Dose
100-F Floodplain	6477	Q			Ambient Dose
Below 100-F	6264	Q			Ambient Dose
Hanford Slough	6478	Q			Ambient Dose
Hanford Powerline Crossing	6389	Q			Ambient Dose
Hanford Ferry Landing	6265	Q			Ambient Dose
Hanford RR Track	6266	Q			Ambient Dose
Savage Island Slough	6479	Q			Ambient Dose
Ringold Island	6267	Q			Ambient Dose
Powerline Crossing	6268	Q			Ambient Dose
N End Wooded Island	6480	Q			Ambient Dose
S End Wooded Island	6269	Q			Ambient Dose
Island Near 300 Area	6481	Q			Ambient Dose
Island DS Bateman Island	6482	Q			Ambient Dose

2.2 COLUMBIA RIVER SHORELINE RADIATION SURVEYS

<u>Location</u>	<u>Sample Number</u>	<u>Frequency</u>	<u>Instrument</u>
Above 100-K Boat Ramp	6132	Q	LLM, GM
100-K Trench Springs	6129	M	LLM, GM
Below Opposite 100-D	6241	Q	LLM, GM
Lower End Locke Island	6123	Q	LLM, GM
White Bluffs Ferry Landing	6121	Q	LLM, GM
Below 100-F	6126	Q	LLM, GM
Hanford Powerline Crossing	6118	Q	LLM, GM
Hanford Ferry Landing	6117	Q	LLM, GM
Hanford RR Track	6242	Q	LLM, GM
Ringold Island	6114	Q	LLM, GM
Powerline Crossing	6113	Q	LLM, GM
Below 100-N Outfall	6485	M	LLM, GM
Below 100-N Stack	6484	M	LLM, GM
Above Tip 100-N Berm	6485	M	LLM, GM

2.3 ONSITE ROADWAY RADIATION SURVEYS

<u>Description</u>	<u>Identification Number</u>	<u>Frequency</u>	<u>Instrument</u>
1100 Area to FFTF 4-S at 1100 Area; 4-S at No. 2 RR Track; 4-S at FFTF Excess; FFTF; FFTF Access at 4-S; 4-S at No. 2 RR Track; 4-S at 300 Area	1	W	Road Monitor
FFTF to US Ecology 4-S at FFTF; 4-S at Wye Barricade; 4-S at Army Loop; 4-S at US Ecology	2	W	Road Monitor
100-N to 100-K to 200-W Rt. 1 at Rt. 4-M Junction; Rt. 4M at 100-M Access; 100-M; 100-M Access at Rt. 4-N; Rt. 4-M at Rt. 1 Junction; Rt. 1 at 100-K Access; 100-K; 100-K Access at Rt. 1; Rt. 1 at Rt. 4-M Junction; Rt. 4 at 11A Junction; 11A at 200-W M Access; N Access Gate 609, 200-W	3	M	Road Monitor
Yakima Barricade to US Ecology Yakima Barricade; Army Loop Road; 4-S; US Ecology; 4-S Rt. 3; 200-W; 11A; 200-W; 4-S; 11A	4	Q	Road Monitor
Army Loop Road 4-S Army Loop; Old Powerline Crossing; S 200-W Area; 11A Army Loop	5	A	Road Monitor
US Ecology to FFTF 4-S US Ecology; 4-S Army Loop; Wye Barricade; Rt. 10 FFTF Access Road; Prosser Barricade; Rt. 10 FFTF Access; FFTF; Rt. 10 FFTF Access; Rt. 10 and 4-S; 4-S and FFTF Access Road; FFTF	6	A	Road Monitor
300-Area through 1100 Area 300 Area; Garage; Stores; Gas Station; Parking Lot; 1st Street; Kaiser's Shop Area; 1st Street; US Testing; George Washington Way - Stevens; US Testing	7	A	Road Monitor
Yakima Barricade to 100-B/C and 200-N Yakima Barricade; 11A and Rt. 6; Rt. 6 and Rt. 1; Rt. 1 and 100-B Cut-off; Rt. 1 100-B Access; Rt. 1 100-K Access; Rt. 1 100-B Access; Rt. 1 100-B Cut-off; 4-N and 100-B Cut-off; Rt. 1 100-B Cut-off; Rt. 1 and Rt. 6; 11A and Rt. 6; 11A and 200-N Access Road; 200-N; 4-N and 2-N Access; 4-N and 11A	8	A	Road Monitor
Wye Barricade to 100-N Wye Barricade; 2-N and 11A; 2-N and 100-F; 2-N and 100-H; 2-N and 100-D; 2-N and 4-N; 4-N and 100-N Access; 4-N and 2-N; 2-N and 100-D; 2-N and 100-H; 2-N and 100-F; 2-N and 11A; Wye Barricade	9	A	Road Monitor
Rt. 2-S and Rt. 11A to White Bluffs 2-N and 11A; 11A and 4-N; 11A and Rt. 1; Rt. 1 and 2-N; Rt. 1 and White Bluffs Cut-off; White Bluffs Ferry Landing; White Bluffs Cut-off and Rt. 1; Rt. 1 and 4-N; 4-S and 11A; 11A and 2-S	10	A	Road Monitor

2.3 ONSITE ROADWAY RADIATION SURVEYS (contd)

<u>Description</u>	<u>Identification Number</u>	<u>Frequency</u>	<u>Instrument</u>
300 Area Cypress Gate and 4-S; 3701 Bodge House; Cypress Street and E of 331 Bldg.; N of 331 Bldg.; 3814-A Bldg; Inside 300 Area Perimeter Fence; Outside 300 Area Perimeter Fence; NW Corner of Pond Area; 4-S 300 Railroad Crossing; 3-N Gate Parking Lot; 4-S Cypress Street	11	Q	Road Monitor
400 Area Visitor Center Access Road; Main Gate; NW Corner Parking Lot; NE Corner Parking Lot; Visitor Center; Old 4-E Monitoring Station; NE Corner Perimeter Fence; NW Corner Perimeter Fence; SW Corner Perimeter Fence; SE Corner Perimeter Fence; Main Gate	12	Q	Road Monitor

2.4 ONSITE RAILWAY RADIATION SURVEYS

<u>Description</u>	<u>Identification Number</u>	<u>Frequency</u>	<u>Instrument</u>
Ruby Junction; Geneva Junction; FFTF; Geneva Junction	1	M	Railway Monitor
200-E Gate; Ethel Junction; Susie Junction; 200-W Gate; Susie Junction; Audrey Junction; 100-K Gate; Audrey Junction; Helen Junction; Nancy Junction	2	M	Railway Monitor
Geneva Junction; May Junction; Willa Junction; Pearl Junction; Ethel Junction;	3	Q	Railway Monitor
Nancy Junction; Ginger Junction; Betty Junction; Ruth Junction; Edna Junction; May Junction	4	A	Railway Monitor
1100 Area; Van Giesen; Yakima River Bridge; Columbia Center	5	A	Railway Monitor

2.5 ONSITE AERIAL RADIATION SURVEYS

<u>Description</u>	<u>Identification Number</u>	<u>Frequency</u>	<u>Instrument</u>
Project Perimeter	3	A	Aerial Monitor

2.6 INACTIVE WASTE SITE RADIATION SURVEYS

<u>Location</u>	<u>Frequency</u>
100-K Trench	A
100-B/C SE Burial Ground (105-C solid waste)	SA
100-B/C SW Burial Ground (105-B solid waste, M solid waste)	SA
100-B/C Construction Burial Ground	SA
100-B/C Burial Ground East of 100-B	SA
100-B/C Irradiated Metal Storage Basin Waste	SA
100-B Ball 3x Burial Ground	SA
100-B Crib	SA
105-C Trench	SA
105-B Trench	SA
107 Basin Sludge Burial	SA
105-C Metal Examination Waste Tank	SA
100-B/C Overflow Pluto Crib	SA
107-C Retention Basin	SA
107-B Retention Basin	SA
100-B/C Effluent Diversion Box	SA
100-B/C Miner Burial Grounds East of 105-B	SA
100-B/C Outfall Structures	SA
100-DR Outfall Structures	SA
100-D/DR Trench	SA
107-D Retention Basin	SA
107-DR Retention Basin	SA
100-D/DR Effluent Lines	SA
100-D Dummy Decontamination Waste	SA
100-D/DR Solid Waste Burial Ground (YSR thistles)	SA
100-D/DR Construction Burial Ground	SA
100-D/DR #3 Burial Ground NE of DR	SA
100-D/DR Pluto Crib	SA
100-D/DR 105 Basin Sludge Burial Ground	SA
100-D/DR #1 Burial Ground	SA
100-D/DR #2 Burial Ground	SA
100-H Trench	SA
107-H Basin	SA
100-H Effluent Lines (junction boxes)	SA
100-H Liquid Waste Burial	SA
100-H #1 Burial Ground	SA
100-H #2 Burial Ground	SA
P-11 Area	A
100-F Lewis Canal	SA
100-F Swampy Area	SA
100-F Trench	SA

2.6 INACTIVE WASTE SITE RADIATION SURVEYS (contd)

<u>Location</u>	<u>Frequency</u>
100-F Retention Basin	SA
100-F Trench Drain and Adjacent Wood Covered Pit	SA
100-F Bell Washer Crib	SA
100-F #3 Burial Ground	SA
100-F #2 Burial Ground	SA
100-F #1 Burial Ground	SA
100-F Sawdust Burial	SA
100-F Leaching Trench	SA
100-F 80-inch Overground Pipe	SA
100-F Happy Valley Farm Plots	SA
200-W New Redox Pond (216-S-16)	SA
200-W Old Redox Pond (216-S-17)	A
200-W U Pond Overflow (216-U-11)	SA
200-E B Pond (216-B-8)	Q
200-E B Pond Ditch #3	SA
200-E Purax Crib #1 (216-A-8)	SA
200-E Purax Crib #2 (216-A-30-1)	SA
200-E North of Purax Crib #3 (216-A-87-1)	SA
Gable Pond	SA
200-E NE Perimeter Fence	SA
200-E 216-B/C Crib Area	SA
200-E US Ecology Burial Ground Perimeter	Q
300 Area 300-W Burial Ground	SA
300 Area 300-Wye Burial Ground	SA
300 Area #2 Burial Ground	SA
300 Area #3 Burial Ground	SA
300 Area #4 Burial Ground	SA
300 Area #5 Burial Ground	SA
300 Area #7 Burial Ground	SA
300 West Burial Ground	SA
300 Area N Process Trench at Perimeter Fence	Q
200-N, -P, and -R Areas	SA

PART II. HANFORD GROUND-WATER MONITORING

1.0 100-AREA WELLS

Well Number	Sample Number	Frequency	Analyses
(100) B3-2 P	1856	A	Alpha, Beta, ^3H , NO_3 , ^{90}Tc
B3-2 Q	1857	A	Alpha, Beta, ^3H , NO_3 , ^{90}Tc
D2-6	1894	SA	Beta, ^3H , NO_3 , ^{90}Sr , U
		A	^{90}Tc
DE-12	1892	SA	NO_3 , U, ^{14}C , ^{63}Ni
		A	^{90}Tc
FG-4	1868	SA	Beta, ^3H , NO_3 , ^{90}Sr , U, Gamma Scan
		A	^{90}Tc
F7-1	1871	SA	Beta, ^3H , NO_3 , ^{90}Sr , U
		A	^{90}Tc
F8-1	1868	Q	Beta, ^3H , NO_3 , ^{90}Sr , U, Gamma Scan
		A	^{90}Tc
F8-2	1889	SA	Beta, ^3H , NO_3 , ^{90}Sr , U, Gamma Scan
		A	^{90}Tc
H3-1	1890	SA	^3H
H4-3	1877	SA	Alpha, Beta, ^3H , ^{14}C , ^{63}Ni , Gamma Scan
H4-4	1876	Q	Alpha, Beta, ^3H , NO_3 , Gamma Scan, DSHS ^(a)
H4-5	1878	SA	^3H , Gamma Scan
H4-6	1874	SA	^3H , Gamma Scan
H4-7	1938	SA	^3H
H4-9	1940	SA	^3H
H4-10	1941	SA	^3H
H4-11	1942	SA	^3H
H4-14	1944	SA	^3H
H4-16	1957	SA	^3H
H4-17	1958	SA	^3H
H4-18	1959	SA	^3H
N-3(D)	1896	SA	Beta, ^3H , ^{90}Sr , U, Gamma Scan
		A	^{90}Tc
N-5	1909	SA	Beta, ^3H , NO_3 , ^{90}Sr , U, Gamma Scan
		A	^{90}Tc
N-6	1901	SA	Beta, ^3H , NO_3 , ^{90}Sr , U, Gamma Scan
		A	^{90}Tc
N-8	1907	Q	Alpha, Beta, ^3H , NO_3 , ^{90}Sr , Gamma Scan, DSHS ^(a)
N-14	1902	Q	Alpha, Beta, ^3H , NO_3 , ^{90}Sr , Gamma Scan, DSHS ^(a)
		SA	U, ^{14}C , ^{63}Ni
		A	^{90}Tc , ^{129}I
N-16	1917	SA	Beta, ^3H , NO_3 , ^{90}Sr , U, Gamma Scan
		A	^{90}Tc
N-21	1920	SA	Beta, ^3H , NO_3 , ^{90}Sr , U
		A	^{90}Tc

1.0 100-AREA WELLS (contd)

Well Number	Sample Number	Frequency	Analyses
(199) N-25	1924	SA A	Beta, ^3H , NO_3 , ^{90}Sr , U, Gamma Scan ^{99}Tc
N-28	1927	SA A	Beta, ^3H , NO_3 , ^{90}Sr , U, Gamma Scan ^{99}Tc
N-29	1928	SA A	Beta, ^3H , NO_3 , ^{90}Sr , U, ^{14}C , ^{63}Ni , Gamma Scan ^{99}Tc , ^{129}I
N-31	1930	SA A	Beta, ^3H , NO_3 , ^{90}Sr , U, Gamma Scan ^{99}Tc
N-36	1934	SA A	Beta, ^3H , NO_3 , ^{90}Sr , U, Gamma Scan ^{99}Tc
N-45	1937	SA A	Alpha, Beta, ^3H , NO_3 , ^{90}Sr , U, Gamma Scan ^{99}Tc
N-70	1972	Q	Alpha, Beta, ^3H , NO_3 , ^{90}Sr , Gamma Scan, DSHS ^(a)

(a) Duplicate samples sent to the Washington State Department of Social and Health Services.

2.0 200-AREA WELLS

Well Number	Sample Number	Frequency	Analyses
<u>Sampled for PML</u>			
(299) E13-5	2582	A	NO ₃ , ⁹⁰ Sr, U, ⁹⁹ Tc, Gamma Scan
E13-5	2583	A	³ H, NO ₃ , ⁹⁰ Sr, U, ⁹⁹ Tc, ¹²⁹ I
E13-14	2584	A	³ H, NO ₃ , ⁹⁰ Sr, U, ⁹⁹ Tc, ¹²⁹ I, Gamma Scan
E13-19	2585	A	³ H, NO ₃ , ⁹⁰ Sr, U, ⁹⁹ Tc, ¹²⁹ I, Gamma Scan
E17-1	2586	A	U
E17-5	2529	SA	¹⁴ C
		A	¹²⁹ I
E17-6	2587	A	¹²⁹ I, ¹⁴ C
E17-8	2530	SA	¹⁴ C
		A	¹²⁹ I
E17-12	2717	A	⁹⁹ Tc
E23-1	2553	A	³ H, NO ₃ , ¹²⁹ I
E23-2	2595	A	U
E24-1	2589	SA	Alpha, ¹⁴ C
		A	¹²⁹ I
E24-2	2531	A	U
E24-7	2542	A	³ H, NO ₃ , ¹²⁹ I
E24-8	2570	A	⁹⁰ Sr, U, ⁹⁹ Tc
E24-13	2572	A	³ H, ⁹⁰ Sr, ¹²⁹ I, Gamma Scan
E25-2	2554	A	⁹⁰ Sr, Gamma Scan
E25-3	2573	A	³ H, NO ₃ , ⁹⁰ Sr, ¹²⁹ I
E25-1	2545	A	³ H, NO ₃ , ¹²⁹ I
E25-2	2550	A	⁹⁰ Sr, ¹²⁹ I
E25-3	2555	A	³ H, NO ₃ , ⁹⁰ Sr, ¹²⁹ I
E25-4	2585	A	⁹⁰ Sr, ¹²⁹ I
E25-8	2556	SA	Alpha, Beta, ⁹⁰ Sr
		A	⁹⁹ Tc, ¹²⁹ I
E27-1	2287	A	³ H, NO ₃ , ⁹⁰ Sr, U, ¹²⁹ I
E27-5	2378	A	³ H, NO ₃ , ⁹⁰ Sr, U, ⁹⁹ Tc, ¹²⁹ I
E28-1	2555	A	³ H, NO ₃ , ⁹⁰ Sr, ¹²⁹ I, Gamma Scan
E28-5	2285	A	³ H, NO ₃ , ¹²⁹ I
E28-7	2289	A	³ H, NO ₃ , ⁹⁹ Tc, ¹²⁹ I
E28-23	2574	SA	Alpha, Beta, ³ H, Gamma Scan
		A	⁹⁹ Tc
E33-1 A	2575	A	³ H, NO ₃ , U, ⁹⁹ Tc, ¹²⁹ I
E33-3	2552	A	NO ₃ , U
E33-5	2576	A	³ H, NO ₃ , U, ⁹⁹ Tc, ¹²⁹ I
E33-7	2577	A	³ H, NO ₃ , U, ⁹⁹ Tc, ¹²⁹ I
E33-8	2578	A	³ H, NO ₃ , U, ⁹⁹ Tc, ¹²⁹ I
E33-9	2579	A	U

2.0 200-AREA WELLS (contd)

Well Number	Sample Number	Frequency	Analyses
(299) E33-10	2680	A	U
E33-12	2659	A	Beta, ^{90}Sr , U, ^{129}I , ^{99}Tc , Gamma Scan
E33-14	2297	A	^3H , NO_3 , ^{90}Sr , U
E33-18	2681	A	^3H , NO_3 , U, ^{129}I , ^{99}Tc
E33-20	2682	A	^3H , U, ^{129}I , ^{99}Tc
E33-21	2683	A	^3H , NO_3 , ^{90}Sr , U, ^{129}I , ^{99}Tc
E33-24	2684	A	^3H , NO_3 , U, ^{129}I
E33-27	2685	A	^3H , U
W6-1	2990	A	^3H , NO_3 , ^{129}I , Gamma Scan
W10-1	2634	A	^3H , NO_3 , U, ^{129}I , ^{99}Tc
W10-3	2635	A	^3H , NO_3 , U, ^{129}I
W10-4	2636	A	^3H , NO_3 , U, ^{129}I
W10-5	2890	A	^3H , NO_3 , ^{129}I
W10-8	2997	A	^3H , U, ^{129}I
W10-9	2837	A	^3H , U, ^{129}I
W11-3	2989	A	^3H , NO_3 , ^{90}Sr , U
W11-9	2881	A	^3H , NO_3 , ^{90}Sr , U
W11-18	2699	A	^{99}Tc
W12-1	2888	A	^3H , NO_3 , ^{129}I
W14-2	2639	A	NO_3 , U, ^{99}Tc
W14-5	2640	A	^{90}Sr , U, Gamma Scan
W14-8	2641	A	^{90}Sr , U, Gamma Scan
W15-2	2891	A	^3H , NO_3 , ^{129}I , Gamma Scan
W15-4	2642	A	^{90}Sr , U, ^{99}Tc
W15-8	2655	A	^{99}Tc
W15-7	2982	A	^3H , ^{129}I
W15-10	2988	A	^3H , ^{129}I
W15-11	2643	A	^3H , ^{129}I
W18-8	3011	A	^3H , NO_3 , ^{90}Sr , ^{129}I , ^{99}Tc
W19-1	2923	A	^{90}Sr , ^{99}Tc
W19-3	2991	SA	Alpha, Beta, ^3H , ^{14}C , Gamma Scan
		A	^{129}I
W19-5	2644	A	U, ^{99}Tc
W19-9	2645	A	^{14}C , ^{129}I
W19-11	2646	SA	^{14}C
		A	^{129}I
W19-12	2803	A	^{99}Tc
W19-15	2649	A	^{14}C , ^{129}I
W19-18	2650	A	^{14}C , ^{129}I
W19-19	2807	SA	Alpha, Beta, ^3H , Gamma Scan
W21-1	2930	A	^3H , NO_3 , U, ^{129}I
W22-1	2987	A	U

2.0 200-AREA WELLS (contd)

Well Number	Sample Number	Frequency	Analyses
(200) W22-2	2061	A	U
W22-7	3014	A	^3H , NO_3 , ^{90}Sr , U, ^{129}I
W22-9	3013	Q	^3H , NO_3 , ^{90}Sr , U, DSHS (a)
		A	^{129}I
W22-10	2908	A	^3H , U, ^{129}I
W22-12	2062	A	U
W22-18	2900	A	^{99}Tc
W22-20	2053	A	NO_3 , U, ^{14}C , ^{129}I
W22-21	2072	SA	^{14}C , ^{129}I
W22-26	2085	A	NO_3 , U
W23-1	3000	A	^3H , U, ^{129}I
W23-2	2054	A	U
W23-4	2988	A	^{90}Sr , ^{129}I
W23-9	2001	A	^{99}Tc
W23-10	3002	A	^{99}Tc
W23-11	2061	A	^{90}Sr , ^{99}Tc

Sampled for Westinghouse

(R299) E13-5	2314	Q	Beta, ^3H
E13-8	2354	Q	Beta, Gamma Scan
E13-14	2340	Q	Beta
E13-19	2352	Q	Beta
E16-2	2372	M	Alpha, Beta, ^3H , NO_3 , Gamma Scan
		Q	^{90}Sr
E17-1	2328	Q	Alpha, Beta, ^3H , ^{90}Sr , NO_3 , Gamma Scan
		SA	^{129}I
E17-2	2387	M	Alpha, Beta, ^3H , NO_3
		Q	^{90}Sr , Gamma Scan, U
		SA	^{129}I
E17-5	2511	M	Alpha, Beta, ^3H , NO_3 , U, Gamma Scan
		Q	^{90}Sr
		SA	^{129}I
E17-6	2512	Q	Beta, ^3H , NO_3
		SA	^{129}I
E17-8	2513	Q	Beta, ^3H , NO_3 , ^{90}Sr , Gamma Scan
E17-9	2514	M	Alpha, Beta, ^3H , NO_3 , Gamma Scan, U
		Q	^{90}Sr
		SA	^{129}I
E17-12	2399	M	Alpha, Beta, ^3H , ^{90}Sr , NO_3 , U, Gamma Scan,
			U, (b) Pu (c)
		Q	^{129}I

2.0 200-AREA WELLS (contd)

<u>Well Number</u>	<u>Sample Number</u>	<u>Fre- quency</u>	<u>Analyses</u>
(R299) E17-13	2400	M	Alpha, Beta, ^3H , ^{90}Sr , NO_3 , U, Gamma Scan, U, (b) Pu (c)
		Q	^{129}I
E24-1	2817	M	Beta, ^3H , NO_3
		Q	Gamma Scan
		SA	^{90}Sr
E24-2	2329	Q	Alpha, Beta, ^3H , NO_3 , ^{90}Sr , Gamma Scan
E24-4	2326	Q	Beta, ^3H , NO_3 , Gamma Scan
		SA	^{90}Sr
E24-8	2355	Q	Beta, ^3H , NO_3 , Gamma Scan
E24-11	2518	M	Beta
		Q	^3H , NO_3 , ^{90}Sr , Gamma Scan
E24-12	2521	M	Beta, ^3H , NO_3 , Gamma Scan
		Q	^{90}Sr
		SA	^{129}I
E24-13	2383	Q	Beta, NO_3
E25-2	2810	SA	Beta, ^3H , NO_3
E25-3	2810	Q	Beta
E25-6	2348	M	Alpha, Beta, ^3H
		Q	NO_3 , ^{90}Sr , Gamma Scan
E25-9	2344	M	Alpha, Beta
		Q	^3H , NO_3 , ^{90}Sr , U, Gamma Scan
E25-10	2363	SA	Alpha, Beta, U, Gamma Scan
E25-11	2370	M	Alpha, Beta, ^3H , NO_3 , Gamma Scan
		Q	^{90}Sr
E25-13	2523	Q	Beta, NO_3
E25-17	2386	M	Alpha, Beta, ^3H , NO_3
		Q	^{90}Sr , Gamma Scan
E25-18	2387	Q	Alpha, Beta, ^3H , NO_3 , ^{90}Sr , Gamma Scan
E25-19	2388	Q	Alpha, Beta, ^3H , NO_3 , ^{90}Sr , Gamma Scan
E25-20	2389	Q	Alpha, Beta, ^3H , NO_3 , ^{90}Sr , Gamma Scan
E25-21	2391	Q	Alpha, Beta, ^3H , NO_3 , ^{90}Sr , Gamma Scan
E25-22	2392	Q	Alpha, Beta, ^3H , NO_3 , ^{90}Sr , Gamma Scan
E25-23	2393	Q	Alpha, Beta, ^3H , NO_3 , ^{90}Sr , Gamma Scan
E25-24	2394	Q	Alpha, Beta, ^3H , NO_3 , ^{90}Sr , Gamma Scan
E26-2	2364	Q	Beta, ^3H , NO_3
E26-4	2362	Q	Beta, ^3H , NO_3
E26-6	2389	Q	Alpha, Beta, ^3H , NO_3 , ^{90}Sr , Gamma Scan
E26-8	2395	SA	^3H , NO_3
E27-5	2551	SA	Beta, Gamma Scan
E27-7	2557	SA	Alpha, Beta, NO_3

2.0 200-AREA WELLS (contd)

Well Number	Sample Number	Frequency	Analyses
(R299) E28-7	2484	Q SA	Alpha, Beta, ^{90}Sr , U, Gamma Scan, $\text{Pu}^{(b)}$ $\text{U}^{(b)}$
E28-9	2357	Q	Alpha, Beta, U
E28-12	2380	M	Beta, ^3H , Gamma Scan
E28-13	2324	Q	Beta, ^3H , Gamma Scan
E28-16	2325	SA	Alpha, Beta, U
E28-17	2519	Q	Alpha, U
E28-18	2524	M Q SA	Alpha, Beta, ^3H , NO_3 , U, Gamma Scan ^{90}Sr $\text{U}^{(b)}$
E28-19	2525	Q	Alpha, Beta, U
E28-21	2555	M Q SA	Alpha, Beta, ^3H , NO_3 , U, Gamma Scan ^{90}Sr $\text{U}^{(b)}$
E28-23	2390	Q SA	Alpha, Beta, ^3H , ^{90}Sr , NO_3 , U, Gamma Scan, $\text{Pu}^{(c)}$ $\text{U}^{(b)}$
E28-24	2560	Q SA	Alpha, Beta, ^{90}Sr , U, $\text{Pu}^{(c)}$ Gamma Scan $\text{U}^{(b)}$
E28-25	2561	Q SA	Alpha, Beta, ^{90}Sr , U, Gamma Scan, $\text{Pu}^{(c)}$ $\text{U}^{(b)}$
E32-1	2358	SA	Beta, ^3H , NO_3
E33-1 A	2301	SA	Beta, ^{90}Sr , Gamma Scan
E33-3	2303	SA	Beta, ^3H , ^{90}Sr , Gamma Scan
E33-6	2308	SA	Beta, ^{90}Sr , Gamma Scan
E33-7	2305	Q	Beta, ^{90}Sr , Gamma Scan
E33-8	2300	SA	Beta, ^{90}Sr , Gamma Scan
E33-9	2299	Q	Beta, ^3H , NO_3 , ^{90}Sr , Gamma Scan
E33-10	2306	SA	Beta, ^3H , NO_3 , ^{90}Sr , Gamma Scan
E33-12	2294	SA	^3H , NO_3
E33-18	2309	SA	Beta, ^{90}Sr , Gamma Scan
E33-20	2332	Q SA	Beta, NO_3 ^{90}Sr
E33-21	2363	Q	Beta, Gamma Scan
E33-24	2520	SA	Beta, ^{90}Sr , Gamma Scan, ^{90}Tc
E33-26	2382	SA	Beta, ^{90}Sr , Gamma Scan
E34-1	2374	Q	Alpha, Beta, ^3H , Gamma Scan
W10-1	2892	Q	Beta, ^{90}Sr , Gamma Scan
W10-3	2885	Q	Alpha, Beta, ^{90}Sr , Gamma Scan

2.0 200-AREA WELLS (contd)

Well Number	Sample Number	Frequency	Analyses
(R209) W10-4	2888	SA	Beta, ^{90}Sr , Gamma Scan
W10-8	2998	SA	Alpha, Beta, ^{90}Sr , NO_3 , Gamma Scan
W10-9	3009	SA	Alpha, Beta, ^{90}Sr , NO_3 , Gamma Scan
W11-7	2895	Q	Alpha, Beta
W11-11	2887	SA	Alpha, Beta, ^{90}Sr , Gamma Scan
W11-14	2898	Q	Alpha, Beta
W11-15	2981	Q	Beta
W11-18	2983	SA	Beta, ^{90}Sr , Gamma Scan
W11-23	2818	SA	Alpha, Beta, ^{90}Sr , NO_3 , Gamma Scan
W11-24	3010	SA	Alpha, Beta, ^{90}Sr , NO_3 , Gamma Scan
W14-2	2895	SA	Alpha, Beta, ^3H , ^{90}Sr , Gamma Scan
W14-5	3007	SA	Beta, ^3H , NO_3
W14-8	3008	Q	Beta, ^3H , NO_3
W14-10	3018	Q	Alpha, Beta, ^3H , ^{90}Sr , NO_3 , Gamma Scan
W15-2	2897	Q	Alpha, Beta
W15-3	2894	Q	Alpha, Beta, NO_3
		SA	^{90}Sr , Gamma Scan
W15-4	2896	SA	Beta, ^3H , NO_3
W15-6	2934	Q	Alpha, Beta, NO_3
W15-7	2980	SA	Alpha, Beta, NO_3 , ^{90}Sr , Gamma Scan
W15-8	2974	Q	Alpha, Beta
W15-10	2809	SA	Alpha, Beta, NO_3
W15-11	2810	SA	Alpha, Beta, ^{90}Sr , NO_3 , Gamma Scan
W18-5	2933	SA	Alpha, Beta
W18-7	2952	Q	Alpha, Beta
W18-9	2964	Q	Alpha, Beta, NO_3
W18-15	3015	Q	Alpha, Beta, ^3H , NO_3 , U, Gamma Scan
		SA	U, (b) Pu(c)
W18-17	3016	M	Alpha, Beta
		Q	^3H , NO_3 , Gamma Scan
W18-20	3020	M	Alpha, Beta
		Q	^3H , NO_3 , Gamma Scan
W19-2	2928	M	Alpha, Beta, NO_3 , U
		Q	^3H , ^{90}Sr , Gamma Scan
W19-3	2929	M	Alpha, Beta, NO_3 , U, ^{99}Tc , Gamma Scan
		Q	^3H , ^{90}Sr
		SA	U(b)
W19-5	2968	SA	Beta, ^3H , NO_3
W19-9	2824	Q	Alpha, Beta, ^3H , NO_3 , U, ^{99}Tc , Gamma Scan
		SA	^{90}Sr , U(b)

2.0 200-AREA WELLS (contd)

Well Number	Sample Number	Frequency	Analyses
(R299) W19-11	2619	M Q SA	Alpha, Beta, NO ₃ , ⁹⁰ Tc, U, Gamma Scan ³ H, ⁹⁰ Sr U(b)
W19-12	2618	SA	Alpha, Beta, ³ H, ⁹⁰ Sr, NO ₃ , U, Gamma Scan
W19-13	2622	Q	Alpha, Beta, ³ H, ⁹⁰ Sr, NO ₃ , U, Gamma Scan
W19-14	2628	Q	Alpha, Beta, ³ H, ⁹⁰ Sr, NO ₃ , U, Gamma Scan
W19-15	2625	Q SA	Alpha, Beta, ³ H, NO ₃ , ⁹⁰ Tc, U, Gamma Scan ⁹⁰ Sr, U(b)
W19-16	2626	Q SA	Alpha, Beta, ³ H, NO ₃ , ⁹⁰ Tc, U, Gamma Scan ⁹⁰ Sr, U(b)
W19-17	2627	Q SA	Alpha, Beta, ³ H, NO ₃ , ⁹⁰ Tc, U, Gamma Scan ⁹⁰ Sr, U(b)
W19-18	2628	M Q SA	Alpha, Beta, NO ₃ , ⁹⁰ Tc, U, Gamma Scan ³ H ⁹⁰ Sr, U(b)
W19-19	2631	M Q	Alpha, Beta, ³ H, NO ₃ , ⁹⁰ Tc, U ⁹⁰ Sr, Gamma Scan, U(b)
W19-20	2629	M Q	Alpha, Beta, ³ H, NO ₃ , ⁹⁰ Tc, U, ⁹⁰ Sr, Gamma Scan, U(b)
W19-21	2630	Q	Alpha, Beta, ³ H, NO ₃ , U, U, (b) ⁹⁰ Sr, Gamma Scan, Pu(c)
W19-22	2663	M Q	Alpha, Beta, ³ H, NO ₃ , ⁹⁰ Tc, U, U(b) ⁹⁰ Sr, Pu, (c) Gamma Scan
W19-24	2664	M Q	Alpha, Beta, ³ H, NO ₃ , ⁹⁰ Tc, U, U(b) ⁹⁰ Sr, Pu, (c) Gamma Scan
W19-25	2665	M Q	Alpha, Beta, ³ H, NO ₃ , ⁹⁰ Tc, U, U(b) ⁹⁰ Sr, Pu, (c) Gamma Scan
W19-26	2666	M Q	Alpha, Beta, ³ H, NO ₃ , ⁹⁰ Tc, U, U(b) ⁹⁰ Sr, Pu, (c) Gamma Scan
W19-27	2678	Q	Alpha, Beta, ³ H, NO ₃ , U, U, (b) ⁹⁰ Sr, Pu, (c) Gamma Scan
W22-1	2919	Q	Alpha, Beta, ³ H, ⁹⁰ Sr, NO ₃ , Gamma Scan
W22-2	2920	Q	Alpha, Beta, ³ H, ⁹⁰ Sr, NO ₃ , Gamma Scan
W22-10	2632	Q	Alpha, Beta, ⁹⁰ Sr, Gamma Scan
W22-12	2912	SA	Beta, ³ H, NO ₃ , ⁹⁰ Sr, Gamma Scan
W22-18	2633	Q	Alpha, Beta, ⁹⁰ Sr, Gamma Scan
W22-20	2926	SA	Beta, ³ H, ⁹⁰ Sr, Gamma Scan
W22-21	2931	SA	Alpha, Beta, NO ₃ , ⁹⁰ Sr, Gamma Scan
W22-22	2939	Q	Alpha, Beta, ³ H, NO ₃ , ⁹⁰ Sr, U, Gamma Scan
W22-28	2964	SA	Beta, ³ H, ⁹⁰ Sr, Gamma Scan

2.0 200-AREA WELLS (contd)

Well Number	Sample Number	Frequency	Analyses
(R299) W23-1	2898	Q SA	Beta, NO_3 , Gamma Scan ^{90}Sr
W23-2	2910	M Q	Beta, ^{99}Tc , ^{90}Sr , NO_3 , Gamma Scan
W23-3	2911	Q	Beta, ^{90}Sr , NO_3 , Gamma Scan
W23-4	2926	M SA	Alpha, Beta, ^3H , NO_3 , U, U(b)
W23-7	2980	M	Beta, ^{99}Tc
W23-9	2993	M Q	Alpha, Beta, ^3H , NO_3 , U, Gamma Scan ^{90}Sr , U(b)
W23-10	2994	Q	Alpha, Beta, ^3H , NO_3 , U, Gamma Scan, ^{90}Sr , U(b)
W23-11	2995	Q	Alpha, Beta, ^3H , NO_3 , U, U, (b) Gamma Scan
W26-3	2917	SA	Alpha, Beta, ^3H , NO_3
W26-6	2820	SA	Alpha, Beta, ^3H , ^{90}Sr , NO_3 , Gamma Scan
W27-1	2821	Q	Alpha, Beta, ^3H , ^{90}Sr , NO_3 , U, Gamma Scan, U, (b) Pu(c)

(a) Duplicate samples sent to the Washington State Department of Social and Health Services.

(b) Isotopic Uranium.

(c) Isotopic Plutonium.

3.0 300-AREA WELLS

Well Number	Sample Number	Frequency	Analysis
(399) 1-1	4489	SA	^3H , U
		A	^{99}Tc
1-2	4484	SA	^3H , U
		A	^{99}Tc
1-3	4486	SA	^3H , U
		A	^{99}Tc
1-4	4407	SA	U
1-5	4806	SA	^3H , U
1-6	4837	SA	^3H , U
1-7	4400	SA	^3H
1-8	4896	SA	^3H , U
1-9	4929	SA	^3H , U
		A	^{99}Tc
1-10	4930	SA	^3H
1-11	4931	SA	^3H
1-12	4932	SA	^3H
1-13	4933	SA	^3H
1-14	4934	SA	^3H
1-15	4935	SA	^3H
1-16 A	4936	SA	^3H
1-16 B	4937	SA	^3H , ^{90}Sr
1-16 C	4938	SA	^3H
		A	^{99}Tc
1-16 D	4954	SA	^3H , U
1-17 A	4939	Q	Alpha, Beta, ^3H , NO_3 , Gamma Scan, DSHS ^(a)
1-17 B	4940	SA	^3H , ^{90}Sr
1-17 C	4941	SA	^3H
1-18 B	4943	SA	^3H , ^{90}Sr
1-18 C	4944	SA	^3H , U
1-19	4953	SA	^3H
2-1	4402	SA	^3H
		A	^{99}Tc
2-2	4633	SA	^3H , NO_3
		A	^{99}Tc
2-3	4834	SA	Beta, ^3H , NO_3 , U
		A	^{99}Tc
3-3	3034	SA	Beta, ^3H , NO_3 , U
		A	^{99}Tc
3-6	3031	SA	^3H , U, Gamma Scan
3-7	4839	SA	^3H
		A	^{99}Tc

3.0 300-AREA WELLS (contd)

Well Number	Sample Number	Frequency	Analyses
(300) 3-9	4826	SA	^3H , NO_3 , ^{90}Sr
		A	^{99}Tc
3-10	4827	SA	^3H , ^{90}Sr
3-11	4828	SA	Beta, ^3H , NO_3 , U, ^{90}Sr , Gamma Scan
		A	^{99}Tc
3-12	4870	SA	Beta, ^3H , NO_3 , U, ^{90}Sr
		A	^{99}Tc
4-1	4410	SA	^3H
4-7	4588	SA	^3H
		A	^{99}Tc
4-9	4829	SA	Beta, ^3H , NO_3 , U, ^{90}Sr , Gamma Scan
		A	^{99}Tc
4-10	4830	SA	Beta, ^3H , NO_3 , U, ^{90}Sr , Gamma Scan
		A	^{99}Tc
4-11	4928	SA	^3H
5-1	4411	SA	Beta, ^3H , NO_3 , U
		A	^{99}Tc
6-1	4409	SA	Beta, ^3H , NO_3 , U, Gamma Scan
		A	^{99}Tc
6-1	4405	SA	^3H , NO_3
		A	^{99}Tc
6-2	4408	SA	^3H
6-3	4412	SA	^3H , NO_3
		A	^{99}Tc
6-4	4865	SA	Beta, ^3H , NO_3 , U
		A	^{99}Tc

(a) Duplicate samples sent to the Washington State Department of Social and Health Services.

4.0 400-AREA WELLS

<u>Well Number</u>	<u>Sample Number</u>	<u>Frequency</u>	<u>Analyses</u>
(499) S0-7	4817	SA	^3H , Gamma Scan
S1-7 B	4819	SA	Alpha, Beta, ^3H , NO_3
		A	^{129}I
S1-7 C	4877	SA	Alpha, Beta, ^3H , NO_3
		A	^{129}I
S1-8 A	4878	SA	Alpha, Beta, ^3H , NO_3
		A	^{129}I
S1-8 B	4879	SA	Alpha, Beta, ^3H , NO_3
		A	^{129}I
S1-8 C	4958	SA	Alpha, Beta, ^3H
		A	^{129}I
<u>Sampled for Westinghouse</u>			
S0-7	4982	A	^{129}I

5.0 600-AREA WELLS

Well Number	Sample Number	Frequency	Analyses
<u>Sampled for PNL</u>			
(899) S3-25	4787	A	Alpha, Beta, ^3H , NO_3 , ^{129}I
S3-E12	4653	SA	Alpha, Beta, ^3H , NO_3
		A	^{129}I
S8-E4 B	4602	Q	Alpha, Beta, ^3H , NO_3 , U, Gamma Scan, DSHS ^(a)
		A	^{129}I
S8-E4 D	4604	Q	Alpha, Beta, ^3H , NO_3 , U, Gamma Scan, DSHS ^(a)
		A	^{129}I
S8-E14 A	4680	A	Beta, ^3H , NO_3 , ^{99}Tc
S7-34	4427	A	^3H , NO_3
S8-19	4421	SA	Alpha, Beta, ^3H
		A	^{129}I
S11-E12A(D)	4652	A	^3H , NO_3
S11-E12A P	4747	A	Alpha, Beta, ^3H , NO_3
S12-3	4424	Q	Alpha, Beta, ^3H , NO_3 , Gamma Scan, DSHS ^(a)
		A	U, Gamma Scan, ^{129}I
S12-29	4592	SA	Alpha, Beta, ^3H , NO_3
S14-20 A	4636	A	^3H , NO_3 , U, Gamma Scan
S18-51	4852	A	Alpha, Beta, ^3H , NO_3 , ^{99}Tc
S19-11	4700	Q	Alpha, Beta, ^3H , NO_3 , ^{90}Sr , Gamma Scan, DSHS ^(a)
		A	^{99}Tc
S19-E13	4802	SA	Beta, ^3H , U, Gamma Scan
S24-19	4510	A	^3H , NO_3 , U
S27-E14	4413	Q	Beta, ^3H , NO_3 , U
S28-E8	4052	SA	U
S29-E12	4803	SA	Beta, ^3H , NO_3 , U
		A	^{99}Tc
S30-E15 A	4804	Q	Alpha, Beta, ^3H , NO_3 , U, Gamma Scan, DSHS ^(a)
		A	^{99}Tc
S31-1F	4745	A	Alpha, Beta, ^3H , NO_3 , ^{99}Tc
1-18	4513	SA	^3H , NO_3
		A	^{129}I
2-3	4423	SA	Alpha, Beta, ^3H , NO_3
		A	^{129}I
2-7	4758	A	^3H , NO_3
2-33 A	4626	SA	Alpha, Beta, ^3H , NO_3
		A	^{129}I
3-45	4693	A	Beta, ^3H , NO_3 , ^{90}Sr , U, ^{99}Tc , ^{129}I
B-17	4426	SA	Alpha, Beta, ^3H , NO_3
		A	^{129}I
8-25	4785	SA	Alpha, Beta, ^3H , NO_3
		A	^{129}I

5.0 600-AREA WELLS (contd)

Well Number	Sample Number	Frequency	Analyses
(699) 8-32	4420	SA	Alpha, Beta, ^3H , NO_3
		A	^{129}I
10-E12	4581	SA	Alpha, Beta, ^3H , NO_3
		A	^{129}I
10-54 A	4428	SA	Alpha, Beta, ^3H , NO_3
13-84	4429	SA	Alpha, Beta, ^3H , NO_3
		A	^{129}I
14-E8 T	4706	A	Alpha, Beta, ^3H , NO_3
14-38	4527	SA	Alpha, Beta, ^3H , NO_3
		A	^{129}I
14-47	4588	A	Alpha, Beta, ^3H , NO_3
15-16 B	4610	A	Alpha, Beta, ^3H , NO_3 , ^{129}I
15-26	4484	SA	Alpha, Beta, ^3H , NO_3 , Gamma Scan
		A	^{129}I
17-6	4422	R	Alpha, Beta, ^3H , NO_3 , Gamma Scan, DSHS ^(a)
17-47	4538	SA	^3H , NO_3
		A	^{129}I
17-70	4531	SA	^3H , NO_3
19-43	4417	A	^3H , NO_3
19-58	4528	SA	NO_3
19-88	4522	SA	Alpha, Beta, ^3H , NO_3
20-E5 A	4638	SA	Alpha, Beta, ^3H , NO_3
		A	^{129}I
20-E5 AP	4706	A	Alpha, Beta, ^3H , NO_3 , ^{99}Tc
20-E5 ASA	4706	A	Alpha, Beta, ^3H , NO_3 , ^{99}Tc
20-E5 AR	4707	A	Alpha, Beta, ^3H , NO_3 , ^{99}Tc
20-E12(0)	4587	SA	Beta, ^3H , NO_3 , U
		A	^{129}I
20-E12 P	4611	A	Alpha, Beta, ^3H , NO_3 , ^{99}Tc
20-20	4418	SA	Beta, ^3H , NO_3 , U
		A	^{129}I
20-39	4559	A	Alpha, Beta, ^3H , NO_3 , ^{99}Tc , Gamma Scan
20-82	4529	SA	Alpha, Beta, ^3H , NO_3
21-5	4555	SA	Alpha, Beta, ^3H , NO_3
		A	^{129}I
22-70	4595	SA	Alpha, Beta, ^3H , NO_3
24-1 P	4710	A	Alpha, Beta, ^3H , NO_3 , ^{99}Tc
24-1 SA	4711	A	Alpha, Beta, ^3H , NO_3 , ^{99}Tc
24-1 R	4712	A	Alpha, Beta, ^3H , NO_3 , ^{99}Tc
24-1 S	4713	A	Alpha, Beta, ^3H , NO_3 , ^{99}Tc
24-1 T	4709	A	Alpha, Beta, ^3H , NO_3 , ^{129}I

5.0 600-AREA WELLS (contd)

Well Number	Sample Number	Frequency	Analysis
(699) 24-33	4418	Q	Alpha, Beta, ^3H , NO_3 , Gamma Scan, DSHS(a)
		A	^{129}I
24-48	4526	A	Alpha, Beta, ^3H , NO_3 , ^{129}I
26-56	4416	SA	Alpha, Beta, ^3H , NO_3
26-70	4452	SA	Alpha, Beta, ^3H , NO_3
		A	^{129}I
26-15 A	4618	SA	Alpha, Beta, ^3H , NO_3 , Gamma Scan
		A	^{129}I
26-89	4598	A	NO_3
27-8	4557	SA	Alpha, Beta, ^3H , NO_3
		A	^{99}Tc , ^{129}I
28-40	4481	SA	Alpha, Beta, ^3H , NO_3
		A	^{129}I
28-40 P	4754	A	Alpha, Beta, ^3H , NO_3 , ^{99}Tc , Gamma Scan
28-52 A	4521	A	Alpha, Beta, ^3H , NO_3
29-4	4867	SA	Alpha, Beta, ^3H , NO_3
		A	^{129}I
29-78	4694	SA	Alpha, Beta, ^3H , NO_3
		A	^{129}I
31-31	4471	A	Alpha, Beta, ^3H , NO_3 , Gamma Scan, DSHS(a)
31-31 P	4738	A	Alpha, Beta, ^3H , NO_3 , ^{99}Tc
31-53 B	4520	A	Gamma Scan
32-22	4794	SA	Alpha, Beta, ^3H , NO_3
		A	^{99}Tc , ^{129}I
32-43	4778	Q	Alpha, Beta, ^3H , NO_3 , Gamma Scan, DSHS(a)
		A	^{14}C , ^{99}Tc , ^{129}I
32-82	4560	SA	Alpha, Beta, ^3H , NO_3 , DSHS(a)
		A	^{129}I
32-70B	4492	SA	Beta, ^3H , NO_3 , ^{90}Sr , U
		A	^{99}Tc , ^{129}I
32-72	4491	SA	^3H , NO_3 , ^{90}Sr , U, Gamma Scan
		A	^{99}Tc , ^{129}I
32-77	4446	SA	Alpha, Beta, ^3H , NO_3 , Gamma Scan
		A	^{129}I
33-42	4779	SA	Alpha, Beta, ^3H , NO_3
33-56	4523	SA	Alpha, Beta, ^3H , NO_3
34-39 A	4448	A	Alpha, Beta, ^3H , NO_3 , Gamma Scan
34-41 B	4789	SA	^3H , NO_3 , Gamma Scan
34-42	4790	SA	Alpha, Beta, ^3H , NO_3
34-51	4414	SA	Alpha, Beta, ^3H , NO_3 , Gamma Scan
		A	^{129}I

5.0 600-AREA WELLS (contd)

Well Number	Sample Number	Frequency	Analyses
(899) 35-9	4419	SA A	Alpha, Beta, ^3H , NO_3 ^{129}I
35-68	4494	SA A	Beta, ^3H , NO_3 , ^{90}Sr , U ^{99}Tc , ^{129}I
35-70	4441	Q SA A	Alpha, Beta, ^3H , NO_3 , ^{90}Sr , Gamma Scan, DSHS(a) U, ^{14}C ^{99}Tc , ^{129}I
36-46 P	4751	A	Alpha, Beta, ^3H , NO_3 , ^{99}Tc
36-46 SA	4752	Q A	Alpha, Beta, ^3H , NO_3 , Gamma Scan, DSHS(a) ^{99}Tc
36-61 A	4447	SA	NO_3
36-61 B	4549	SA A	Alpha, Beta, ^3H , NO_3 ^{129}I
36-93	4579	A	Alpha, Beta, ^3H , NO_3 , ^{90}Sr , ^{99}Tc
37-E4	4876	A	Alpha, Beta, ^3H , NO_3
37-43	4480	A	Alpha, Beta, ^3H , NO_3 , ^{99}Tc , ^{129}I , ^{14}C , Gamma Scan
37-82 A	4554	SA	Alpha, Beta, ^3H , NO_3 , DSHS(a)
38-15	4680	SA A	Alpha, Beta, ^3H , NO_3 , Gamma Scan ^{129}I
38-66	4548	Q A	Alpha, Beta, ^3H , NO_3 , Gamma Scan, DSHS(a) U, ^{129}I
38-70	4493	SA A	^3H , NO_3 , ^{90}Sr , ^{14}C , ^{63}Ni ^{129}I
39-0	4871	A	Alpha, Beta, ^3H , NO_3 , Gamma Scan
39-39	4791	SA A	Alpha, Beta, ^3H , NO_3 , Gamma Scan ^{129}I
39-79	4444	SA A	Alpha, Beta, ^3H , NO_3 , Gamma Scan ^{129}I
40-1	4566	Q A	Alpha, Beta, ^3H , NO_3 , ^{90}Sr , Gamma Scan, DSHS(a) ^{99}Tc
40-33 A	4431	Q	Alpha, Beta, ^3H , NO_3 , Gamma Scan, DSHS(a)
40-62	4458	SA A	Alpha, Beta, ^3H , NO_3 ^{129}I
41-1	4858	Q A	Alpha, Beta, ^3H , NO_3 , ^{90}Sr , Gamma Scan, U, DSHS(a) ^{99}Tc , ^{129}I
41-23	4430	SA A	Alpha, Beta, ^3H , NO_3 ^{99}Tc , ^{129}I
42-2	4859	A	^3H , NO_3
42-12 A	4517	SA A	Beta, ^3H , NO_3 , ^{90}Sr , U, Gamma Scan ^{99}Tc , ^{129}I
42-40 C	4912	SA A	Alpha, Beta, ^{90}Sr ^{99}Tc , ^{129}I

5.0 600-AREA WELLS (contd)

Well Number	Sample Number	Frequency	Analyses
(899) 43-3	4881	SA A	Alpha, Beta, ^3H , NO_3 , Gamma Scan ^{99}Tc , ^{129}I
43-88	4836	SA	Alpha, Beta, ^3H , NO_3
44-4	4862	A	^3H , NO_3 , Gamma Scan
44-64	4548	SA A	Alpha, Beta, ^3H , NO_3 ^{129}I
45-2	4872	SA A	Alpha, Beta, ^3H , NO_3 , Gamma Scan ^{129}I
45-89 A	4449	SA A	Alpha, Beta, ^3H , NO_3 ^{129}I
46-4	4863	SA A	Alpha, Beta, ^3H , NO_3 ^{99}Tc , ^{129}I
46-21 B	4479	SA A	Alpha, Beta, ^3H , NO_3 ^{129}I
47-5	4864	R SA	Alpha, Beta, ^3H , NO_3 U, ^{90}Sr , Gamma Scan
47-35 A	4476	A	Alpha, Beta, ^3H , NO_3 , ^{129}I
47-45 A	4584	SA A	Beta, ^3H , NO_3 , U, Gamma Scan ^{129}I
47-50	4434	SA A	Beta, ^3H , NO_3 , U, Gamma Scan ^{129}I
48-7	4758	SA A	Alpha, Beta, ^3H , NO_3 ^{99}Tc , ^{129}I
48-18	4860	SA A	Alpha, Beta, ^3H , NO_3 ^{129}I
48-71	4487	SA A	Alpha, Beta, ^3H , NO_3 ^{129}I
49-13 E	4771	SA A	Alpha, Beta, ^3H , NO_3 ^{99}Tc , ^{129}I
49-28	4816	SA A	Alpha, Beta, ^3H , NO_3 ^{129}I
49-55 A	4582	SA A	Alpha, Beta, ^3H , NO_3 , ^{90}Sr , U, Gamma Scan ^{99}Tc , ^{129}I
49-55B	4910	SA A A	Alpha, Beta, ^{90}Sr ^{99}Tc ^{129}I
49-57	4485	SA A	Beta, ^3H , NO_3 , ^{90}Sr , U, ^{14}C , Gamma Scan ^{99}Tc , ^{129}I
49-79	4443	SA	Alpha, Beta, ^3H , NO_3
50-30	4461	SA	Alpha, Beta, ^3H , NO_3 , ^{90}Sr
50-42	4466	SA A	Alpha, Beta, ^3H , NO_3 ^{129}I

5.0 600-AREA WELLS (contd)

Well Number	Sample Number	Frequency	Analysis
(609) 50-45	4914	SA A	Alpha, Beta, ^{90}Sr ^{99}Tc , ^{129}I
50-48B	4883	SA A	Alpha, Beta, ^{90}Sr ^{99}Tc , ^{129}I
50-58	4473	SA A	Alpha, Beta, ^3H , NO_3 , ^{90}Sr , ^{14}C , Gamma Scan ^{99}Tc , ^{129}I
50-85	4497	SA	Alpha, Beta, ^3H , NO_3
51-48	4916	SA A	Alpha, Beta, ^{90}Sr , ^{99}Tc , ^{129}I
51-83	4488	SA A	Beta, ^3H , NO_3 , U ^{129}I
51-75	4496	SA	Alpha, Beta, ^3H , NO_3
52-19	4776	SA A	Alpha, Beta, ^3H , NO_3 ^{129}I
52-48A	4915	SA A	Alpha, Beta, ^{90}Sr ^{99}Tc , ^{129}I
52-48	4917	SA A	Alpha, Beta, ^{90}Sr ^{99}Tc , ^{129}I
53-50	4918	SA A	Alpha, Beta, ^{90}Sr ^{99}Tc , ^{129}I
53-103	4772	A	Alpha, Beta, ^3H , NO_3 , ^{99}Tc , ^{129}I
54-34	4888	SA	Alpha, Beta, ^3H , NO_3
54-46 A	4811	SA	Alpha, Beta, ^3H , NO_3
54-57	4919	SA A	Alpha, Beta, ^{90}Sr ^{99}Tc , ^{129}I
55-40	4839	A	^3H , NO_3
55-44	4840	A	^3H , NO_3
55-50 A(0)	4433	SA A	Beta, ^3H , NO_3 , ^{90}Sr , U, Gamma Scan ^{99}Tc , ^{129}I
55-50 C	4483	SA A	^3H , NO_3 , U, Gamma Scan ^{129}I
55-50 D	4484	SA A	^3H , NO_3 , U ^{129}I
55-70	4442	A	Beta, ^3H , NO_3 , U
55-76	4533	SA	NO_3
55-89	4459	A	Beta, ^3H , NO_3 , ^{90}Sr , U, Gamma Scan
56-43	4850	SA A	Alpha, Beta, ^3H , NO_3 ^{129}I
58-53	4920	SA A	Alpha, Beta, ^{90}Sr ^{99}Tc , ^{129}I
57-29 A	4482	SA	Alpha, Beta, ^3H , NO_3

5.0 600-AREA WELLS (contd)

Well Number	Sample Number	Frequency	Analyses
(699) 59-58	4827	SA A	Beta, ^3H , NO_3 , ^{90}Sr , U ^{99}Tc , ^{129}I
59-80 B	4437	SA	NO_3
60-57	4826	SA A	Beta, ^3H , NO_3 , U ^{129}I
60-60	4436	A	Beta, ^3H , NO_3 , ^{90}Sr , U, ^{99}Tc , ^{129}I , Gamma Scan
61-37	4894	SA	Alpha, Beta, ^3H , NO_3
61-41	4853	SA	Alpha, Beta, ^3H , NO_3
61-62	4825	SA A	Beta, ^3H , NO_3 , ^{90}Sr , U, Gamma Scan ^{99}Tc , ^{129}I
61-66	4474	SA A	Beta, ^3H , NO_3 , ^{90}Sr , U, Gamma Scan ^{99}Tc , ^{129}I
62-31	4813	SA	NO_3
63-25 A	4499	SA	Alpha, Beta, ^3H , NO_3
63-55	4823	SA	Beta, ^3H , NO_3 , U
63-58	4822	SA A	Beta, ^3H , NO_3 , U, Gamma Scan ^{129}I
63-90	4438	SA	Alpha, Beta, ^3H , NO_3
64-27	4599	A	^3H , NO_3
64-62	4824	SA A	Beta, ^3H , NO_3 , ^{90}Sr , U, Gamma Scan ^{99}Tc , ^{129}I
65-23	4851	A	^3H , NO_3
65-50	4477	SA A	Beta, ^3H , NO_3 , U ^{129}I
65-59	4532	SA A	Beta, ^3H , NO_3 , ^{90}Sr , U, Gamma Scan ^{99}Tc , ^{129}I
65-72	4468	SA A	Beta, ^3H , NO_3 , U ^{129}I
65-83	4775	SA	Alpha, Beta, ^3H , NO_3
66-23	4547	SA	NO_3
66-38	4586	SA	NO_3
66-39	4812	SA	NO_3
66-58	4821	SA A	Beta, ^3H , NO_3 , ^{90}Sr , U, Gamma Scan ^{99}Tc , ^{129}I
66-64	4820	SA A	Beta, ^3H , NO_3 , ^{90}Sr , U, Gamma Scan ^{99}Tc , ^{129}I
66-103	4587	SA	Alpha, Beta, ^3H , NO_3 , Gamma Scan
67-51	4561	SA	^3H , NO_3 , U
67-66	4585	SA	Alpha, Beta, ^3H , NO_3
67-98	4558	SA	Alpha, Beta, ^3H , NO_3
68-106	4588	A	^3H , NO_3
69-38	4461	SA	Alpha, Beta, ^3H , NO_3

5.0 600-AREA WELLS (contd)

Well Number	Sample Number	Frequency	Analyses
(899) 70-68	4455	SA A	Beta, ^3H , NO_3 , ^{90}Sr , U, Gamma Scan ^{90}Tc , ^{129}I
71-30	4490	SA	Alpha, Beta, ^3H , NO_3
71-52	4454	SA A	Beta, ^3H , NO_3 , U ^{129}I
71-77	4584	SA A	Beta, ^3H , NO_3 , U ^{129}I
72-73	4509	A	Alpha, Beta, ^3H , NO_3 , ^{129}I
72-88	4485	SA	Alpha, Beta, ^3H , NO_3
72-92	4585	A	Alpha, Beta, ^3H , NO_3
73-61	4583	SA A	Beta, ^3H , NO_3 , U ^{129}I
74-44	4518	SA	Alpha, Beta, ^3H , NO_3
77-38	4509	A	^3H , NO_3
77-54	4512	SA	Alpha, Beta, ^3H , NO_3
78-82	4511	A	NO_3
80-43 P	4760	A	Alpha, Beta, ^3H , NO_3 , ^{90}Tc
80-43 SA	4761	A	Alpha, Beta, ^3H , NO_3 , ^{90}Tc
80-43 R	4762	A	Alpha, Beta, ^3H , NO_3 , ^{90}Tc
80-43 S	4763	A	Alpha, Beta, ^3H , NO_3 , ^{90}Tc
81-58	4597	SA	Alpha, Beta, ^3H , NO_3
83-47	4515	A	^3H , ^{90}Sr , ^{90}Tc
84-35 A(0)	4598	A	^3H , NO_3
87-55	4792	SA	Alpha, Beta, ^3H , NO_3
89-35	4571	SA	Alpha, Beta, ^3H , NO_3
90-45	4770	SA	Alpha, Beta, ^3H , NO_3
96-49	4591	SA	Alpha, Beta, ^3H , NO_3 , U, ^{14}C , ^{63}Ni
97-43	4590	SA	Alpha, Beta, ^3H , NO_3
97-51 A	4728	SA	Alpha, Beta, ^3H , NO_3 , U, ^{14}C , ^{63}Ni
101-48 B	4848	SA A	Alpha, Beta, ^3H , NO_3 , ^{90}Sr ^{90}Tc
<u>Sampled for Westinghouse</u>			
(R699) 528-ED	4754	Q A	Alpha, Beta, ^3H , ^{90}Sr , NO_3 ^{129}I
32-72	4888	Q	Alpha, Beta
35-70	4957	SA	^{129}I
35-78 A	4889	Q	Alpha, Beta, ^3H , U, U, $^{(b)}\text{NO}_3$, Gamma Scan
38-70	4951	M	Alpha, Beta, U, ^{90}Tc
42-40 A	4874	Q	Alpha, Beta, ^3H , Gamma Scan, ^{90}Sr , NO_3 , U, U, $^{(b)}\text{Pu}$ $^{(c)}$
42-40 B	4875	M Q	Beta, ^3H , Gamma Scan ^{90}Sr , NO_3

5.0 600-AREA WELLS (contd)

Well Number	Sample Number	Frequency	Analyses
(R599) 42-40 C	4881	SA	^3H , NO_3
43-42	4958	M	Alpha, Beta, ^3H , NO_3 , ^{90}Sr , U, Gamma Scan, U, (b) Pu (c)
47-60	4882	SA	^3H , NO_3
49-65 B	4743	SA	^3H , NO_3
49-100 C	4742	Q	Alpha, Beta, ^3H , ^{90}Sr , NO_3 , DSHS (a)
		A	^{129}I
60-42	4610	Q	^{90}Sr
		SA	Alpha, Beta
60-45	4769	SA	^3H , NO_3
63-48 B	4968	SA	^3H , NO_3
61-48	4884	SA	^3H , NO_3
62-46 A	4788	SA	^3H , NO_3
62-48	4888	SA	^3H , NO_3
63-47 A	4888	M	Alpha, Beta, ^{90}Sr , Gamma Scan
63-47 B	4888	Q	Alpha, Beta, ^{90}Sr , Gamma Scan
63-48 A	4893	Q	Alpha, Beta, ^{90}Sr , Gamma Scan
63-48 B	4894	Q	Alpha, Beta, ^{90}Sr , Gamma Scan
63-50	4849	SA	^3H , NO_3
63-55 A(0)	4887	SA	Alpha, Beta, ^{90}Sr , Gamma Scan
64-48	4895	Q	Alpha, Beta, ^{90}Sr , Gamma Scan
64-49	4732	Q	Alpha, Beta, ^{90}Sr
64-57	4489	SA	^3H , NO_3
65-50 C	4887	Q	Alpha, Beta, ^{90}Sr
65-50 D	4730	Q	Alpha, Beta, ^{90}Sr
66-63	4892	SA	^3H , NO_3

(a) Duplicate samples sent to the Washington State Department of Social and Health Services.

(b) Isotopic Uranium.

(c) Isotopic Plutonium.

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