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Master Schedule for CY-1983 Hanford Environmental Surveillance Routine Sampling Program

P. J. Blumer
M. J. Sula
P. A. Eddy
R. L. Dirkes

December 1982

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

Pacific Northwest Laboratory
Operated for the U.S. Department of Energy
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MASTER SCHEDULE FOR CY-1983 HANFORD ENVIRONMENTAL SURVEILLANCE ROUTINE SAMPLING PROGRAM

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Pacific Northwest Laboratory
Richland, Washington 99352

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MASTER SCHEDULE FOR CY-1983
HANFORD ENVIRONMENTAL SURVEILLANCE ROUTINE SAMPLING PROGRAMS

INTRODUCTION

This report provides the current schedule of data collection for the routine Hanford environmental surveillance and ground-water Monitoring Programs at the Hanford Site. The programs are sponsored by the Department of Energy and are conducted by the Environmental Evaluations Section of Pacific Northwest Laboratory.(a)

The purpose of the programs is to evaluate and report the levels of radioactive and non-radioactive pollutants in the Hanford environs, as required in DOE Order 5484.1. The data collected are available in general reports issued by the Environmental Evaluations staff. Ground-water data and evaluations are reported in the series, "Radiological Status of the Ground Water Beneath the Hanford Project." The latest issue is PNL-4237 (Eddy, Cline, and Prater 1982) for CY-1981. Data from locations within the plant boundaries are presented in the annual report series, "Environmental Status of the Hanford Site." The most recent report in this series is PNL-4212 (Sula, Blumer, Dirkes 1982) for CY-1981. Data from offsite locations are presented annually in the "Environmental Surveillance at Hanford" series. The latest report in this series is PNL-4211 (Sula, et al. 1982) for CY-1981.

The routine sampling schedule provided herein does not include samples that are planned to be collected during FY-1983 in support of special studies, special contractor support programs, or for quality control purposes. In addition, the routine program outlined in this schedule is subject to modification during the year in response to changes in site operations, program requirements, or unusual sample results.

It is intended that all samples be collected as scheduled. However, several factors including bad weather, mechanical breakdowns, unavailability of sample media (particularly wildlife samples) and vandalism may prevent samples from being collected as scheduled.

(a) Pacific Northwest Laboratory is operated by Battelle Memorial Institute for the U.S. Department of Energy.

Frequency Symbols Used

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

Analysis Symbols Used

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

Alpha - total alpha activity of sample

Beta - total beta activity of sample

Gamma Scan - analysis of gamma energy spectrum for individual gamma-emitting radionuclides including: ^{22}Na, ^{60}Co, ^{65}Zn, ^{106}Ru, ^{131}I, and ^{137}Cs

DO - dissolved oxygen

BOD - biological oxygen demand

WQ - water quality analyses including: pH, conductance, Ca, Mg, Na, CO_3, HCO_3, K, B, NO_3-N, Cl, SO_4-S, and dissolved solids.

Cr - Cr^{+6}

PART I. HANFORD ENVIRONMENTAL SURVEILLANCE AND RADIATION CONTROL AUDIT PROGRAMS

1.0 RADIOLOGICAL ENVIRONMENTAL SURVEILLANCE

1.1 AIR - PARTICULATE FILTER

Location	Individual Samples			Composited Samples			
	Sample Number	Frequency	Analysis	Composite Group	Composite Sample No.	Frequency	Analysis
ONSITE							
100 K	0058	BW	Beta	100 Areas	1753	M Q	Gamma Scan ^{89}Sr, ^{90}Sr, ^{238}Pu, $^{239-240}Pu$, U
100 N (WPPSS)	1529	BW	Beta				
100 D	1074	BW	Beta, Alpha				
100 Area Fire Station	6154	BW	Beta				
Rt 11A-Mile 9	0249	BW	Beta, Alpha	200 North	0613	M Q	Gamma Scan ^{89}Sr, ^{90}Sr, ^{238}Pu, $^{239-240}Pu$, U
N of 200 E	0051	BW	Beta, Alpha				
200 EEC	0042	BW	Beta, Alpha	200 East	1749	M Q	Gamma Scan ^{89}Sr, ^{90}Sr, ^{238}Pu, $^{239-240}Pu$, U
200 ESE	0043	BW	Beta, Alpha				
SW of BC Cribs	0250	BW	Beta, Alpha	200 W South & East	0614	M Q	Gamma Scan ^{89}Sr, ^{90}Sr, ^{238}Pu, $^{239-240}Pu$, U
Army Loop Camp	0248	BW	Beta, Alpha				
200 Tel. Exchange	0052	BW	Beta, Alpha				
3705 Building	1531	BW	Beta	300 Area	1752	M Q	Gamma Scan ^{89}Sr, ^{90}Sr, ^{238}Pu, $^{239-240}Pu$, U
ACRM	1793	BW	Beta				
300 SW Gate	6148	BW	Beta				
300 South Gate	6150	BW	Beta, Alpha				
300 Pond	1543	BW	Beta, Alpha				
400 E	6308	BW	Beta, Alpha	400 Area	6465	M Q	Gamma Scan ^{89}Sr, ^{90}Sr, ^{238}Pu, $^{239-240}Pu$, U
400 W	6455	BW	Beta, Alpha				
400 S	6456	BW	Beta, Alpha				
400 N	6457	BW	Beta, Alpha				

1.1 AIR - PARTICULATE FILTER (Cont'd.)

Location	Individual Samples: Sample Number	Frequency	Analysis	Composited Samples: Composite Group	Composite Sample No.	Frequency	Analysis
ONSITE (Cont'd.)							
Hanford	0057	BW	Beta, Alpha	Hanford	0600	M Q	Gamma Scan ^{89}Sr, ^{90}Sr, ^{238}Pu, $^{239-240}Pu$, U
Wye Barricade	0924	BW	Beta, Alpha	Wye Barricade	0601	M Q	Gamma Scan ^{89}Sr, ^{90}Sr, ^{238}Pu, $^{239-240}Pu$, U
PERIMETER							
Berg Ranch	1405	BW	Beta, Alpha	Northeast Perimeter	0602	M Q	Gamma Scan ^{89}Sr, ^{90}Sr, ^{238}Pu, $^{239-240}Pu$
Sagehill Met. Tower	0047	BW	Beta				
Ringold Met. Tower	0048	BW	Beta				
Fir Road	6391	BW	Beta	East Perimeter	0603	M Q	Gamma Scan ^{89}Sr, ^{90}Sr, ^{238}Pu, $^{239-240}Pu$, U
Pettett	6351	BW	Beta, Alpha				
Byers Landing	0247	BW	Beta, Alpha	Southeast Perimeter	0604	M Q	Gamma Scan ^{89}Sr, ^{90}Sr, ^{238}Pu, $^{239-240}Pu$, U
RRC #64	6182	BW	Beta, Alpha				
Horn Rapids Rd - Mile 12	0049	BW	Beta, Alpha	Horn Rapids Road	0605	M Q	Gamma Scan ^{89}Sr, ^{90}Sr, ^{238}Pu, $^{239-240}Pu$, U
Horn Rapids Rd Substation	0050	BW	Beta				
Prosser Barricade	0055	BW	Beta, Alpha	Prosser Barricade	0606	M Q	Gamma Scan ^{89}Sr, ^{90}Sr, ^{238}Pu, $^{239-240}Pu$, U
ERC	0929	BW	Beta	ERC	0612	M Q	Gamma Scan ^{89}Sr, ^{90}Sr, ^{238}Pu, $^{239-240}Pu$, U

1.1 AIR - PARTICULATE FILTER (Cont'd.)

Location	Individual Samples: Sample Number	Frequency	Analysis	Composited Samples: Composite Group	Composite Sample No.	Frequency	Analysis
PERIMETER (Cont'd.)							
Rattlesnake Springs	0972	BW	Beta	West Perimeter	0607	M Q	Gamma Scan ^{89}Sr, ^{90}Sr, ^{238}Pu, $^{239-240}Pu$
Yakima Barricade	1650	BW	Beta, Alpha				
Vernita Bridge	1651	BW	Beta	Northwest Perimeter	0608	M Q	Gamma Scan ^{89}Sr, ^{90}Sr, ^{238}Pu, $^{239-240}Pu$, U
Wahluke Slope #2	1551	BW	Beta, Alpha				
COMMUNITY							
Othello	1652	BW	Beta	Northeast Communities	0609	M Q	Gamma Scan ^{89}Sr, ^{90}Sr, ^{238}Pu, $^{239-240}Pu$
Connell	1653	BW	Beta, Alpha,				
Pasco	1654	BW	Beta	Tri-City	0610	M Q	Gamma Scan ^{89}Sr, ^{90}Sr, ^{238}Pu, $^{239-240}Pu$
Richland	0054	BW	Beta, Alpha				
Benton City	0029	BW	Beta, Alpha	Benton City	0611	M Q	Gamma Scan ^{89}Sr, ^{90}Sr, ^{238}Pu, $^{239-240}Pu$
DISTANT							
Moses Lake	0960	BW	Beta, Alpha	Outer Northeast	1742	M Q	Gamma Scan ^{89}Sr, ^{90}Sr, ^{238}Pu, $^{239-240}Pu$
Washtucna	0959	BW	Beta				
Walla Walla	0262	BW	Beta, Alpha	Outer Southeast	1744	M Q	Gamma Scan ^{89}Sr, ^{90}Sr, ^{238}Pu, $^{239-240}Pu$
McNary Dam	0958	BW	Beta				
Sunnyside	0964	BW	Beta, Alpha	Outer Western	1748	M Q	Gamma Scan ^{89}Sr, ^{90}Sr, ^{238}PU, $^{239-240}Pu$, U

1.2 AIR - GASES/VAPOR

Location	Iodine-131		Tritium (HTO)		Tritium (HT)		Carbon-14 (CO_2)		Krypton-85	
	Sample Number	Frequency	Sample Number	Frequency	Sample Number	Frequency	Sample Number	Frequency	Sample Number	Frequency
ONSITE										
100 K	1581	NRA								
100 N (WPPSS)	1661	BW								
100 D	1582	BW	6335	M	6502	M				
100 Area Fire Station	6155	NRA	0901	M			0912	BM		
Rt. 11A-Mile 9	0254	NRA								
N of 200 E	0251	NRA								
200 EEC	1361	NRA								
200 ESE	1664	BW	6201	M	6503	M	0913	BM		
SW of BC Cribs	0056	NRA								
Army Loop Camp	0253	NRA								
200 Tel. Exchange	0252	NRA								
3705 Building	1669	NRA								
ACRMS	1795	NRA								
300 SW Gate	6149	BW								
300 South Gate	6151	NRA								
300 Pond	6239	NRA							1501	M
400 E	6309	BW	6428	M						
400 W	6458	BW								
400 S	6459	BW								
400 N	6460	BW								
Hanford	1666	NRA	0903	M						
Wye Barricade	1584	NRA	0904	M			0915	BM		

1.2 AIR - GASES/VAPOR (Cont'd.)

Location	Iodine-131		Tritium (HTO)		Tritium (HT)		Carbon-14 (CO_2)		Krypton-85	
	Sample Number	Frequency	Sample Number	Frequency	Sample Number	Frequency	Sample Number	Frequency	Sample Number	Frequency
PERIMETER										
Berg Ranch	1672	NRA								
Sagehill Met. Tower	0257	BW	0905	M						
Ringold Met. Tower	0258	NRA	0906	M			0916	BM	1504	M
Fir Road	6392	BW	6393	M	6513	M	0917	BM	1503	M
Pettett	6352	BW	0907	M			0918	BM		
Byers Landing	0246	BW								
RRC #64	6183	NRA								
Horn Rapids Rd - Mile 12	0259	NRA	0256	M			0919	BM		
Horn Rapids Rd Substation	0260	NRA								
Prosser Barricade	6248	NRA	0908	M			0920	BM	1502	M
ERC	1585	NRA								
Rattlesnake Springs	1586	NRA								
Yakima Barricade	1667	NRA	0902	M						
Vernita Bridge	1668	NRA								
Wahluke Slope #2	1671	NRA								
COMMUNITY										
Othello	1673	NRA								
Connell	1674	NRA								

1.2 AIR - GASES/VAPOR (Cont'd.)

Location	Iodine-131		Tritium (HTO)		Tritium (HT)		Carbon-14 (CO_2)		Krypton-85	
	Sample Number	Frequency	Sample Number	Frequency	Sample Number	Frequency	Sample Number	Frequency	Sample Number	Frequency
COMMUNITY (Cont'd.)										
Pasco	1678	NRA								
Richland	0231	NRA	6207	M	6514	M				
Benton City	1670	BW	6411	M	6515	M	0921	BM		
DISTANT										
Moses Lake	1682	NRA	0909	M						
Washtucna	1683	NRA								
Walla Walla	0261	NRA								
McNary Dam	1684	NRA								
Sunnyside	1680	BW	0910	M	0911	M	0922	BM	1505	M

1.3 COLUMBIA RIVER WATER

Location	Sample Type	Sample Number	Frequency	Analyses
Priest Rapids Dam	Cumulative	1265	M	Alpha, Beta, ^{3}H, Gamma Scan, ^{89}Sr, ^{90}Sr, U
	Particulate (filter)	6395	BW Q	Gamma Scan ^{238}Pu, $^{239-240}Pu$
	Soluble (resin)	6394	BW Q	Gamma Scan ^{129}I, ^{238}Pu, $^{239-240}Pu$
Richland	Cumulative	1000	M	Alpha, Beta, ^{3}H, Gamma Scan, ^{89}Sr, ^{90}Sr, U
300 Area Forebay	Particulate (filter)	6385	BW Q	Gamma Scan ^{238}Pu, $^{239-240}Pu$
	Soluble (resin)	6384	BW Q	Gamma Scan ^{129}I, ^{238}Pu, $^{239-240}Pu$

1.4 SANITARY WATER

Location	Sample Number	Frequency	Analyses
Richland	1002	M	Gamma Scan, ^{90}Sr

1.5 ONSITE POND WATER

Location	Sample Number	Frequency	Analyses
Gable Mountain Pond	1054	Q	Alpha, Beta, ^{3}H, ^{90}Sr, Gamma Scan
West Lake	6133	Q	Alpha, Beta, ^{3}H, ^{90}Sr, Gamma Scan
B Pond	0015	Q	Alpha, Beta, ^{3}H, ^{90}Sr, Gamma Scan
FFTF Percolation Pond	6467	Q	Alpha, Beta, ^{3}H, Gamma Scan

1.6 FOODSTUFFS

1.6.1 Whole Milk

Location	Sample Number	Frequency	Analyses
Wahluke East Area Comp[(a)]	0305	M	^{131}I, Gamma Scan, ^{3}H
		Q	^{89}Sr, ^{90}Sr
		SA	^{129}I
Sagemoor Area Comp[(a)]	0306	BW	^{131}I, Gamma Scan
		M	^{3}H
		Q	^{90}Sr
		SA	^{129}I
Riverview Area	0975	M	^{131}I, Gamma Scan, ^{3}H
		Q	^{89}Sr, ^{90}Sr
		SA	^{129}I
Benton City Area	6519	M	^{131}I, Gamma Scan, ^{3}H
		Q	^{90}Sr
		SA	^{129}I
Sunnyside Area	6355	BW	^{131}I, Gamma Scan
		M	^{3}H
		Q	^{89}Sr, ^{90}Sr
		SA	^{129}I
Moses Lake Area	0307	M	^{131}I, Gamma Scan, ^{3}H
		Q	^{90}Sr
		SA	^{129}I

(a) Composite from three sources in area.

1.6.2 Produce (Leafy Vegetables)

Location	Sample Number	Frequency[a]	Analyses
Wahluke East Area	0308	A	^{90}Sr, Gamma Scan
Sagemoor Area	6419	A	^{90}Sr, Gamma Scan
Riverview Area	1609	A	^{90}Sr, Gamma Scan
Benton City Area	1612	A	^{90}Sr, Gamma Scan
Sunnyside Area	6372	A	^{90}Sr, Gamma Scan
Moses Lake Area	6407	A	^{90}Sr, Gamma Scan

(a) Three samples collected in July at each location.

1.6.3 Fruit

Location	Sample Type	Sample Number	Frequency[a]	Analysis
Sagemoor Area	Apples	0565	A	^{3}H, ^{90}Sr, Gamma Scan
	Cherries	0543	A	^{3}H, ^{90}Sr, Gamma Scan
	Grapes	6417	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	6440	A	^{3}H, ^{90}Sr, Gamma Scan
	Cherries	6453	A	^{3}H, ^{90}Sr, Gamma Scan
	Grapes	6454	A	^{3}H, ^{90}Sr, Gamma Scan

(a) Three samples from each source at picking time.

1.6.4 Wheat/Alfalfa

Location	Sample Type	Sample Number	Frequency[a]	Analyses
Wahluka East Area	Wheat	0320	A	^{90}Sr, Gamma Scan
	Alfalfa	0311	A	^{90}Sr, Gamma Scan
Sagemoor Area	Wheat	0319	A	^{90}Sr, Gamma Scan
	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, Gamma Scan
	Alfalfa	0315	A	^{90}Sr, Gamma Scan
Moses Lake Area	Wheat	0321	A	^{90}Sr, Gamma Scan
	Alfalfa	0310	A	^{90}Sr, Gamma Scan

(a) Three samples each of wheat and alfalfa from each source at first cutting.

1.6.5 Beef

Location	Sample Number	Frequency[a]	Analyses
Sagemoor Area	6418	SA	^{90}Sr, Gamma Scan
Riverview Area	1292	SA	^{90}Sr, Gamma Scan
Horn Rapids Area	6516	SA	^{90}Sr, Gamma Scan
Sunnyside Area	0322	SA	^{90}Sr, Gamma Scan

(a) If available.

1.6.6 Poultry/Eggs

Location	Sample Type	Sample Number	Frequency[a]	Analyses
Sagemoor 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

(a) If available.

1.7 WILDLIFE

1.7.1 Fish

Location	Species	Part	Sample Number	Frequency[a]	Analyses
Above Priest Rapids Dam	Whitefish	Muscle	6491	SA (April & Oct)	^{90}Sr, Gamma Scan
		Carcass	6492	SA (April & Oct)	^{90}Sr, Gamma Scan
	Bass	Muscle	6497	A (April)	^{90}Sr, Gamma Scan
		Carcass	6498	A (April)	^{90}Sr, Gamma Scan
Vernita to Priest Rapids	Whitefish	Muscle	0329	SA (April & Oct)	^{90}Sr, Gamma Scan
		Carcass	6493	SA (April & Oct)	^{90}Sr, Gamma Scan
100 D	Whitefish	Muscle	6431	Q	^{90}Sr, Gamma Scan
		Carcass	6490	Q	^{90}Sr, Gamma Scan
Hanford Slough	Whitefish	Muscle	0330	SA (April & Oct)	^{90}Sr, Gamma Scan
		Carcass	6494	SA (April & Oct)	^{90}Sr, Gamma Scan
	Bass	Muscle	0337	A (April)	^{90}Sr, Gamma Scan
		Carcass	6495	A (April)	^{90}Sr, Gamma Scan
Ringold	Whitefish	Muscle	0331	SA (April & Oct)	^{90}Sr, Gamma Scan
		Carcass	6496	SA (April & Oct)	^{90}Sr, Gamma Scan

(a) Composite of up to five fish at each sampling.

1.7.2 Ducks

Location	Species	Sample Number	Frequency	Analyses
Vicinity 100 N	Mallard	6451	2/mo.[b]	Gamma Scan
	Other[a]	ATS*	2/mo.[b]	Gamma Scan
B Pond	Mallard	1298	2/mo.[b]	Gamma Scan
	Other[a]	ATS*	2/mo.[b]	Gamma Scan
Gable Pond	Mallard	0433	2/mo.[b]	Gamma Scan
	Other[a]	ATS*	2/mo.[b]	Gamma Scan
U Pond	Mallard	0439	2/mo.[b]	Gamma Scan
	Other[a]	ATS*	2/mo.[b]	Gamma Scan
West Lake	Mallard	6186	2/mo.[b]	Gamma Scan
	Other[a]	ATS*	2/mo.[b]	Gamma Scan
300 Area	Mallard	1589	2/mo.[b]	Gamma Scan
	Other[a]	ATS*	2/mo.[b]	Gamma Scan

(a) Other species such as coot, teal, widgeon, etc., may be used for this sample.
(b) 2/mo. in January, August and December.
* ATS - according to species.

1.7.3 Geese

Location	Species	Sample Number	Frequency	Analyses
Vicinity 100 N	Greater Canadian	1763	3/year[a]	Gamma Scan

(a) One each in October, November and December.

1.7.4 Game Birds

Location	Species	Sample Number	Frequency[a]	Analyses
100 BC	Chukar, quail or pheasant	ATS*	A (3 Bird Comp. in October)	Gamma Scan
100 K	Chukar, quail or pheasant	ATS*	A (3 Bird Comp. in October)	Gamma Scan
100 N	Chukar, quail or pheasant	ATS*	A (3 Bird Comp. in October)	Gamma Scan
100 D	Chukar, quail or pheasant	ATS*	A (3 Bird Comp. in October)	Gamma Scan
100 H	Chukar, quail or pheasant	ATS*	A (3 Bird Comp. in October)	Gamma Scan
100 F	Chukar, quail or pheasant	ATS*	A (3 Bird Comp. in October)	Gamma Scan
200 E	Chukar, quail or pheasant	ATS*	A (3 Bird Comp. in October)	Gamma Scan
200 W	Chukar, quail or pheasant	ATS*	A (3 Bird Comp. in October)	Gamma Scan
300 Area	Chukar, quail or pheasant	ATS*	A (3 Bird Comp. in October)	Gamma Scan
Offsite				
Wahluke Slope	Chukar, quail or pheasant	ATS*	A (3 Bird Comp. in October)	Gamma Scan

(a) Samples composited only if of the same species.
* ATS - according to species.

1.7.5 Deer

Location	Species	Sample Number	Frequency	Analyses
Road kill as available at onsite locations	Mule	According to location	6/yr	Muscle - Gamma Scan Bone - ^{90}Sr Liver - ^{238}Pu, $^{239-240}Pu$

1.7.6 Rabbits

Location	Species	Sample Number	Frequency	Analyses
100-N Area	Cottontail or Jack Rabbit	According to to location	4/yr	Muscle - Gamma Scan Bone - ^{90}Sr
200 Areas	Cottontail or Jack Rabbit	According to to location	4/yr	Muscle - Gamma Scan Bone - ^{90}Sr
300 Area	Cottontail or Jack Rabbit	According to to location	4/yr	Muscle - Gamma Scan Bone - ^{90}Sr

1.8 SOIL AND VETETATION

Location	Soil Sample Number	Vegetation Sample No.	Frequency	Analyses
1 Mile NE of N Area	0590	0591	A	Gamma Scan, ^{90}Sr, U, Pu(a)
1 Mile E of N Area	0578	0579	A	Gamma Scan, ^{90}Sr, U, Pu(a)
100 Area Fire Station	0580	0585	A	Gamma Scan, ^{90}Sr, U, Pu(a)
200 ENC	6362	6368	A	Gamma Scan, ^{90}Sr, U, Pu(a), ^{241}Am
1.25 Miles E of Purex	0581	0586	A	Gamma Scan,(^{90}Sr, U, Pu(a),^{241}Am
200-E Hill Air Sampling Station	6022	6068	A	Gamma Scan, ^{90}Sr, U, Pu(a),^{241}Am
2 Miles S of Purex	0582	0587	A	Gamma Scan, ^{90}Sr, U, Pu(a), ^{241}Am
SW of BC Cribs	0583	0588	A	Gamma Scan, ^{90}Sr, U, Pu(a), ^{241}Am
E of 200-W Gate	6276	6283	A	Gamma Scan, ^{90}Sr, U, Pu(a), ^{241}Am
2 Miles S of 200 W	0584	0589	A	Gamma Scan, ^{90}Sr, U, Pu(a), ^{241}Am
Rattlesnake Springs	6003	6049	A	Gamma Scan, ^{90}Sr, U, Pu(a), ^{241}Am
Yakima Barricade	6004	6050	A	Gamma Scan, ^{90}Sr, U, Pu(a)
1/2 Mile NE of FFTF Site	6282	6285	A	Gamma Scan, ^{90}Sr, U, Pu(a)
SE Side of FFTF Site	6277	6286	A	Gamma Scan, ^{90}Sr, U, Pu(a)
N of 300 Area	6322	6328	A	Gamma Scan, ^{90}Sr, U, Pu(a)
S of 300 Area	6323	6329	A	Gamma Scan, ^{90}Sr, U, Pu(a)
Hanford Townsite (CP#57)	6017	6063	A	Gamma Scan, ^{90}Sr, U, Pu(a), ^{241}Am
Wye Barricade	6016	6062	A	Gamma Scan, ^{90}Sr, U, Pu(a), ^{241}Am
Prosser Barricade	6225	6227	A	Gamma Scan, ^{90}Sr, U, Pu(a)
East of ALE Field Lab	6278	6287	A	Gamma Scan, ^{90}Sr, U, Pu(a)

(a) ^{238}Pu, $^{239-240}Pu$.

1.8 SOIL AND VEGETATION (Cont'd.)

Location	Soil Sample Number	Vegetation Sample No.	Frequency	Analyses
Vernita Bridge N End	6005	6051	A	Gamma Scan, ^{90}Sr, U, Pu(a)
Wahluke #2 Air Sampling Station	6007	6053	A	Gamma Scan, ^{90}Sr, U, Pu(a)
Berg Ranch Air Sampling Station	6008	6054	A	Gamma Scan, ^{90}Sr, U, Pu(a)
Ringold	6009	6055	A	Gamma Scan, ^{90}Sr, U, Pu(a)
W End Fir Road	6360	6366	A	Gamma Scan, ^{90}Sr, U, Pu(a)
Taylor Flats #2	6421	6423	A	Gamma Scan, ^{90}Sr, U, Pu(a)
Sagemoor Farms	6358	6364	A	Gamma Scan, ^{90}Sr, U, Pu(a), ^{241}Am
Byers Landing Air Sampling Station	6011	6057	A	Gamma Scan, ^{90}Sr, U, Pu(a)
Harris Farm	6361	6367	A	Gamma Scan, ^{90}Sr, U, Pu(a)
Benton City	6000	6046	A	Gamma Scan, ^{90}Sr, U, Pu(a)
Sunnyside	6357	6363	A	Gamma Scan, ^{90}Sr, U, Pu(a), ^{241}Am

(a) ^{238}Pu, $^{239-240}Pu$.

1.9 DIRECT RADIATION

1.9.1 Ambient Dose Rate

Location	Sample No.	Frequency	Measurement
Coyote Rapids	6135	M	Immersion Dose
Richland Pumphouse	1715	M	Immersion Dose
100 K[a]	1475	M	Ambient Dose
100 N (WPPSS)[a]	1476	M	Ambient Dose
100 D[a]	1477	M	Ambient Dose
100 Area Fire Station[a]	6164	M	Ambient Dose
Rt. 11A-Mile 9[a]	0327	M	Ambient Dose
N of 200 E[a]	0324	M	Ambient Dose
200 Tel. Exchange[a]	0325	M	Ambient Dose
SW of BC Cribs[a]	0328	M	Ambient Dose
Army Loop Camp[a]	0326	M	Ambient Dose
200 EEC[a]	1469	M	Ambient Dose
200 ESE[a]	1468	M	Ambient Dose
3705 Building[a]	1486	M	Ambient Dose
ACRMS[a]	1698	M	Ambient Dose
300 Southwest Gate[a]	6163	M	Ambient Dose
300 South Gate[a]	6162	M	Ambient Dose
300 Pond[a]	1699	M	Ambient Dose
377 Building	1479	M	Ambient Dose
400 E[a]	1729	M	Ambient Dose
400 W[a]	6468	M	Ambient Dose
400 S[a]	6469	M	Ambient Dose
400 N[a]	6470	M	Ambient Dose
FFTF North	6177	M	Ambient Dose
FFTF Southeast	6178	M	Ambient Dose
Hanford[a]	1480	M	Ambient Dose
Wye Barricade[a]	1483	M	Ambient Dose
Berg Ranch[a]	1491	M	Ambient Dose
Sagehill Met. Tower[a]	0927	M	Ambient Dose
Ringold Met. Tower[a]	0928	M	Ambient Dose
Fir Road[a]	6356	M	Ambient Dose
Pettett[a]	6353	M	Ambient Dose
Sagemoor Farms	6354	M	Ambient Dose
Byers Landing[a]	1498	M	Ambient Dose
RRC #64[a]	6171	M	Ambient Dose
Horn Rapids Rd-Mile 12[a]	0925	M	Ambient Dose
Horn Rapids Rd Substation[a]	0926	M	Ambient Dose
Prosser Barricade[a]	6176	M	Ambient Dose

(a) Located at Air Sampling Station.

1.9.1 Ambient Dose Rate (Cont'd.)

Location	Sample No.	Frequency	Measurement
ERC[a]	1484	M	Ambient Dose
Rattlesnake Springs[a]	1485	M	Ambient Dose
Yakima Barricade[a]	1482	M	Ambient Dose
Vernita Bridge[a]	1481	M	Ambient Dose
Wahluke Slope #2[a]	1490	M	Ambient Dose
Othello[a]	1652	M	Ambient Dose
Connell[a]	1494	M	Ambient Dose
Pasco[a]	1488	M	Ambient Dose
Richland[a]	1487	M	Ambient Dose
Benton City[a]	1499	M	Ambient Dose
Moses Lake[a]	1693	M	Ambient Dose
Washtucna[a]	1694	M	Ambient Dose
Walla Walla[a]	1695	M	Ambient Dose
McNary Dam[a]	1696	M	Ambient Dose
Sunnyside[a]	1500	M	Ambient Dose
Up River 100-B Area	6471	M	Ambient Dose
Below 100-B Retention Basin	6472	M	Ambient Dose
Above 100-K Boat Ramp	6260	M	Ambient Dose
Downstream 100-N Outfall	6536	M	Ambient Dose
Below 100-N Stack	6537	M	Ambient Dose
Upstream 100-N Berm	6538	M	Ambient Dose
100-N Trench Spring	6390	M	Ambient Dose
Down River 100 D	6475	M	Ambient Dose
Down River Opposite 100 D	6261	M	Ambient Dose
Lower End Locke Island	6262	M	Ambient Dose
White Bluffs Ferry Landing	6263	M	Ambient Dose
White Bluffs Slough	6476	M	Ambient Dose
100-F Area Floodplain	6477	M	Ambient Dose
Below 100 F	6264	M	Ambient Dose
Hanford Peninsula	6478	M	Ambient Dose
Hanford Power-Line Crossing	6389	M	Ambient Dose
Hanford Ferry Landing	6265	M	Ambient Dose
Hanford RR Track	6266	M	Ambient Dose
Savage Island Slough	6479	M	Ambient Dose
Ringold Island	6267	M	Ambient Dose
Power-Line Crossing	6268	M	Ambient Dose
North End Wooded Island	6480	M	Ambient Dose
South End Wooded Island	6269	M	Ambient Dose
Island River Mile 344	6481	M	Ambient Dose
Island River Mile 333	6482	M	Ambient Dose

(a) Located at Air Sampling Station.

1.9.2 Columbia River Shoreline Surveys

Location	Sample Number	Frequency	Instrument
Above 100-K Boat Ramp	6132	M	LLM, GM
100-N Trench Springs	6129	M	LLM, GM
Down River Opposite 100 D	6241	M	LLM, GM
Lower End Locke Island	6123	M	LLM, GM
White Bluffs Ferry Landing	6121	M	LLM, GM
Below 100 F	6120	M	LLM, GM
Hanford Power-Line Crossing	6118	M	LLM, GM
Hanford Ferry Landing	6117	M	LLM, GM
Hanford RR Track	6242	M	LLM, GM
Ringold Island	6114	M	LLM, GM
Power-Line Crossing	6113	M	LLM, GM

2.0 COLUMBIA RIVER WATER QUALITY MONITORING

Location	Sample Type	Sample Number	Frequency	Analyses
Vernita	Thermograph	--	Continuous[a]	Temperature
	Grab	1616	W	NO_3^-
		1204	W	pH, DO, Turbidity
		1373	M[b]	Coliforms, Fecal Coliforms, BOD
	Grab	--	Q	WQ-NASQAN[c]
Richland Forebay	Thermograph	--	Continuous[a]	Temperature
	Grab	1617	W	NO_3^-
		6429	W	pH, DO, Turbidity
		1365	M[b]	Coliforms, Fecal Coliforms, BOD
	Grab	--	Q	WQ-NASQAN[c]

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

3.0 ONSITE RADIATION CONTROL AUDIT SURVEYS

3.1 ROADWAY SURVEY

Description	Identification Number	Frequency	Instrument
1100 Area to FFTF Rt. 4-S and return to 300 Area Barricade.	1	W	Road Monitor
FFTF to U.S. Ecology Rt. 4-S	2	W	Road Monitor
200 W to 100 K and 100 N NW Gate of 200 W to 11A, to Rt. 4-N to Rt. 1 to 100 K, back to Rt. 4-N to 100 N and back to Rt. 1.	3	M	Road Monitor
Yakima Barricade to U.S. Ecology Yakima Barricade to Rt. 4-S, to U.S. Ecology. Return to Rt. 4-S and Rt. 3, do both sides Rt. 3 from Rt. 4-S to 11A.	4	Q	Road Monitor
Army Loop Road From Rt. 4-S to Rt. 11A.	5	A	Road Monitor
U.S. Ecology to FFTF via Horn Rapids U.S. Ecology (Rt. 4-S) to Rt. 10 to FMEF cutoff to FFTF, back to Rt. 10 to Rt. 4-S to East gate FFTF.	6	A	Road Monitor
300 Area through 1100 Area 300 Area Barricade to Rt. 4-S to garage, stores, gas station, parking lot to Rt. 4-S to first street, to JA Jones shop area to first street, to G.W. Way to Rt. 4-S back to G.W. Way to U.S. Testing.	7	A	Road Monitor
Yakima Barricade to 100 B-C and 200 N Yakima Barricade to 11A to Rt. 6 to 100 B-C to 100-K turnoff back to 100 B-C to cutoff Rt. 4-N, back on cutoff to 100 B-C to Rt. 6 to Rt. 11A to 200 N to Rt. 4-N and back through 200 N to Rt. 11A.	8	A	Road Monitor
Wye Barricade to 100 N Wye Barricade to Rt. 2-S to Rt. 2-N to 100-N turnoff on Rt. 4-N and return same route.	9	A	Road Monitor
Rt. 2-S and Rt. 11A to White Bluffs Rt. 2-S and Rt. 11A, go west on Rt. 11A to Rt. 4-N to Rt. 1 to Rt. 2-N. Return to White Bluffs turnoff to river, go back to Rt. 1 to Rt. 4-N to Rt. 11A to Rt. 2-S.	10	A	Road Monitor
300 Area 300 Area Barricade to 3701 badgehouse back on Cypress to 331 perimeter road to 3765 Building to 300 east perimeter fence to north perimeter fence. From north perimeter fence (River Road) to north process pond to Rt. 2-S through north parking lot back to 2-S and 300 Area Barricade.	11	Q	Road Monitor

3.1 ROADWAY SURVEY (Cont'd.)

Description	Identification Number	Frequency	Instrument
400 Area From access road through east parking lot around north perimeter, west and south to access road.	12	Q	Road Monitor

3.2 RAILWAY SURVEY

Description	Identification Number	Frequency	Instrument
300 Area to FFTF fence.	1	M	Railway Monitor
200 East to Ethel, Ethel to 200 West, 200 West to Ethel, Ethel to 100 K, 100 K to 100 N.	2	M	Railway Monitor
Geneva junction to Pearl junction via May junction.	3	Q	Railway Monitor
May junction via Low-Line to 100 N.	4	A	Railway Monitor

3.3 AERIAL SURVEY

Description	Identification Number	Frequency	Instrument
Project Perimeter	3	A	Aerial Monitor

3.4 SURVEILLANCE OF WASTE DISPOSAL SITES

Active, inactive, and retired waste disposal sites require periodic monitoring to assure appropriate maintenance. The following sites are routinely checked for vegetation growth, evidence of burrowing animals, erosion, status of enclosure, etc.

Description	Frequency
100-K Trench	A
100-BC SE B. G. (105-C Solid Waste)	SA
100-BC SW B. G. (105-B Solid Waste, N. Solid Waste)	SA
100-BC Construction B. G.	SA
100-BC B. G. East of 108-B	SA
100-BC Irradiated Metal Storage Basin Waste	SA
109-B Ball 3x Burial Ground	SA
108-B Crib	SA
105-C Trench	SA
105-B Trench	SA
107 Basin Sludge Burial	SA
105-C Metal Examination Waste Tank	SA
100-BC Overflow Pluto Crib	SA
107-C Retention Basin	SA
107-B Retention Basin	SA
100-BC Effluent Diversion Box	SA
100-BC Minor B. G.'s East of 105-B	SA
100-BC Outfall Structures	SA
100-DR Outfall Structures	SA
100-DDR Trench	SA
107-D Retention Basin	SA
107-DR Retention Basin	SA
100-DDR Effluent Lines	SA
100-D Dummy Decontamination Waste	SA
100-DDR Solid Waste B. G. (VSR Thimbles)	SA
100-DDR Construction B. G.	SA
100-DDR #3 B. G. NE of DR	SA
100-DDR Pluto Crib	SA
100-DDR 105 Basin Sludge B. G.	SA
100-DDR #1 B. G.	SA
100-DDR #2 B. G.	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 B. G.	SA
100-H #2 B. G.	SA
P-11 Area	A

3.4 SURVEILLANCE OF WASTE DISPOSAL SITES (Cont'd.)

Description	Frequency
100-F Lewis Canal	SA
100-F Swampy Area	SA
100-F Trench	SA
100-F Retention Basin	SA
100-F Trench Drain and Adjacent Wood Covered Pit	SA
100-F Ball Washer Crib	SA
100-F #3 B. G.	SA
100-F #2 B. G.	SA
100-F #1 B. G.	SA
100-F Sawdust Burial	SA
100-F Leaching Trench	SA
100-F 60" 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-3)	Q
200-E B Pond Ditch #3	SA
200-E Purex Crib #1 (216-A-6)	SA
200-E Purex Crib #2 (216-A-30-1)	SA
200-E North of Purex Crib #3 (216-A-37-1)	SA
200-E NE Perimeter Fence	SA
200-E 216-BC Crib Area	SA
200-E U.S. Ecology B. G. Perimeter	Q
300 Area 300 N B. G.	SA
300 Area 300 Wye B. G.	SA
300 Area #2 B. G.	SA
300 Area #3 B. G.	SA
307 Area #4 B. G.	SA
300 Area #5 B. G.	SA
300 Area #7 B. G.	SA
300 West B. G.	SA
300 Area N. Process Trench at Perimeter Fence	Q
200-N, P, and R Areas	SA

PART II. HANFORD GROUND-WATER MONITORING PROGRAM

1.0 600 AREA WELLS

Well Number	Sample No.	Frequency	Analyses
(699) S0-7	4817	Q	^3H, NO_3, Gamma Scan
S0-8	4818	Q	^3H, NO_3, Gamma Scan
S1-7B	4819	Q	^3H, NO_3, Gamma Scan
S3-25	4787	Q	^3H, NO_3
		A	WQ
S3-E12	4553	Q	^3H, NO_3
		A	WQ
S6-E4 B	4502	Q	^3H, NO_3, U
S6-E4 D	4504	Q	^3H, NO_3, U
S6-E14	4580	Q	^3H, NO_3
S7-34	4427	Q	^3H, NO_3
S8-19	4421	Q	^3H, NO_3
S11-E12A (0)	4552	Q	^3H, NO_3
S11-E12A P	4747	Q	^3H, NO_3
S12-3	4424	Q	^3H, NO_3
S12-29	4592	Q	NO_3
S14-20 A	4535	Q	NO_3
S18-51	4852	Q	NO_3, F
S19-11	4780	SA	NO_3
S19-E13	4802	Q	NO_3, F, U
		A	WQ
S24-19	4510	SA	NO_3
S27-E14	4413	M	NO_3, U, F, Cr
S29-E12	4803	Q	NO_3, F, U
S30-E15 A	4804	Q	NO_3, F, U, Cr
S31-1 (0)	4745	Q	^3H, NO_3
		A	WQ
1-18	4513	Q	^3H, NO_3
2-3	4423	M	^3H, NO_3
		Q	Gamma Scan
		A	WQ
2-7	4758	A	WQ
2-33	4526	Q	^3H, NO_3
3-45	4593	Q	NO_3
		SA	^3H
4-E6	4620	Q	^3H, NO_3
8-17	4426	Q	^3H, NO_3, Gamma Scan

1.0 600 AREA WELLS (Cont'd.)

Well Number	Sample No.	Frequency	Analyses
(699) 8-25	4788	Q	^3H, NO_3, Gamma Scan
8-32	4420	Q	^3H, NO_3
9-E2	4519	Q	^3H, NO_3
10-E12	4581	Q	^3H, NO_3
10-54	4428	A	WQ
13-1 C	4854	Q	^3H, NO_3
		SA	Gamma Scan
13-64	4429	Q	^3H, NO_3
14-E6 T	4766	Q	^3H, NO_3
14-38	4527	Q	^3H, NO_3
14-47	4608	Q	^3H, NO_3
		A	WQ
15-15 B	4810	Q	^3H, NO_3, Gamma Scan
15-26	4464	Q	^3H, NO_3, Gamma Scan
		A	WQ
17-5	4422	Q	^3H, NO_3, Gamma Scan
17-47	4530	Q	^3H, NO_3
17-70	4531	Q	^3H, NO_3
19-43	4417	Q	^3H, NO_3
		A	WQ
19-58	4528	Q	NO_3
19-88	4522	Q	NO_3
20-E5 A	4838	Q	^3H, NO_3, Gamma Scan
		A	WQ
20-E5 P	4705	Q	^3H, NO_3
20-E5 Q	4706	Q	^3H, NO_3
20-E5 R	4707	Q	^3H, NO_3
20-E12 (0)	4567	Q	^3H, NO_3
20-E12 P	4611	Q	^3H, NO_3
20-20	4418	Q	^3H, NO_3, Gamma Scan
20-39	4559	Q	^3H, NO_3
		A	Gamma Scan
20-82	4529	Q	^3H, NO_3
22-70	4595	Q	^3H, NO_3
		A	Gamma Scan
23-7	4855	M	^3H, NO_3
24-1 P	4710	Q	^3H, NO_3

1.0 600 AREA WELLS (Cont'd.)

Well Number	Sample No.	Frequency	Analyses
(699) 24-1 Q	4711	Q	^{3}H, NO_3
24-1 R	4712	Q	^{3}H, NO_3
24-1 S	4713	Q	^{3}H, NO_3
24-1 T	4709	Q	^{3}H, NO_3
24-33	4416	Q	^{3}H, NO_3, Gamma Scan
24-46	4525	Q	^{3}H, NO_3
25-55	4415	Q	^{3}H, NO_3
25-70	4452	SA	^{3}H, NO_3
		A	WQ
26-15	4518	Q	^{3}H, NO_3, Gamma Scan
		A	WQ
26-89	4598	SA	NO_3
		A	WQ
27-4	4857	M	^{3}H, NO_3
27-8	4557	Q	^{3}H, NO_3, Gamma Scan
28-40 (0)	4481	Q	^{3}H, NO_3, Gamma Scan
28-40 P	4754	Q	^{3}H, NO_3, Gamma Scan
28-52	4521	Q	^{3}H, NO_3, Gamma Scan
29-78	4594	Q	^{3}H, NO_3
31-31 (0)	4471	Q	^{3}H, NO_3, Gamma Scan
31-31 P	4738	Q	^{3}H, NO_3, Gamma Scan
31-53 B	4520	SA	^{3}H, NO_3, Gamma Scan
		A	WQ
32-22	4794	Q	^{3}H, NO_3, Gamma Scan
32-42	4777	Q	^{3}H, NO_3
32-43	4778	Q	^{3}H, NO_3, Gamma Scan
32-62	4550	Q	^{3}H, NO_3, Alpha
32-70	4492	Q	^{3}H, NO_3, Gamma Scan
32-72	4491	Q	^{3}H, NO_3, Gamma Scan
32-77	4446	Q	^{3}H, NO_3, Gamma Scan
33-42	4779	Q	^{3}H, NO_3, Gamma Scan
33-56	4523	Q	Alpha, ^{3}H, NO_3, Gamma Scan
34-39 A	4448	Q	^{3}H, NO_3, Gamma Scan
34-41	4789	Q	^{3}H, NO_3, Gamma Scan
34-42	4790	Q	^{3}H, NO_3, Gamma Scan
		A	WQ
34-51	4414	Q	^{3}H, NO_3, Gamma Scan
34-88	4439	Q	^{3}H, NO_3
35-9	4419	Q	^{3}H, NO_3, Gamma Scan
35-66	4494	Q	^{3}H, NO_3, Gamma Scan

1.0 600 AREA WELLS (Cont'd.)

Well Number	Sample No.	Frequency	Analyses
(699) 35-70	4441	Q	^{3}H, NO_3, Gamma Scan
		A	WQ
36-46 P	4751	Q	^{3}H, NO_3
		SA	Gamma Scan
36-46 Q	4752	Q	^{3}H, NO_3
		SA	Gamma Scan
36-61 A	4447	Q	NO_3
36-61 B	4549	Q	^{3}H, NO_3
36-93	4579	SA	^{3}H, NO_3
		A	WQ
37-43	4480	Q	^{3}H, NO_3, Gamma Scan
37-82 A	4554	Q	^{3}H, NO_3
38-65	4546	Q	^{3}H, NO_3
		SA	Gamma Scan
38-70	4493	Q	^{3}H, NO_3, Gamma Scan
39-1	4871	M	^{3}H, NO_3, Gamma Scan
39-E3	4876	M	^{3}H, NO_3, Gamma Scan
39-39	4791	SA	^{3}H, NO_3, Gamma Scan
39-79	4444	Q	^{3}H, NO_3, Gamma Scan
40-1	4566	Q	^{3}H, NO_3
		A	Gamma Scan, WQ
40-33	4431	Q	^{3}H, NO_3
		A	Gamma Scan, WQ
40-62	4458	Q	^{3}H, NO_3
41-1	4858	M	^{3}H, NO_3
41-23	4430	Q	^{3}H, NO_3, Gamma Scan
42-2	4859	M	^{3}H, NO_3
42-12	4517	Q	^{3}H, NO_3, Gamma Scan
43-3	4861	M	^{3}H, NO_3
43-88	4836	Q	^{3}H, NO_3
44-4	4872	Q	^{3}H, NO_3, Gamma Scan
44-64	4548	Q	^{3}H, NO_3, Gamma Scan
45-4	4862	M	^{3}H, NO_3, Gamma Scan
45-42	4450	Q	^{3}H, NO_3, Gamma Scan
		A	WQ
45-69	4449	Q	^{3}H, NO_3
		SA	Gamma Scan
		A	WQ
46-5	4863	M	^{3}H, NO_3

1.0 600 AREA WELLS (Cont'd.)

Well Number	Sample No.	Frequency	Analyses
(699) 46-21	4479	Q	^3H, NO_3
47-6	4864	M	^3H, NO_3
47-35	4478	Q	^3H, NO_3
47-46	4564	Q	^3H, NO_3
		SA	Gamma Scan
47-60	4434	Q	^3H, NO_3, Gamma Scan
48-7	4756	Q	^3H, NO_3
48-18	4850	Q	^3H, NO_3
48-71	4487	Q	^3H, NO_3
49-13	4771	Q	^3H, NO_3
		A	WQ
49-28	4816	Q	^3H, NO_3
49-55	4562	Q	^3H, NO_3, Gamma Scan
49-57	4485	Q	^3H, NO_3, Gamma Scan
49-79	4443	Q	^3H, NO_3
		A	WQ
50-19	4776	SA	NO_3
50-28 B	4844	Q	^3H, NO_3
		A	WQ
50-30	4451	Q	^3H, NO_3
50-42	4460	Q	^3H, NO_3
50-53	4473	Q	^3H, NO_3, Gamma Scan
		A	WQ
50-85	4497	Q	^3H, NO_3
51-63	4488	Q	^3H, NO_3
51-75	4496	Q	^3H, NO_3
53-35	4637	Q	^3H, NO_3
		A	Gamma Scan
53-103	4772	Q	^3H, NO_3
54-34	4638	Q	^3H, NO_3
54-37 A	4853	Q	^3H, NO_3
54-42	4432	Q	NO_3
		SA	^3H
54-45	4811	Q	^3H, NO_3
54-57	4469	Q	^3H, NO_3
55-40	4639	Q	^3H, NO_3
55-44	4640	Q	^3H, NO_3
55-50 (AC)	4433	Q	^3H, NO_3

1.0 600 AREA WELLS (Cont'd.)

Well Number	Sample No.	Frequency	Analyses
(699) 55-50 C	4483	Q	^{3}H, NO_3
		SA	Gamma Scan
		A	WQ
55-50 D	4484	Q	^{3}H, NO_3
55-70	4442	Q	^{3}H, NO_3
55-76	4533	Q	NO_3
55-89	4453	Q	NO_3
56-43	4650	Q	^{3}H, NO_3
57-25 A	4856	Q	^{3}H, NO_3
57-29 A	4462	Q	^{3}H, NO_3
57-83	4558	Q	NO_3
58-24	4652	Q	^{3}H, NO_3
59-32	4815	Q	^{3}H, NO_3
59-58	4827	Q	^{3}H, NO_3
		A	WQ
59-80 B	4437	Q	NO_3
60-32	4814	Q	^{3}H, NO_3
60-57	4826	Q	^{3}H, NO_3
60-60	4435	Q	^{3}H, NO_3
61-37	4694	Q	NO_3
61-41	4653	Q	^{3}H, NO_3
61-62	4825	Q	^{3}H, NO_3
61-66	4474	Q	^{3}H, NO_3
62-31	4813	Q	NO_3
62-43 F	4537	Q	^{3}H, NO_3
63-25	4499	Q	^{3}H, NO_3
63-51	4845	SA	^{3}H, NO_3
63-55	4823	Q	^{3}H, NO_3
63-58	4822	Q	^{3}H, NO_3
63-90	4436	Q	^{3}H, NO_3
		A	WQ
64-27	4599	Q	NO_3
		SA	^{3}H
		A	WQ
64-62	4824	Q	^{3}H, NO_3
65-23	4851	SA	^{3}H, NO_3
65-50	4477	Q	^{3}H, NO_3
65-59	4532	Q	^{3}H, NO_3
65-72	4468	Q	^{3}H, NO_3

1.0 600 AREA WELLS (Cont'd.)

Well Number	Sample No.	Frequency	Analyses
(699) 65-83	4775	Q	^3H, NO_3
66-23	4547	Q	NO_3
66-38	4586	Q	NO_3
66-39	4812	Q	NO_3
66-58	4821	Q	^3H, NO_3
66-64	4820	Q	^3H, NO_3
		A	WQ
66-103	4587	SA	^3H, NO_3
		A	Gamma Scan
67-51	4561	Q	^3H, NO_3
67-86	4585	Q	^3H, NO_3
67-98	4556	Q	^3H, NO_3
68-105	4588	SA	^3H, NO_3
		A	Gamma Scan
69-38	4461	Q	^3H, NO_3
70-68	4455	SA	^3H, NO_3
71-30	4490	SA	^3H, NO_3
71-52	4454	Q	^3H, NO_3
71-77	4584	SA	^3H, NO_3
		A	WQ
72-73	4569	SA	^3H, NO_3
72-88	4465	Q	^3H, NO_3
		A	WQ
72-92	4565	SA	^3H, NO_3
72-98	4463	SA	^3H, NO_3
73-61	4583	Q	^3H, NO_3
74-44	4516	Q	^3H, NO_3
		A	WQ
77-36	4500	Q	^3H, NO_3
77-54	4512	Q	NO_3
78-62	4511	SA	NO_3
		A	WQ
80-43 P	4760	SA	NO_3
80-43 Q	4761	SA	NO_3
80-43 R	4762	SA	NO_3
80-43 S	4763	SA	NO_3
81-58	4597	Q	^3H, NO_3
		A	WQ
83-47	4515	SA	^3H

1.0 600 AREA WELLS (Cont'd.)

Well Number	Sample No.	Frequency	Analyses
(699) 84-35 A(0)	4596	SA	^{3}H, NO_3
87-55	4792	Q	^{3}H, NO_3
		A	WQ
89-35	4571	Q	NO_3
		A	WQ
90-45	4770	Q	^{3}H
		SA	NO_3
96-49	4591	Q	^{3}H, NO_3
97-43	4590	Q	^{3}H, NO_3
97-51 A	4728	Q	^{3}H, NO_3
101-48 B	4846	SA	^{3}H, NO_3

2.0 100 AREA WELLS

Well Number	Sample No.	Frequency	Analyses
(199) B3-1	1851	SA	^{3}H
B3-2 P	1856	SA	^{3}H, NO_3
B3-2 Q	1857	SA	^{3}H, NO_3
B4-1	1853	Q	^{3}H, NO_3
B4-2	1854	Q	^{3}H, NO_3
B4-3	1855	Q	^{3}H, NO_3
B4-4	1891	SA	^{3}H, NO_3, Gamma Scan
B5-1	1895	Q	^{3}H, NO_3
B9-1	1893	SA	^{3}H, NO_3
D2-5	1894	Q	^{3}H, NO_3
D5-12	1892	Q	^{3}H, NO_3, Gamma Scan
D8-3	1862	Q	^{3}H, NO_3
F5-1	1865	Q	^{3}H, NO_3
F5-3	1867	Q	^{3}H, NO_3
F5-4	1868	Q	^{3}H, NO_3
F5-6	1870	Q	^{3}H, NO_3
F7-1	1871	Q	^{3}H, NO_3
F8-1	1888	Q	^{3}H, NO_3
F8-2	1889	Q	^{3}H, NO_3
H3-1	1890	Q	^{3}H, NO_3
H4-3	1877	Q	^{3}H, NO_3, U, Cr^{+6} F, Cu, Gamma Scan
		A	WQ
K-11	1882	Q	^{3}H, NO_3
		SA	Gamma Scan
K-19	1884	Q	^{3}H, NO_3
K-20	1885	Q	^{3}H, NO_3
K-22	1887	Q	^{3}H, NO_3
K-27	1911	Q	^{3}H, Gamma Scan
K-28	1912	Q	^{3}H, Gamma Scan
K-29	1913	Q	^{3}H, Gamma Scan
K-30	1914	Q	^{3}H, Gamma Scan
N-2	1904	Q	^{3}H, NO_3, Gamma Scan
		SA	^{90}Sr
N-3 (0)	1896	Q	^{3}H, Gamma Scan
		SA	^{90}Sr
N-4	1899	Q	^{3}H, NO_3, Gamma Scan
		SA	^{90}Sr
N-5	1909	Q	^{3}H, NO_3, Gamma Scan
		SA	^{90}Sr

2.0 100 AREA WELLS (Cont'd.)

Well Number	Sample No.	Frequency	Analyses
(199) N-6	1901	Q	^{3}H, Gamma Scan
		SA	^{90}Sr
N-7	1910	Q	^{3}H, NO_3, Gamma Scan
		SA	^{90}Sr
N-14	1902	Q	^{3}H, NO_3, Gamma Scan
		SA	^{90}Sr
N-15	1903	Q	^{3}H, NO_3, Gamma Scan
		SA	^{90}Sr
N-16	1915	Q	^{3}H, NO_3, Gamma Scan
		SA	^{90}Sr
N-17	1916	Q	^{3}H, NO_3, Gamma Scan
		SA	^{90}Sr
N-18	1917	Q	^{3}H, NO_3, Gamma Scan
		SA	^{90}Sr
N-19	1918	Q	^{3}H, NO_3, Gamma Scan
		SA	^{90}Sr
N-20	1919	Q	^{3}H, NO_3, Gamma Scan
		SA	^{90}Sr
N-21	1920	Q	^{3}H, NO_3, Gamma Scan
		SA	^{90}Sr
N-22	1921	Q	^{3}H, NO_3, Gamma Scan
		SA	^{90}Sr
N-23	1922	Q	^{3}H, NO_3, Gamma Scan
		SA	^{90}Sr
N-24	1923	Q	^{3}H, NO_3, Gamma Scan
		SA	^{90}Sr
N-25	1924	Q	^{3}H, NO_3, Gamma Scan
		SA	^{90}Sr
N-26	1925	Q	^{3}H, NO_3, Gamma Scan
		SA	^{90}Sr

3.0 200 AREA WELLS

Well Number	Sample No.	Frequency	Analyses
(299) E19-1	2359	Q	^{3}H, NO_3, Gamma Scan
E23-1	2553	Q	^{3}H, NO_3, Gamma Scan
E24-7	2542	Q	^{3}H, NO_3, Gamma Scan
E25-2	2554	Q	^{3}H, NO_3, Gamma Scan
E26-1	2545	Q	^{3}H, NO_3, Gamma Scan
E26-3	2365	Q	^{3}H, NO_3, Gamma Scan
E27-1	2287	Q	^{3}H, NO_3, Gamma Scan
E28-1	2555	Q	^{3}H, NO_3, Gamma Scan
E28-5	2285	Q	^{3}H, NO_3, Gamma Scan
E33-14	2297	Q	^{3}H, NO_3, Gamma Scan
E34-1	2549	M	NO_3
W6-1	2990	Q	^{3}H, NO_3, Gamma Scan
W10-5	2890	Q	^{3}H, NO_3, Gamma Scan
W11-9	2881	Q	^{3}H, NO_3, Gamma Scan
W12-1	2883	Q	^{3}H, NO_3, Gamma Scan
W15-2	2891	Q	^{3}H, NO_3, Gamma Scan
W18-3	3011	Q	^{3}H, NO_3, Gamma Scan
W19-4	2938	Q	^{3}H, NO_3, Gamma Scan
W21-1	2930	Q	^{3}H, NO_3, Gamma Scan
W22-7	3014	Q	^{3}H, NO_3, Gamma Scan
W22-9	3013	Q	^{3}H, NO_3, Gamma Scan
W22-10	2906	Q	Alpha, ^{90}Sr, Gamma Scan

4.0 300 AREA WELLS

Well Number	Number	Frequency	Analyses
(399) 1-1	4403	Q	Beta, NO_3, U, Cr, F, Gamma Scan
1-2	4404	Q	Beta, NO_3, U, Cr, F, Gamma Scan
1-3	4406	Q	Beta, NO_3, U, Cr, F, Gamma Scan
1-4	4407	Q	Beta, NO_3, U, Cr, F, Gamma Scan
1-5	4806	Q	Beta, NO_3, U, Cr, F, Gamma Scan (To HEDL Monthly)
1-6	4837	Q	Beta, NO_3, U, Cr, F, Gamma Scan
2-1	4402	Q	Beta, NO_3, U, Cr, F, Gamma Scan
2-2	4633	Q	Beta, NO_3, U, Cr, F, Gamma Scan
2-3	4634	Q	Beta, NO_3, U, Cr, F, Gamma Scan
3-1	4401	Q	Beta, NO_3, U, Cr, F, Gamma Scan
3-2	3033	Q	Beta, NO_3, U, Cr, F, Gamma Scan
3-3	3034	Q	Beta, NO_3, U, Cr, F, Gamma Scan
3-6	3031	M	Beta, NO_3, U, Cr, F, Gamma Scan
3-7	4839	M	Beta, NO_3, U, Cr, F, Gamma Scan
3-9	4626	Q	Beta, NO_3, U, Cr, F, Gamma Scan, ^{90}Sr
3-10	4627	Q	Beta, NO_3, U, Cr, F, Gamma Scan, ^{90}Sr
3-11	4628	Q	Beta, NO_3, U, Cr, F, Gamma Scan, ^{90}Sr
3-12	4870	M	Beta, NO_3, U, Cr, F, Gamma Scan, ^{90}Sr
4-1	4410	Q	Beta, NO_3, U, Cr, F, Gamma Scan
4-7	4568	Q	Beta, NO_3, U, Cr, F, Gamma Scan
4-9	4629	Q	Beta, NO_3, U, Cr, F, Gamma Scan, ^{90}Sr
4-10	4630	Q	Beta, NO_3, U, Cr, F, Gamma Scan, ^{90}Sr
5-1	4411	Q	Beta, NO_3, U, Cr, F, Gamma Scan
6-1	4409	Q	Beta, NO_3, U, Cr, F, Gamma Scan
8-1	4405	Q	Beta, NO_3, U, Cr, F, Gamma Scan
8-2	4408	Q	Beta, NO_3, U, Cr, F, Gamma Scan
8-3	4412	Q	Beta, NO_3, U, Cr, F, Gamma Scan
8-4	4865	Q	Beta, NO_3, U, Cr, F, Gamma Scan

APPENDIX A

SUMMARY OF DIFFERENCES BETWEEN THE 1982 AND 1983 ENVIRONMENTAL SURVEILLANCE PROGRAM ROUTINE SAMPLING SCHEDULE--PART I

APPENDIX A

SUMMARY OF DIFFERENCES BETWEEN THE 1982 AND 1983 ENVIRONMENTAL SURVEILLANCE PROGRAM ROUTINE SAMPLING SCHEDULE--PART I

A comparison of the current (1983) Master Schedule Part I for the Hanford Environmental Surveillance Program's routine sampling and monitoring activities with the CY-1982 schedule will show several changes. These changes are summarized below.

SECTION A. RADIOLOGICAL ENVIRONMENTAL SURVEILLANCE

Air Sampling

- Air sampler locations have been changed in three areas:

1) Air samplers were relocated in the vicinity of the 200 Areas to better serve the objectives of the Hanford Environmental Surveillance Program by providing for a more thorough coverage of all potential airborne sources in the 200 Areas, by placing samplers at or beyond estimated elevated-source plume-touchdown points, and by removing sampling locations in the immediate vicinity of 200-Area operational activities. Samplers which have been added for 1983 are:

Rt 11A-Mile 9	-- located on the north side of Rt 11A north of 200-West Area
SW of BC Crib	-- located alongside the PUD transmission line southwest of the BC Crib Area
Army Loop Camp	-- located at an abandoned army artillary emplacement camp on Army Loop Road, south of the southeast corner of 200-West Area
200 Tel. Exchange	-- located approximately 100 feet from the GTE telephone exchange building between 200-East and 200 West Areas.

The relocation of air samplers in the 200 Areas has resulted in the deletion of the following locations:

200-West Area	200 WEC 200 WNE 200 WWC Redox
200-East Area	200 ENC 200 EWC

Although not shown in the 1983 schedule, it is planned to add two additional sampling locations in the 200 Areas during the year. One location will be approximately one mile east of the PUREX facility and the other just south of the southeast corner of the BC Crib Area. Following these additions, the "200 EEC" location will be deleted from the schedule.

2) New sampling locations have been established at the Bonnevile Power Administration's White Bluffs Substation on Horn Rapids Road and at a location about one mile west of the Exxon plant on Horn Rapids Road. These new locations will provide more complete coverage along the southern perimeter of the site. As a result of the addition of these two locations, the "1100 Area" sampling location has been deleted from the schedule.

3) Two samplers which had been located in farming areas northeast of the site have been moved closer to the site perimeter. The "Wahluke Watermaster" sampling location has been moved to the Sagehill Road meteorology station located near the site perimeter east of 100-F Area and the "Cooke Brothers" sampling location has been moved to the Ringold meteorology station near the site perimeter east of Savage Island. The moves will enhance coverage of the northeast portion of the site perimeter.

- Composite sampling groups were redefined for airborne particulate samples. The number of composite groups has been increased from 13 in 1982 to 22 in the current schedule. The new compositing scheme will result in greater sensitivity with respect to identifying radionuclides of potential Hanford origin in the environment and will enable potential sources of observed environmental radioactivity to be more readily identified. Particular efforts were made to eliminate the compositing of samples from site-perimeter locations with samples collected farther from the site and from compositing over large angular distances with respect to individual onsite facilities.
- Gross alpha analysis requests were increased to include a biweekly analysis from at least one sampler location within each composite group. Additionally, samples collected in the vicinity of the 200 Areas will be analyzed for gross alpha activity.
- Strontium-89 analyses will be performed on all quarterly composited particulate samples.
- The "100 N - WPPSS" charcoal cartridge iodine sampler, which was operated but not routinely analyzed during 1982, will be analyzed for iodine-131 on a biweekly frequency.
- Uranium analyses will be performed on a quarterly frequency for 15 of the airborne particulate sample composites. The analysis was requested in consideration of the large quantities of uranium processed onsite including fuel fabrication in the 300 Areas and fuel processing and uranium recovery operations in the 200 Areas. A non-DOE facility operated by Exxon just south of the site is another potential source of airborne uranium in the Hanford environs.
- Atmospheric water vapor will be sampled and analyzed for tritium (HTO) at 11 additional locations in preparation for the restart of PUREX operations. The new locations include a sampler between the 100 and 200 Areas, a sampler near the FFTF facility, several additional perimeter locations primarily in the prevailing downwind direction from the PUREX facility, and an additional distant (background) location at Moses Lake.
- The frequency of analysis of tritium as HTO or HT in air has been decreased from biweekly to monthly. The monthly frequency provides for a more economical tritium sampling program without a reduction in the quality of information provided.
- Sampling for carbon-14 (CO_2) will be performed at 10 locations on and off the site, also in preparation for the restart of PUREX. Samplers will be operated continuously and analyzed individually on a bimonthly basis.

- Krypton-85 sampling and analysis was initiated at five locations in 1982 as part of a special development program. These sampling locations have been incorporated into the routine program for 1983 as part of PUREX restart preparations. The samples are collected in pressurized cylinders over a one-month period and then analyzed for krypton-85.

Columbia River Water

- The analysis frequency for soluble iodine-129 in Columbia River water samples collected using the large volume filter/resin sampler had been increased from a quarterly to monthly frequency during 1982 in support of a special study. The analysis frequency has been changed back to quarterly for 1983.
- The analysis frequency for strontium-89 and strontium-90 in cumulative samples of Columbia River water collected at Priest Rapids Dam and at the Richland public water supply forebay has been increased from a quarterly frequency to a monthly frequency. This change was actually initiated in the spring of 1982 (following publication of the 1982 Master Schedule) in an attempt to better describe seasonal fluctuations of strontium-90 concentrations in the river and in consideration of discharges of low concentrations of strontium-90 to the river at N Reactor.

Sanitary Water

- The analysis of sanitary water samples collected at the Richland water treatment plant for strontium-90 on a monthly frequency has been added to the 1983 schedule. The Columbia River drinking water pathway for strontium-90 is a potentially critical pathway for offsite dose impact from Hanford operations. Analysis of drinking water samples for strontium-90 enables measurements to be made in this potential pathway at the receptor.

Surface Ponds

- Tritium analysis was added to surface pond water samples in consideration of PUREX restart.

Foodstuffs

Significant changes were made to the foodstuffs sampling schedule during 1982. The changes were intended to increase the types of foodstuffs sampled, provide more complete and balanced geographical coverage, and to incorporate additional analyses in consideration of the restart of PUREX.

The two most significant changes in the foodstuffs sampling schedule, from a design standpoint, are the creation of sampling areas and the collection of crop-type samples in triplicate once per year. The designation of sampling areas with defined boundaries replaces the specification of the exact location (farm) for sample collection used in the past. Foodstuff sampling is used primarily to provide verification of expected environmental concentrations in various areas around the site and, therefore, a sample from anywhere within the designated area is appropriate. This change enables the collection of samples from the designated sampling area to be unaffected by crop rotation.

The collection of samples in triplicate on an annual basis will simplify the interpretation of data by providing a uniform sampling schedule for all locations for each type of foodstuff and by reducing the apparent significance of occasionally observed higher than background concentrations attributed to the statistical nature of the radioactivity measurement process.

Specific foodstuffs sampling program changes are as follows:

- Whole Milk -- Sample locations were redefined according to geographical area as discussed above. An additional distant (background) sampling location was added in the Moses Lake area. Sampling frequencies were reduced to monthly except at the Sagemoor and Sunnyside locations where FFTF Environmental Technical Specifications require sampling to be performed on a biweekly frequency. The reduction in sampling frequency is based on the current and expected future low probability for the presence of detectable iodine-131 in locally produced milk. (Sampling frequencies may be rescheduled to biweekly following the restart of PUREX.)

  Iodine-129 analyses were requested at all locations on a twice per year basis and tritium analyses were requested for all samples in consideration of the restart of PUREX operation.

- Produce (Leafy Vegetables) -- Sample locations were redefined by geographical area as discussed previously. Samples were scheduled to be collected from all locations in July with each collection consisting of three samples analyzed separately. Strontium-90 and cesium-137 (gamma scan) analyses were requested for all samples.

- Fruits -- Three primary fruit collection areas were defined. Apples, cherries, and grapes, representing the major commercial fruit crops in the Hanford area, were scheduled to be collected, where available, from each sampling area. The collection of peaches, plums, and pears was determined unnecessary on a routine basis in consideration of the low probability for detectable Hanford-produced radioactivity in any local fruits. Tritium and strontium-90 were added as analysis requests for fruit samples in consideration of PUREX restart.

- Wheat/Alfalfa -- Wheat and alfalfa samples were added to the program in consideration of their importance as local feed and commercial export crops. Five sampling areas were defined including distant (background) locations in the Sunnyside and Moses Lake areas. The three near-site locations represent the primary production areas for these crops in the immediate Hanford vicinity. Strontium-90 and cesium-137 (gamma scans) were requested on all samples on an annual frequency.

- Poultry and Eggs -- Two sampling areas were defined in consideration of FFTF Environmental Technical Specification sampling requirements. Cesium-137 and strontium-90 were determined to be the radionuclides of primary interest.

Soil and Vegetation

- Several sampling locations added to the schedule during 1982 are reflected in the 1983 schedule. The added locations are intended to provide improved monitoring for the potential long-term buildup of long-lived radionuclides in the vicinity of onsite operating areas. New locations were established in the vicinity of N Area, the 200 Areas, and the 300 Area.

- The Taylor Flats #1 location, where samples have been collected since 1978, was discontinued because of its location at the bottom of a hill. These samples may have been affected by soil eroded from above.

- Approximately one-third of the soil samples, principally those collected near the 200 Areas, will be analyzed for americium-241 in consideration of the restart of PUREX.

Direct Radiation

- Environmental dosimeters (TLDs) were installed at all air sampling locations; hence dosimeter locations were added and deleted as described previously for air sampling stations.
- An environmental dosimeter was placed in a parking lot outside the 300 Area perimeter fence west of the 377 Building. Operations in the 377 Building have increased ambient dose rate levels around the building.
- The "Below 100-K Retention Basin" environmental dosimeter location has been deleted from the schedule. The location was directly above an area of subsurface contamination and dose information provided by the dosimeter was dominated by radiation emitted from the subsurface deposit. The location was determined not to be suitable for environmental monitoring purposes because 1) the source of the ambient dose rate at the measurement location is known and stable; 2) the measurement location is onsite and in a controlled area; and 3) the relatively high background at the measurement location precludes the dosimeter from being used to identify impacts potentially associated with nearby operational facilities.

SECTION B. COLUMBIA RIVER WATER QUALITY MONITORING

- Temperature monitoring and water quality parameter sampling, which have been performed by the United States Geological Survey through a contract with PNL for a number of years, were identified in the 1983 schedule.

SECTION C. ONSITE RADIATION CONTROL AUDIT SURVEYS

Roadway Surveys

- The current roadway survey schedule reflects changes made during 1982 following a review of current onsite roadway usage. In addition to modifying routes and frequencies of surveys along roadways included in the 1982 schedule, the extent of coverage has been expanded to include the 300 Area perimeter and parking lots, Stevens Drive between the 1100 and 300 Areas, George Washington Way from Stevens Drive to U.S. Testing Company, the FFTF parking lot, 1100 Area service roads and parking areas, and the J.A. Jones Area service roads and parking lots.

Railway Surveys

- The current railway schedule reflects a recently performed review of current onsite railway usage. In addition to modifying routes and frequencies of surveys along railways included in the 1982 schedule, the extent of coverage has been expanded to include the survey of DOE-owned railways extending beyond the Hanford Site boundary.

APPENDIX B

SUMMARY OF DIFFERENCES BETWEEN THE 1982 AND 1983 HANFORD GROUND-WATER SURVEILLANCE PROGRAM--PART II

APPENDIX B

SUMMARY OF DIFFERENCES BETWEEN THE 1982 AND 1983 HANFORD GROUND-WATER SURVEILLANCE PROGRAM--PART II

A comparison of the current (1983) Master Schedule, Part II, for the Hanford Ground-Water Monitoring Program and the 1982 Calander Year Master Schedule shows several changes which are summarized below:

- The FFTF Preoperational Survey has been completed. The wells have been placed in the routine sampling and monitoring program.
- Several wells that no longer produce water have been removed from the schedule. When possible, a nearby well has been placed on the schedule to replace the well that had been removed.
- The frequency of sampling has been changed on several wells since historic data has indicated extensive change in the analytical results obtained.
- Historic data has indicated a continual decline in beta emitters to a very low level. Therefore, the beta analysis has been removed from several wells.
- All other changes have been made for consistency purposes between the two parts.

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