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Department of Energy
Richland Operations Office
P.O. Box 550
Richland, Washington 99352

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Mr. Paul T. Day
Hanford Project Manager
U. S. Environmental Protection Agency
Region 10
P. O. Box 550, A7-70
Richland, Washington 99352

Dear Mr. Day:

DATA FROM REMEDIAL INVESTIGATIONS (RI)

In response to your letter of March 30, 1990, to Mr. Robert K. Stewart, Department of Energy, Richland Operations Office Unit Manager, regarding RI data, the following information is being formally transmitted to Mr. Dave Einan of your staff. (Copies were informally transmitted to Mr. Einan on April 2, 1990)

1) "Validated Data from the Phase I Remedial Investigation of the 1100-EM-1 Operable Unit (WHC-MR-0127)." Data is from vadose zone boreholes, groundwater monitoring wells, and near surface soil sampling.

2) Draft "Analytical Results from Samples Collected During Surface Radiation Survey Activities" [300-FF-1 Operable Unit] and information about ... "Areas Above Background Found During the Surface Radiation Survey of the 300-FF-1 Operable Unit, 9/89 to 12/89."

Additionally, a report which is in preparation by the Pacific Northwest Laboratory (PNL), will be provided to you when available, it is expected by April 13, 1990. This report will formally document the data and results from the 300-FF-1 Radiation Survey.

We are working to expedite providing requested data to you. To that end, Westinghouse Hanford Company is developing an abbreviated clearance process for the kinds of data to be provided to you during the Remedial Investigation/Feasibility Study process.

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Please call Mr. Robert K. Stewart on 376-6192, if you have any questions about the attachments or this response.

Sincerely,

Steven H. Wisness
Hanford Project Manager

ERD:RKS

Attachments

cc w/att:
L. Goldstein, Ecology

cc w/o att:
G. Hofer, EPA
T. L. Nord, Ecology
T. M. Wintczak, WHC
[redacted] Waite, WHC
M. J. Lauterback, WHC
Administrative Record
(300-FF-1, 1100-EM-1)

TABLE 3. Analytical Results From Samples Collected During Surface Radiation Survey Activities

CONSTITUENT→ SAMPLE↓	SAMPLE TYPE	U-238 (pCi/g)	U-235 (pCi/g)	COPPER (ppm)	SELENIUM (ppm)	LEAD (ppm)	ARSENIC (ppm)	URANIUM (ppm)	Sr-90 (pCi/g)
300-FF-1 R1	SED	22.8	<3	180.6 ± 9.7	0.90 ± 0.43	19.5 ± 1.6	4.30 ± 0.74	680 ± 48	732
300-FF-1 R2	SED	102.0	4.93	85.0 ± 5.0	<0.95	31.2 ± 2.5	7.2 ± 1.2	517 ± 36	P
300-FF-1 R6	SED	153.0	6.54	123.6 ± 6.8	<0.93	37.9 ± 2.6	5.9 ± 1.1	706 ± 50	P
300-FF-1 R8	SED	112.0	4.23	114.8 ± 6.4	<0.93	33.5 ± 2.4	5.7 ± 1.1	502 ± 35	P
300-FF-1 R9	SED	101.0	6.34	1005 ± 51	<0.91	25.9 ± 2.1	5.2 ± 1.1	492 ± 35	P
300-FF-1 R10	SED	165.0	13.10	5650 ± 280	<1.0	79.3 ± 4.6	2.8 ± 1.4	674 ± 47	P
300-FF-1 R11	SED	197.0	7.99	110.0 ± 6.1	<0.04	16.4 ± 1.6	3.16 ± 0.81	486 ± 34	P
300-FF-1 R12	SED	63.2	3.50	73.3 ± 4.3	<0.80	15.5 ± 1.6	1.63 ± 0.76	185 ± 13	P
300-FF-1 R13	SED	21.5	<3	34.0 ± 2.4	<0.81	16.1 ± 1.6	2.20 ± 0.75	169 ± 12	P
300-FF-1 R14	SED	77.2	4.12	43.0 ± 2.9	<0.82	24.3 ± 1.9	1.64 ± 0.84	226 ± 16	P
300-FF-1 R15	SED	75.8	3.49	34.9 ± 2.5	<0.79	23.9 ± 1.8	1.80 ± 0.78	155 ± 11	P
300-FF-1 R16	SED	119.0	6.10	28.9 ± 2.2	<0.83	21.4 ± 1.8	1.60 ± 0.79	153 ± 11	P
300-FF-1 R17	SED	61.8	3.20	29.3 ± 2.3	<0.84	18.8 ± 1.7	2.97 ± 0.85	147 ± 10	P
300-FF-1 R19	SED	61.4	<3	39.5 ± 2.8	<0.79	24.4 ± 1.9	3.04 ± 0.86	182 ± 13	P
300-FF-1 R20B	SED	60.4	3.20	35.5 ± 2.8	<0.83	22.3 ± 1.8	2.28 ± 0.85	140 ± 10	P
300-FF-1 R23	SED	289.0	18.20	4420 ± 220	<1.0	76.2 ± 4.4	<2.4	1115 ± 78	P
300-FF-1 R26	SED	46.5	2.68	144.2 ± 7.9	<0.87	26.9 ± 2.1	4.19 ± 0.94	219 ± 16	P
300-FF-1 R27	SED	45.1	2.52	60.9 ± 3.7	<0.84	21.0 ± 1.8	3.45 ± 0.86	171 ± 12	P
300-FF-1 R28	METAL	18800.0	843.00	NA	NA	NA	NA	NA	NA
300-FF-1 R32	SED	4410.0	23.80	38.9 ± 2.8	<0.99	58.9 ± 3.5	2.3 ± 1.1	18500 ± 1300	NA
300-FF-1 R38	SED	90.9	5.33	77.7 ± 4.7	<0.91	78.5 ± 4.5	2.9 ± 1.2	1322 ± 93	NA

SED = Sediment Sample
NA = Not Analyzed
P = Analysis Pending

TABLE 2. Description of Areas Above Background Found During the Surface Radiation Survey of the 300-FF-1 Operable Unit, 9/89 to 12/89

Site	Instrument Reading Aerial Extent	CPM	Sampled?	Description/Status
R-1	6" dia.	10,000	yes	Contaminated soil; Removed
R-2	4' dia.	250-300	yes	Contaminated soil; Areas R-2 through R-8 are included in one surface contamination radiation area.
R-3	4' dia.	250-300	no	See above
R-4	6" dia.	250-300	no	" "
R-5	6" dia.	250-300	no	" "
R-6	6' x 10'	250-300	yes	" "
R-7	6" x 1'	250-300	no	" "
R-8	6" x 1'	250-300	yes	" "
R-9	6' x 9'	500-1500	yes	Contaminated soil; marked as a surface contamination radiation area.
R-10	1' dia.	600-700	yes	" "
R-11	2' dia.	200-1000	yes	" "
R-12	2' x 8'	200-900	yes	" "
R-13	3' dia.	250-400	yes	" "
R-14	6" dia.	500	yes	Contaminated soil; areas R-14 through R-16 have been included in one surface contamination radiation area.
R-15	4' dia.	500	yes	See above
R-16	6" dia.	500	yes	See above
R-17	6" dia.	750	yes	Contaminated soil; areas R-17 through R-27 have been included in one surface contamination radiation area.
R-18	6" dia.	500	no	See above
R-19	2' dia.	400	yes	" "
R-20A,B	4' x 20'	250	yes	" "
R-21	2' dia.	250	no	" "
R-22	50' dia.	150	no	" "

TABLE 2. Contd.

Site	Aerial Extent	CPM	Sampled?	Description/Status
R-23	5' x 20'	350	yes	" "
R-24	Within 80' x 200' area	250	no	" "
R-25	" "	250	no	" "
R-26	" "	250	yes	" "
R-27	" "	250	yes	" "
R-28	0.5" x 1"	15,000	yes	Contaminated metal; removed from site and sent to lab for analysis.
R-29	2"	300	no	Contaminated metal; removed and placed in a "lard can" within Burial Ground #4 fence.
R-30	3"	700	no	" " " "
R-31	2"	300	no	" " " "
R-32	5' dia.	50,000	yes	Contaminated soil; surface contamination radiation zone.
R-33	2"	300	no	Same as R-29.
R-34	<1'	1200	no	" " "
R-35	"	200	no	" " "
R-36	3' x 3'	200-600	no	Contaminated soil; surface contamination radiation zone.
R-37	"	"	no	" " " " "
R-38	5"	14,000	yes	" " " " "
R-39	4' x 11'	7500	no	" " " " "
R-40	11' x 74'	350-25,000	no	Contaminated soil and glass; surface contamination radiation zone.
R-41	18' x 14'	850-1000	no	Contaminated soil and pipes; surface contamination radiation zone. Also contains non.-rad. empty mercury bottle, metal, and ceramics.
R-42	6' x 9'	800	no	Contaminated soil and tumbleweed; surface contamination radiation zone.
R-43	6" dia.	200	no	Contaminated soil; surface contamination radiation zone. Also contains non.-rad. broken glass and ceramics.

TABLE 2. Contd.

Site	Aerial Extent	CPM	Sampled?	Description/Status
R-44	6" dia.	150	no	Contaminated disks of metallic or ceramic composition, rusty-red color; surface contamination radiation zone.
R-45	12' x 16'	150-350	no	Small mound with debris on top - contaminated soil and ceramics; surface contamination radiation zone.
R-46	6" dia.	150-350	no	Contaminated soil and metal; surface contamination radiation zone.
R-47	<6" dia.	2500	no	Contaminated soil.

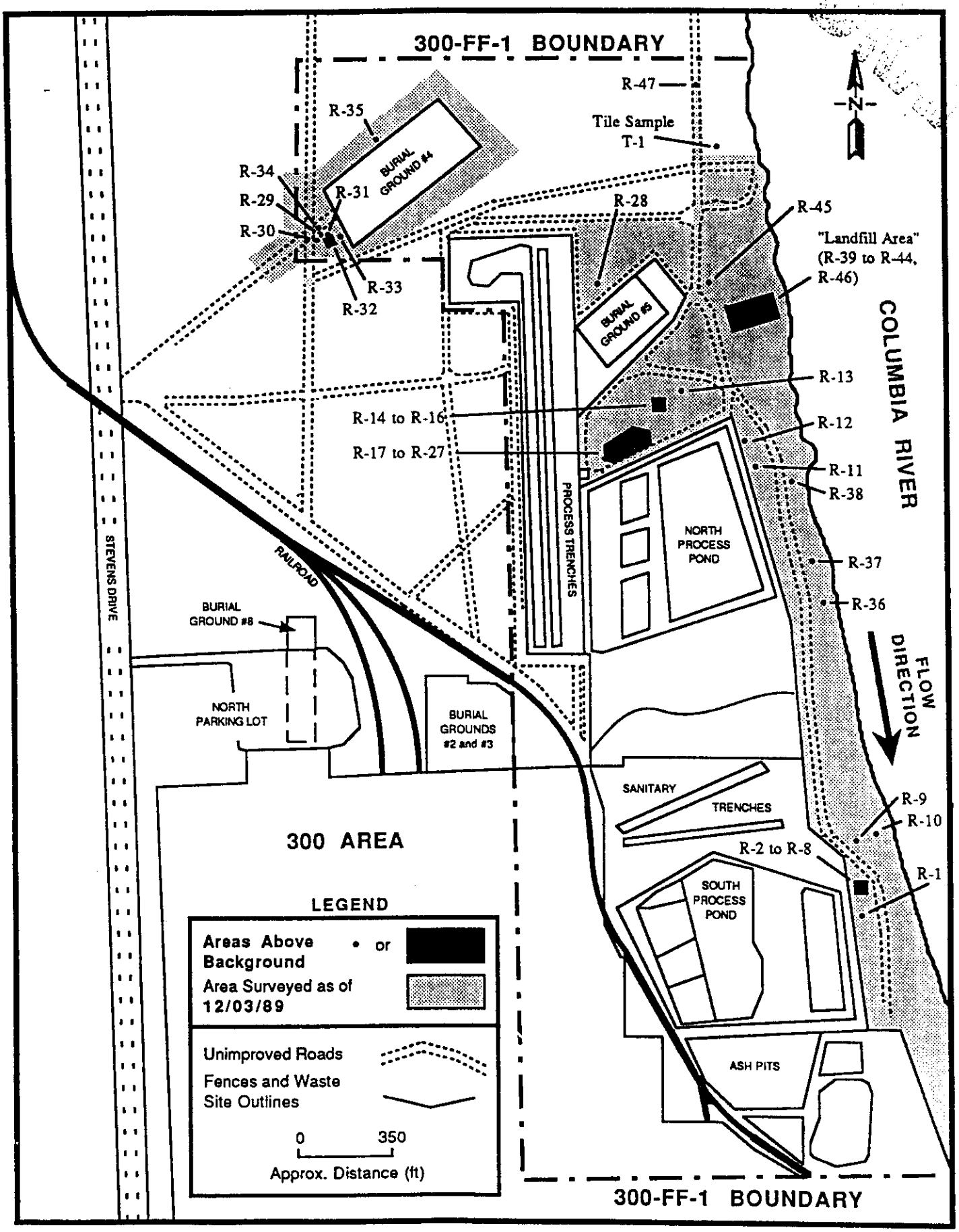

FIGURE 3. SURFACE RADIATION SURVEY AREAS AND AREAS ABOVE BACKGROUND RADIATION WITHIN THE 300-FF-1 OPERABLE UNIT

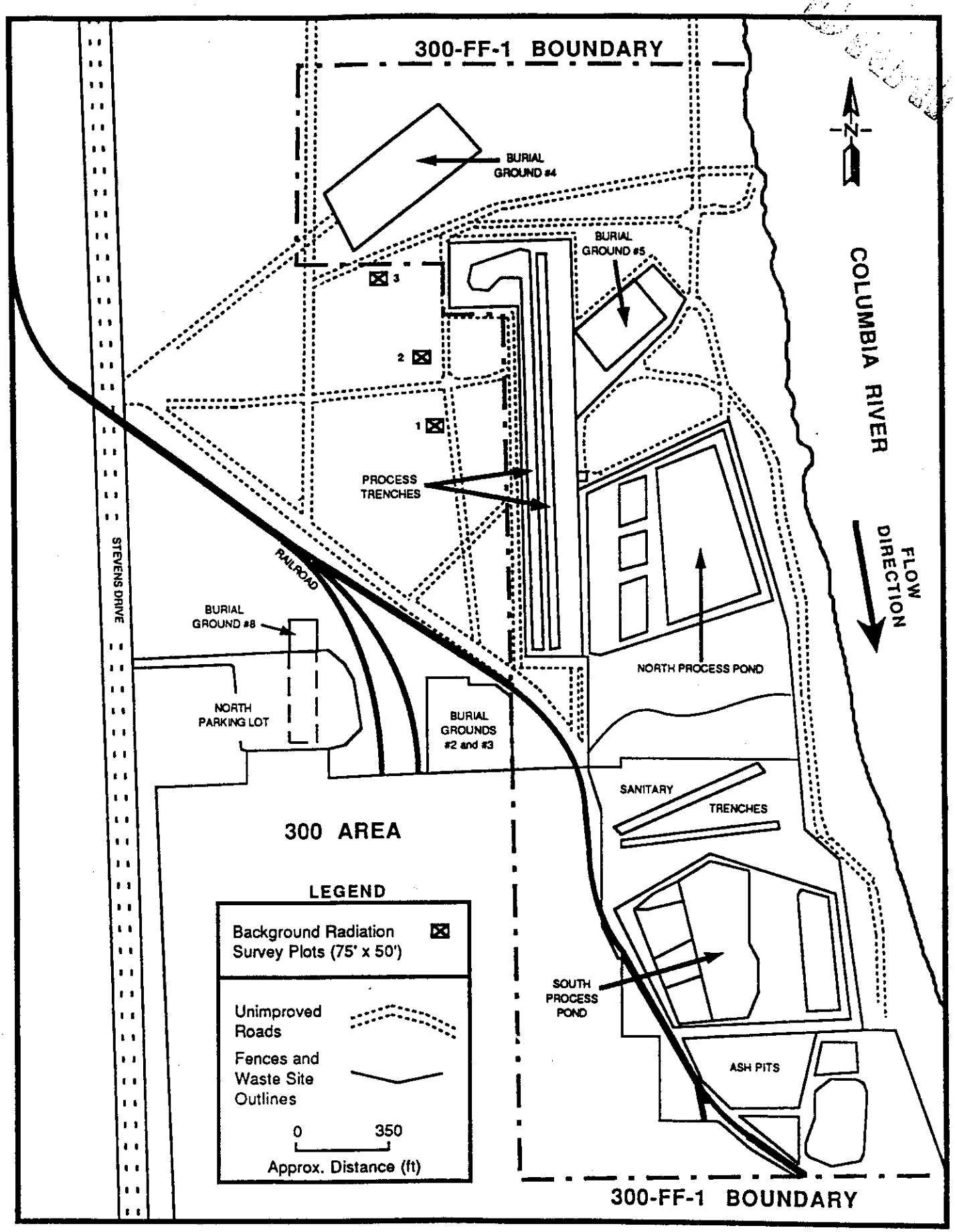

FIGURE 2. BACKGROUND RADIATION PLOT LOCATIONS

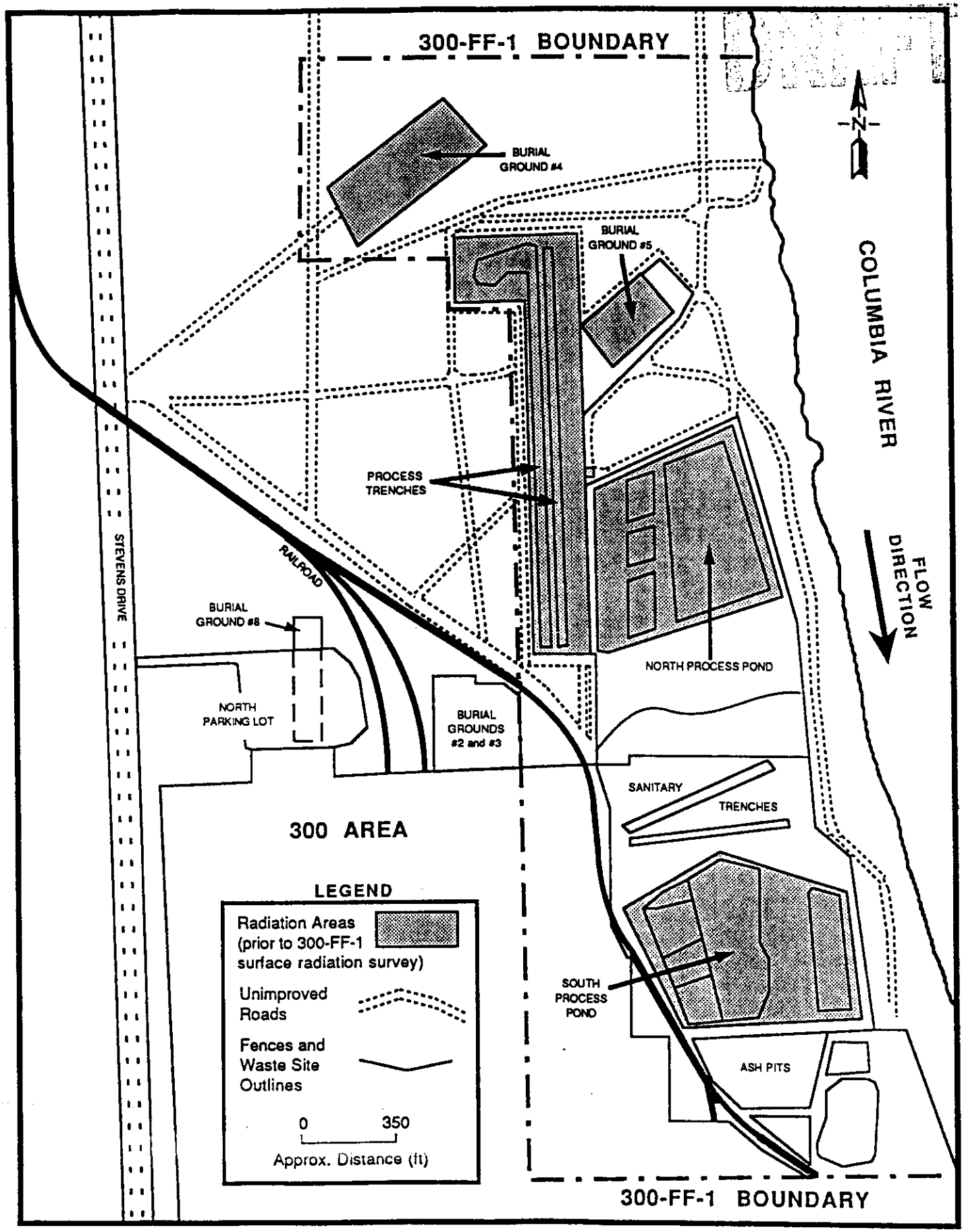

FIGURE 1. RADIATION AREAS WITHIN THE 300-FF-1 OPERABLE UNIT

CORRESPONDENCE DISTRIBUTION COVERSHEET

Author	Addressee	Correspondence No.
S. H. Wisness, DOE-RL	P. T. Day, Ecology	9001553

Subject: DATA FROM REMEDIAL INVESTIGATION

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