

Attachment 10.1 ²³⁸Pu in Water - 1996

<u>Sampling Location</u>	<u>Collection Date</u>	<u>μCi/mL × 10⁻¹²</u>		
		<u>Mean</u>	<u>Standard Deviation</u>	<u>MDC</u>
SUPPLY WELLS				
Area 5, Well 5B	01/17/96	0.60	3.35	17.80
Area 5, Well 5B	05/09/96	0.09	3.36	18.10
Area 5, Well 5B	07/15/96	-2.12	2.27	17.80
Area 5, Well 5B	10/07/96	-1.84	1.91	14.90
Area 5, Well 5C	01/17/96	-2.24	2.56	20.70
Area 5, Well 5C	05/09/96	-6.98	7.12	26.40
Area 5, Well 5C	07/15/96	0.32	3.47	18.60
Area 5, Well 5C	10/07/96	-2.32	2.41	18.70
Area 6, Well No. 4A	01/17/96	0.53	2.97	15.80
Area 6, Well No. 4A	06/04/96	-2.18	2.31	18.10
Area 6, Well No. 4A	07/15/96	-1.66	1.78	14.00
Area 6, Well No. 4A	10/07/96	0.15	2.97	16.00
Area 6, Well No. 4	01/17/96	-2.09	2.39	19.30
Area 6, Well No. 4	05/09/96	-8.95	9.13	33.80
Area 6, Well No. 4	07/15/96	-3.96	4.16	32.40
Area 6, Well No. 4	10/07/96	-2.25	2.34	18.10
Area 6, Well C-1	01/17/96	3.34	4.49	19.00
Area 6, Well C-1	05/09/96	-6.43	6.56	24.30
Area 6, Well C-1	07/15/96	2.66	4.00	17.40
Area 6, Well C-1	10/07/96	6.43	3.79	11.50
Area 16, Well UE-16d	01/17/96	-1.63	1.87	15.10
Area 16, Well UE-16d	05/09/96	-6.69	6.82	25.30
Area 16, Well UE-16d	07/15/96	-2.10	2.25	17.70
Area 16, Well UE-16d	10/07/96	0.16	3.03	16.30
Area 18, Well HTH No. 8	01/17/96	-2.23	2.55	20.60
Area 18, Well HTH No. 8	05/09/96	-5.47	9.03	31.60
Area 18, Well HTH No. 8	07/15/96	-2.47	2.64	20.70
Area 18, Well HTH No. 8	10/07/96	-1.90	2.03	16.00
Area 22, Army Well No. 1	01/17/96	-2.05	2.35	18.90
Area 22, Army Well No. 1	05/07/96	-4.54	7.49	26.20
Area 22, Army Well No. 1	07/15/96	-2.21	2.36	18.60
Area 22, Army Well No. 1	10/07/96	-2.02	2.10	16.30
Area 25, Well J-12	01/17/96	-1.92	2.20	17.80
Area 25, Well J-12	05/09/96	-7.82	7.98	29.50
Area 25, Well J-12	07/15/96	-2.05	2.19	17.20
Area 25, Well J-12	10/07/96	-2.28	2.37	18.40
Area 25, Well J-13	01/17/96	-2.19	2.51	20.30
Area 25, Well J-13	05/09/96	-6.95	7.09	26.20
Area 25, Well J-13	07/15/96	-2.45	2.62	20.60
Area 25, Well J-13	10/07/96	0.20	3.82	20.60

Attachment 10.1 (²³⁸Pu in Water - 1996, cont.)

<u>Sampling Location</u>	<u>Collection Date</u>	<u>μCi/mL × 10⁻¹²</u>		
		<u>Mean</u>	<u>Standard Deviation</u>	<u>MDC</u>
INDUSTRIAL WELLS				
Area 5, Well UE-5c	01/31/96	2.79	4.28	18.70
Area 5, Well UE-5c	05/09/96	-8.53	8.70	32.20
Area 5, Well UE-5c	07/15/96	-2.16	2.31	18.20
Area 5, Well UE-5c	10/07/96	0.14	2.74	14.70
Area 20, Well U-20	01/29/96	8.44	11.86	50.70
POTABLE WATER				
Area 1, Building 101	01/09/96	0.61	2.91	15.40
Area 1, Building 101	05/09/96	-9.62	9.76	36.10
Area 1, Ice House	07/11/96	0.35	3.78	20.40
Area 1, Building 101	10/01/96	-1.94	2.02	15.60
Area 2, Rest Room	01/09/96	0.51	2.45	13.00
Area 2, Rest Room	05/09/96	-4.30	7.01	24.50
Area 2, Rest Room	07/11/96	0.37	4.05	21.80
Area 2, Rest Room	10/01/96	-2.30	2.39	18.50
Area 6, Cafeteria	01/09/96	2.95	3.82	16.10
Area 6, Cafeteria	05/14/96	-4.31	7.03	24.60
Area 6, Cafeteria	07/11/96	-2.43	2.60	20.40
Area 6, Cafeteria	10/01/96	-2.25	2.34	18.10
Area 6, Building 6-900	01/09/96	0.63	3.53	18.80
Area 6, Building 6-900	05/14/96	-4.38	7.14	25.00
Area 6, Building 6-900	07/11/96	-2.07	2.21	17.40
Area 6, Building 6-900	10/01/96	-2.15	2.24	17.40
Area 12, Building 12-23	01/09/96	2.74	3.55	14.90
Area 12, Medical Aid Station	05/09/96	-6.83	6.93	25.60
Area 12, Building 12-23	07/11/96	0.35	3.76	20.20
Area 12, Ice House	10/01/96	-1.94	2.02	15.60
Area 23, Mercury Cafeteria	01/09/96	-1.54	1.81	14.80
Area 23, Mercury Cafeteria	05/14/96	-12.10	12.28	45.30
Area 23, Mercury Cafeteria	07/11/96	0.29	3.15	16.90
Area 23, Mercury Cafeteria	10/01/96	-1.86	1.93	15.00
Area 25, Building 4221	01/09/96	0.49	2.34	12.40
Area 25, Building 4221	05/14/96	-1.93	1.97	15.20
Area 25, Building 4221	07/11/96	-2.28	2.44	19.10
Area 25, Building 4221	10/01/96	2.44	3.90	17.00
RESERVOIRS				
Area 2, Mud Plant	07/22/96	-2.02	2.14	16.70
Area 3, Well A Reservoir	07/22/96	-2.11	2.24	17.40

Attachment 10.1 (²³⁸Pu in Water - 1996, cont.)

<u>Sampling Location</u>	<u>Collection Date</u>	<u>μCi/mL × 10⁻¹²</u>		
		<u>Mean</u>	<u>Standard Deviation</u>	<u>MDC</u>
(RESERVOIRS, cont.)				
Area 5, Well 5B Reservoir	07/15/96	-2.43	2.58	20.10
Area 5, Well UE-5c Reservoir	07/15/96	-2.84	3.01	23.50
Area 6, Well 3 Reservoir	07/15/96	-2.19	2.32	18.10
Area 6, Well C-1 Reservoir	07/15/96	0.29	3.81	20.40
Area 18, Camp 17 Reservoir	07/22/96	-2.01	2.11	16.50
Area 25, Well J-11 Reservoir	07/15/96	-2.33	2.47	19.30
Area 25, Well J-12 Reservoir	07/15/96	-2.30	2.44	19.00
NATURAL SPRINGS				
Area 5, Cane Spring	07/15/96	-2.65	2.81	22.00
Area 7, Reitman Seep	07/15/96	-3.62	3.84	29.90
Area 12, White Rock Spring	07/22/96	-2.46	2.61	20.30
Area 12, Captain Jack Spring	07/22/96	0.24	3.21	17.20
Area 15, Tub Springs	07/22/96	0.28	3.64	19.50
Area 16, Tippisah Spring	07/15/96	-2.46	2.61	20.30
Area 29, Topopah Spring	07/15/96	-2.11	2.24	17.50
CONTAINMENT PONDS				
Area 12, E Tunnel Effluent	02/07/96	316.00	32.39	19.60
Area 12, E Tunnel Effluent	05/30/96	233.00	27.03	19.60
Area 12, E Tunnel Effluent	07/25/96	501.00	40.08	16.80
Area 12, E Tunnel Effluent	10/31/96	373.00	28.72	10.60
Area 12, E Tunnel Pond No. 1	02/07/96	202.00	31.71	31.00
Area 12, E Tunnel Pond No. 2	07/25/96	450.00	39.60	19.10
Area 12, E Tunnel Pond No. 2	10/31/96	271.00	24.25	11.10
SEWAGE LAGOONS				
Area 5, RWMS Sewage Pond	02/13/96	-2.16	2.41	19.20
Area 5, RWMS Sewage Pond	05/07/96	-10.60	10.81	39.90
Area 5, RWMS Sewage Pond	08/08/96	-2.21	11.03	36.90
Area 5, RWMS Sewage Pond	11/06/96	-2.28	2.88	24.30
Area 6, Yucca Sewage Pond	02/13/96	-2.66	2.97	23.70
Area 6, Yucca Sewage Pond	05/07/96	0.15	5.33	28.70
Area 6, Yucca Sewage Pond	08/08/96	-4.08	4.28	33.40
Area 6, Yucca Sewage Pond	11/06/96	-1.43	1.92	16.50
Area 6, DAF Sewage Pond	02/13/96	0.65	4.50	24.00

Attachment 10.1 (^{238}Pu in Water - 1996, cont.)

<u>Sampling Location</u>	<u>Collection Date</u>	<u>$\mu\text{Ci/mL} \times 10^{-12}$</u>		
		<u>Mean</u>	<u>Standard Deviation</u>	<u>MDC</u>
(SEWAGE LAGOONS, cont.)				
Area 6, DAF Sewage Pond	05/07/96	0.13	4.75	25.50
Area 6, DAF Sewage Pond	08/08/96	-2.42	2.54	19.80
Area 6, DAF Sewage Pond	11/06/96	-1.36	1.72	14.50
Area 11, LANL Sewage Pond	02/13/96	2.92	4.09	17.50
Area 11, LANL Sewage Pond	05/07/96	-7.50	7.65	28.30
Area 11, LANL Sewage Pond	08/08/96	-3.40	3.57	27.80
Area 11, LANL Sewage Pond	11/06/96	-1.53	1.94	16.30
Area 12, Sewage Pond	02/13/96	-2.28	2.54	20.30
Area 12, Sewage Pond	05/07/96	-5.12	8.45	29.60
Area 12, Sewage Pond	08/08/96	0.25	3.86	20.80
Area 12, Sewage Pond	11/06/96	-1.62	2.05	17.40
Area 22, Sewage Pond	02/13/96	0.52	3.62	19.20
Area 22, Sewage Pond	05/07/96	-8.40	8.57	31.70
Area 22, Sewage Pond	08/08/96	0.25	3.84	20.70
Area 22, Sewage Pond	11/06/96	-1.64	2.07	17.50
Area 23, Sewage Pond	02/13/96	63.10	12.34	15.90
Area 23, Sewage Pond	05/07/96	-2.99	3.05	23.50
Area 23, Sewage Pond	08/08/96	-3.02	3.17	24.70
Area 23, Sewage Pond	11/06/96	-1.34	1.70	14.30
Area 25, Reactor Control Sewg.	02/13/96	-3.04	3.39	27.00
Area 25, Reactor Control Sewg.	11/06/96	-1.70	2.15	18.20
Area 25, Central Supply Sewg.	02/13/96	4.18	5.85	25.10
Area 25, Central Supply Sewg.	05/07/96	-6.09	10.05	35.20
Area 25, Central Supply Sewg.	08/08/96	-7.03	7.52	28.20
Area 25, Central Supply Sewg.	11/06/96	-2.07	2.62	22.20

Attachment 10.2 ²³⁹⁺²⁴⁰Pu in Water - 1996

<u>Sampling Location</u>	<u>Collection Date</u>	<u>μCi/mL × 10⁻¹²</u>		
		<u>Mean</u>	<u>Standard Deviation</u>	<u>MDC</u>
SUPPLY WELLS				
Area 5, Well 5B	01/17/96	0.1	3.5	19.0
Area 5, Well 5B	05/09/96	-2.2	2.3	17.9
Area 5, Well 5B	07/15/96	-2.7	2.6	19.1
Area 5, Well 5B	10/07/96	-2.3	2.1	15.9
Area 5, Well 5C	01/17/96	0.2	4.1	22.1
Area 5, Well 5C	05/09/96	-6.7	7.0	26.0
Area 5, Well 5C	07/15/96	-2.8	2.7	20.1
Area 5, Well 5C	10/07/96	-0.4	3.7	20.0
Area 6, Well No. 4A	01/17/96	0.1	3.1	16.9
Area 6, Well No. 4A	06/04/96	7.3	5.5	18.7
Area 6, Well No. 4A	07/15/96	-0.2	2.8	15.0
Area 6, Well No. 4A	10/07/96	-0.3	3.1	17.1
Area 6, Well No. 4	01/17/96	-2.6	2.7	20.6
Area 6, Well No. 4	05/09/96	-5.5	9.5	33.3
Area 6, Well No. 4	07/15/96	-0.7	6.4	34.8
Area 6, Well No. 4	10/07/96	-2.8	2.6	19.4
Area 6, Well C-1	01/17/96	-2.6	2.6	20.3
Area 6, Well C-1	05/09/96	-3.9	6.8	23.9
Area 6, Well C-1	07/15/96	-2.6	2.5	18.7
Area 6, Well C-1	10/07/96	-1.7	1.6	12.2
Area 16, Well UE-16d	01/17/96	-2.0	2.1	16.1
Area 16, Well UE-16d	05/09/96	-6.4	6.7	24.9
Area 16, Well UE-16d	07/15/96	-2.7	2.5	19.0
Area 16, Well UE-16d	10/07/96	-2.5	2.4	17.5
Area 18, Well HTH No. 8	01/17/96	-2.8	2.8	22.0
Area 18, Well HTH No. 8	05/09/96	-8.0	8.4	31.2
Area 18, Well HTH No. 8	07/15/96	-3.2	3.0	22.3
Area 18, Well HTH No. 8	10/07/96	-0.2	3.1	17.0
Area 22, Army Well No. 1	01/17/96	-2.5	2.6	20.2
Area 22, Army Well No. 1	05/07/96	-6.7	6.9	25.8
Area 22, Army Well No. 1	07/15/96	-2.8	2.7	20.0
Area 22, Army Well No. 1	10/07/96	1.8	3.9	17.4
Area 25, Well J-12	01/17/96	0.1	3.5	19.0
Area 25, Well J-12	05/09/96	-7.5	7.8	29.1
Area 25, Well J-12	07/15/96	-0.3	3.4	18.5
Area 25, Well J-12	10/07/96	-2.9	2.7	19.7
Area 25, Well J-13	01/17/96	0.2	4.0	21.6
Area 25, Well J-13	05/09/96	-6.7	6.9	25.8
Area 25, Well J-13	07/15/96	-0.3	4.1	22.2
Area 25, Well J-13	10/07/96	2.3	4.9	22.1

Attachment 10.2 (²³⁹⁺²⁴⁰Pu in Water - 1996, cont.)

<u>Sampling Location</u>	<u>Collection Date</u>	<u>μCi/mL × 10⁻¹²</u>		
		<u>Mean</u>	<u>Standard Deviation</u>	<u>MDC</u>
INDUSTRIAL WELLS				
Area 5, Well UE-5c	01/31/96	2.5	4.4	19.3
Area 5, Well UE-5c	05/09/96	-8.2	8.5	31.7
Area 5, Well UE-5c	07/15/96	-2.8	2.6	19.6
Area 5, Well UE-5c	10/07/96	-2.3	2.1	15.7
Area 20, Well U-20	01/29/96	-6.4	6.8	52.5
POTABLE WATER				
Area 1, Building101	01/09/96	-2.0	2.1	16.5
Area 1, Building101	05/09/96	-9.1	9.5	35.4
Area 1, Ice House	07/11/96	2.4	4.9	21.9
Area 1, Building101	10/01/96	-2.4	2.3	16.7
Area 2, Restroom	01/09/96	-1.7	1.8	13.9
Area 2, Restroom	05/09/96	-6.2	6.5	24.1
Area 2, Restroom	07/11/96	-3.3	3.1	23.5
Area 2, Restroom	10/01/96	-2.9	2.7	19.8
Area 6, Cafeteria	01/09/96	-2.1	2.2	17.2
Area 6, Cafeteria	05/14/96	-4.0	6.9	24.1
Area 6, Cafeteria	07/11/96	-3.1	2.9	22.0
Area 6, Cafeteria	10/01/96	-0.4	3.6	19.4
Area 6, Building 6-900	01/09/96	0.1	3.7	20.0
Area 6, Building 6-900	05/14/96	-4.0	7.0	24.5
Area 6, Building 6-900	07/11/96	-0.3	3.4	18.7
Area 6, Building 6-900	10/01/96	-2.7	2.5	18.6
Area 12, Building 12-23	01/09/96	-2.0	2.0	16.0
Area 12, Medical Aid Station	05/09/96	-6.5	6.7	25.1
Area 12, Building 12-23	07/11/96	-3.1	2.9	21.8
Area 12, Ice House	10/01/96	-2.4	2.3	16.7
Area 23, Mercury Cafeteria	01/09/96	-1.9	2.0	15.8
Area 23, Mercury Cafeteria	05/14/96	-11.5	12.0	44.4
Area 23, Mercury Cafeteria	07/11/96	-2.6	2.4	18.2
Area 23, Mercury Cafeteria	10/01/96	-0.3	3.0	16.1
Area 25, Building 4221	01/09/96	0.2	2.5	13.3
Area 25, Building 4221	05/14/96	2.2	3.4	15.0
Area 25, Building 4221	07/11/96	-0.3	3.8	20.6
Area 25, Building 4221	10/01/96	1.9	4.1	18.2
RESERVOIRS				
Area 2, Mud Plant	07/22/96	2.3	3.9	17.2
Area 3, Well A Reservoir	07/22/96	-2.3	2.3	18.0
Area 3, Well 3 Reservoir	07/15/96	-2.4	2.4	18.7

Attachment 10.2 (²³⁹⁺²⁴⁰Pu in Water - 1996, cont.)

<u>Sampling Location</u>	<u>Collection Date</u>	<u>μCi/mL × 10⁻¹²</u>		
		<u>Mean</u>	<u>Standard Deviation</u>	<u>MDC</u>
(RESERVOIRS, cont.)				
Area 5, Well 5B Reservoir	07/15/96	0.0	3.8	20.7
Area 5, Well UE-5c Reservoir	07/15/96	0.0	4.5	24.3
Area 6, Well C-1 Reservoir	07/15/96	-2.8	2.8	21.1
Area 18, Camp 17 Reservoir	07/22/96	-0.3	3.2	17.7
Area 25, Well J-11 Reservoir	07/15/96	0.0	3.7	19.9
Area 25, Well J-12 Reservoir	07/15/96	0.0	3.6	19.7
NATURAL SPRINGS				
Area 5, Cane Spring	07/15/96	0.0	4.2	22.7
Area 7, Reitman Seep	07/15/96	109.0	22.6	30.9
Area 12, White Rock Spring	07/22/96	-2.8	2.8	21.0
Area 12, Capt. Jack Spring	07/22/96	0.0	3.3	17.8
Area 15, Tub Springs	07/22/96	0.0	3.7	20.2
Area 16, Tippipah Spring	07/15/96	-2.7	2.7	21.0
Area 29, Topopah Spring	07/15/96	-2.4	2.4	18.0
CONTAINMENT PONDS				
Area 12, E Tunnel Effluent	02/07/96	2460.0	136.5	20.3
Area 12, E Tunnel Effluent	05/30/96	2060.0	116.4	20.2
Area 12, E Tunnel Effluent	07/25/96	3630.0	178.8	17.4
Area 12, E Tunnel Effluent	10/31/96	3210.0	144.4	13.0
Area 12, E Tunnel Pond No. 1	02/07/96	1610.0	122.4	32.1
Area 12, E Tunnel Pond No. 2	07/25/96	3450.0	177.7	19.8
Area 12, E Tunnel Pond No. 2	10/31/96	2650.0	125.6	13.7
SEWAGE LAGOONS				
Area 5, RWMS Sewage Pond	02/13/96	0.3	3.7	19.9
Area 5, RWMS Sewage Pond	05/07/96	-2.8	11.7	39.3
Area 5, RWMS Sewage Pond	08/08/96	-8.3	11.7	40.3
Area 5, RWMS Sewage Pond	11/06/96	-0.2	5.2	28.4
Area 6, Yucca Sewage Pond	02/13/96	6.9	6.5	24.5
Area 6, Yucca Sewage Pond	05/07/96	-3.5	3.7	28.4
Area 6, Yucca Sewage Pond	08/08/96	3.8	8.0	35.8
Area 6, Yucca Sewage Pond	11/06/96	10.1	6.3	19.8
Area 6, DAF Sewage Pond	02/13/96	-3.0	3.2	24.8
Area 6, DAF Sewage Pond	05/07/96	-3.1	3.2	25.2
Area 6, DAF Sewage Pond	08/08/96	-0.4	3.9	21.3
Area 6, DAF Sewage Pond	11/06/96	-2.3	2.2	16.9

Attachment 10.2 ($^{239+240}\text{Pu}$ in Water - 1996, cont.)

<u>Sampling Location</u>	<u>Collection Date</u>	$\mu\text{Ci/mL} \times 10^{-12}$		
		<u>Mean</u>	<u>Standard Deviation</u>	<u>MDC</u>
(SEWAGE LAGOONS, cont.)				
Area 11, LANL Sewage Pond	02/13/96	0.2	3.4	18.2
Area 11, LANL Sewage Pond	05/07/96	-7.2	7.5	27.9
Area 11, LANL Sewage Pond	08/08/96	6.9	7.6	29.9
Area 11, LANL Sewage Pond	11/06/96	-2.6	2.5	19.0
Area 12, Sewage Pond	02/13/96	0.3	3.9	21.0
Area 12, Sewage Pond	05/07/96	-7.5	7.8	29.1
Area 12, Sewage Pond	08/08/96	-0.4	4.1	22.3
Area 12, Sewage Pond	11/06/96	-2.8	2.7	20.2
Area 22, Sewage Pond	02/13/96	-2.4	2.6	19.9
Area 22, Sewage Pond	05/07/96	-8.1	8.4	31.3
Area 22, Sewage Pond	08/08/96	-3.2	3.0	22.2
Area 22, Sewage Pond	11/06/96	-2.8	2.7	20.4
Area 23, Sewage Pond	02/13/96	3280.0	163.0	16.9
Area 23, Sewage Pond	05/07/96	0.2	4.3	23.2
Area 23, Sewage Pond	08/08/96	-0.5	4.9	26.6
Area 23, Sewage Pond	11/06/96	-0.1	3.1	16.6
Area 25, Reactor Control Pond	02/13/96	4.1	6.4	28.0
Area 25, Reactor Control Pond	11/06/96	-2.9	2.8	21.2
Area 25, Central Supply Pond	02/13/96	3.8	6.0	26.0
Area 25, Central Supply Pond	05/07/96	-5.7	9.9	34.7
Area 25, Central Supply Pond	08/08/96	-3.6	9.3	30.8