

ENVIRONMENTAL RADIOLOGICAL MONITORING PROGRAM ANNUAL SUMMARY

Name of Facility CALLAWAY PLANT Docket No. 50-483
 Location of Facility CALLAWAY COUNTY, MISSOURI Reporting Period January-December, 1984
 (County, State) ,

Medium or Pathway Sampled (Unit of Measurement)	Type and Total Number of Analyses Performed	Lower Limit of Detection (LLD)	All Indicator Locations Mean (f) Range	Location with Highest Annual Mean		Control loca- tions Mean (f) Range	Number of Nonroutine Reported Measure- ments
				Name Distance & Direction	Mean (f) Range		
TLD (mrem)	Gamma (587)		8.1 (544/563) 3.7-15.6	CA-IDM-22 2.5 mi NNE	9.0 (11/11) 5.8-13.8	8.0 (22/24) 5.4-13.9	0
Air Particu- lates (pCi/m)	Gross Beta (704)	0.002	0.022 (641/653) 0.002-.051	CA-APT-B6 4.2 mi NE	0.024 (50/52) 0.012-0.051	0.021 (50/51) 0.010-0.044	0
Quarterly Composites	Sr-90 (56)	0.002	0.003 (30/52) 0.002-0.012	CA-APT-B1 3.4 mi SE	0.006 (3/4) 0.002-0.012	0.002 (3/4) 0.002-0.003	0
	Y-Spec. Be-7 (56)	0.01	0.010 (48/52) 0.004-0.024	CA-APT-A5 6.6 mi NW	0.015 (3/4) 0.010-0.018	0.009 (4/4) 0.005-0.020	0
	Cs-137 (56)	0.001	0.003 (3/56) 0.002-0.006	CA-APT-A1 1.3 mi ENE	0.006 (1/4)	<LLD	0
Airborne Iodine (pCi/m)	I-131 (431)	0.005	0.008 (4/379) 0.006-0.023	CA-AIO-A5 6.6 mi NW	0.023 (1/52)	<LLD	0
Well Water (pCi/l)	Gross Alpha (35)	2.0	3.2 (14/23) 2.10-5.0	CA-WWA-F05 1.0 mi SSE	3.3 (5/12) 2.8-4.7	3.4 (11/12) 2.4-5.0	0
	Gross Beta (35)	3.0	7.9 (13/23) 2.1-11.9	CA-WWA-F05 1.0 mi SSE	8.6 (11/12) 4.6-11.9	6.5 (11/12) 3.6-12.9	0

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				Name Distance & Direction	Mean (f) Range		
Well Water (pCi/l)(cont.)	Tritium (35)	500	1.0 (1/23)	CA WWA-F05 1.0 mi SSE	1.0 (1/12)	1.5 (1/12)	0
	Sr-90 (35)	0.5	0.9 (3/23) 0.6-1.2	CA-WWA-F05 1.0 mi SSE	1.1 (2/12) 1.0-1.2	1.6 (2/12) 1.5-1.7	0
Surface Water (pCi/l)	Gross Alpha (39)	2.0	5.4 (16/26) 2.0-8.8	CA-SWA-S03 68 mi E	5.9 (7/13) 2.9-8.3	4.9 (9/13) 2.4-8.7	0
	Gross Beta (39)	3.0	8.5 (23/26) 3.4-17.5	CA-SWA-S02 5.2 mi SE	8.8 (12/13) 4.6-14.7	8.6 (13/13) 4.2-21.6	0
	Tritium (39)	500	<LLD		<LLD	<LLD	0
	Sr-90 (38)	0.5	1.3 (1/26)	CA-SWA-S03 68 mi E	1.3 (1/13)	<LLD	0
Sediment (Washload, Bedload, Bottom) (pCi/g, dry)	Gross Alpha (108)	0.3	5.0 (71/72) 1.0-13.0	CA-AQS-C 5.1 mi SE	5.0 (36/36) 1.0-13.0	4.0 (36/36) 1.8-10.6	0
	Gross Beta (108)	0.1	5.6 (72/72) 1.0-19.1	CA-AQS-C 5.1 mi SE	5.9 (36/36) 1.0-16.8	4.9 (36/36) 0.8-15.7	0

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				Name Distance & Direction	Mean (f) Range		
Sediment (Washload, Bedload, Bottom) (pCi/g, dry) (cont.)	SR-90 (108)	0.02	0.55 (15/72) 0.09-2.90	CA-AQS-D 53 mi ESE	0.58 (9/36) 0.09-2.90	0.66 (4/36) 0.50-0.91	
	Sr-89 (108)	0.05	0.57 (1/72)	CA-AQS-D 53 mi ESE	0.57 (1/36)	<LLD	0
	Y-Spec Cs-134 (108)	0.03	1.45 (2/72) 0.8-2.1	CA-AQS-C 5.1 mi SE	1.45 (2/36) 0.8-2.1	<LLD	0
	Cs-137 (108)	0.04	0.2 (27/72) 0.02-1.30	CA-AQS-C 5.1 mi SE	0.22 (11/36) 0.02-1.30	0.69 (6/36) 0.047-3.40	0
	Mn-54 (108)	0.02	0.1 (3/72) 0.033-0.22	CA-AQS-C 5.1 mi SE	0.13 (2/36) 0.04-0.22	0.30 (1/36)	0
	Co-60 (108)	0.02	1.43 (3/72) 0.05-2.20	CA-AQS-C 5.1 mi SE	2.12 (2/36) 2.04-2.20	0.37 (3/36) 0.04-0.58	0
	Zr-Nb-95 (108)	0.08	0.72 (3/72) 0.07-2.00	CA-AQS-D 53 mi ESE	0.72 (3/36) 0.07-2.00	4.12 (3/36) 0.10-12.10	0
Sediment (Shoreline) (pCi/g, dry)	Y-Spec Cs-137 (2)	0.04	0.073 (2/2) 0.02-0.126	CA-AQS-C 5.1 mi SE	0.073 (2/2) 0.02-0.126	<LLD	0

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				Name Distance & Direction	Mean (f) Range		
Fish (pCi/g, dry)	Gross Alpha (171)	0.3	1.5 (24/115) 0.5-2.5	CA-AQF-D 53 mi SE	1.5 (14/60) 0.5-2.5	1.1 (12/56) 0.4-2.0	0
	Gross Beta (171)	0.1	7.1 (115/115) 2.6-13.2	CA-AQF-C 5.1 mi SE	7.3 (55/55) 2.6-13.2	7.2 (56/56) 1.4-11.6	0
	Sr-89 (170)	0.05	<LLD		<LLD	0.2 (5/56) 0.11-0.22	0
	Sr-90 (170)	0.02	0.29 (9/115) 0.1-0.6	CA-AQF-D 53 mi SE	0.32 (5/60) 0.1-0.6	0.3 (10/56) 0.1-0.7	0
	Y-Spec Cs-137	0.04	0.11 (2/115) 0.06-0.16	CA-AQF-C 5.1 mi SE	0.11 (2/55) 0.06-0.16	0.113 (1/56)	0
	Y-Spec Mn-54	0.02	0.29 (1/115)	CA AQS-D 53 mi SE	0.29 (1/60)	0.22 (3/56) 0.08-0.48	0
	Co-60	0.02	0.44 (8/115) 0.25-0.70	CA-AQS-D 53 mi SE	0.46 (2/60) 0.15-0.67	0.33 (4/56) 0.21-0.46	0
	Zr-Nb-95	0.08	0.91 (7/115) 0.23-2.21	CA-AQS-D 53 mi SE	0.95 (5/60) 0.23-2.21	0.86 (5/56) 0.46-1.79	0

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Milk (pCi/l)	I-131 (35)	0.03	<LLD		<LLD	1.4 (1/21)	0
	Sr-90 (35)	0.5	2.95 (2/14) 2.40-5.90	CA-MLK-M3 3.8 mi NE	2.95 (2/6) 2.40-5.90	3.7 (6/21) 1.7-8.0	0
Vegetation (pCi/g)	Gross Alpha (38)	0.3	0.77 (5/29) 0.3 - 1.6	CA-FPL-V2 3.3 mi WNW	1.60 (1/10)	1.73 (3/9) 1.0 - 2.8	0
	Gross Beta (38)	0.1	37.8 (28/29) 6.0-79	CA-FPL-V4 3.5 mi SSE	46.2 (6/6) 17.0-73.0	37.0 (9/9) 9.1-58.0	0
	I-131	0.03	<LLD		<LLD	<LLD	0
Soil (pCi/g, dry)	Gross Alpha (11)	0.3	4.6 (10/10) 3.6-6.2	CA SOL-F9 1.45 mi NNW	6.2 (1/1)	5.9 (1/1)	0
	γ-Spec CS-137 (11)	0.04	0.92 (10/10) 0.53-1.31	CA-SOL-F9 1.45 mi NNW	1.31 (1/1)	0.42 (1/1)	0
	Mn-54 (11)	0.02	0.029 (2/10) 0.023-0.035	CA-SOL-F9 1.45 mi NNW	0.035 (1/1)	<LLD	0
	Co-60 (11)	0.02	0.039 (2/10) 0.030-0.047	CA-SOL-PR4 1.34 mi ESE	0.047 (1/1)	0.049 (1/1)	0

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				Name Distance & Direction	Mean (f) Range		
Soil (pCi/g, dry) (cont.)	Zr-Nb-95 (11)	0.08	0.167 (1/10)	CA-SOL-PR5 1.89 mi NE	0.167 (1/1)	0.155 (1/1)	0

a. Mean and range based upon detectable measurements only. Fraction of detectable measurements at specified locations is indicated in parenthesis. (f)