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PERKINS, T. J. Niagara Mohawk Power Corp.
RECIP. NAME RECIPIENT AFFILIATION
HAYNES, R. C. Region 1, Office of Director

SUBJECT: ~~Forwards revised pages to "Annual Environ Operating Rept 1981," originally submitted 820430. Change made to tables to include associated error w/original measurements. Results remain same.~~

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June 2, 1982

Mr. Ronald C. Haynes
Regional Administrator
United States Nuclear Regulatory Commission
Region I
631 Park Avenue
King of Prussia, PA. 19406

RE: Nine Mile Nuclear Station Unit #1
Facility Operating License, DPR-63
Docket No. 50-220

Dear Mr. Haynes:

Enclosed please find revised pages to be inserted into the Annual Environmental Operating Report for Nine Mile Point #1 for the period January 1, 1981 through December 31, 1981. This report was originally submitted to you by letter dated April 30, 1982.

Changes were made to tables to include the associated error with original measurements. The results remain the same as noted in the previous report.

If any further clarification is needed, please feel free to contact H. Flanagan at Nine Mile Point on extension 1395.

Very truly yours,

Thomas J. Perkins
General Superintendent
Nuclear Generation

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xc: Director, Office of NRR (17 copies)

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TABLE 5B

Concentrations of Strontium-89 & 90 & Gamma Emitters in Fish Samples
Results in Units of pCi/kg (dry)

Sample Date	Sample Type	Sr-89	Sr-90	K-40	GAMMA EMITTERS		Co-60	Cs-134	Cs-137	Others
					Mn-54	Co-58				
FITZPATRICK										
May 1981	Lake Trout #1	<27.6	< 6.9	9840.0	<32.5	< 49.2	< 42.6	< 27.6	118.1	< LLD
	Lake Trout #2	12.8	< 6.2	9269.0	<35.9	< 50.8	< 53.8	< 29.9	158.5	< LLD
	White Sucker	<38.6	<14.0	16592.0	87.8	229.4	585.6	< 36.1	175.7	< LLD
October 1981	Lake Trout	<18.8	< 8.7	10571.0	<29.3	< 32.7	< 40.9	< 24.9	150.0	< LLD
	White Sucker #1	<49.4	<15.0	20360.0	<44.8	< 50.9	< 47.3	< 42.2	376.7	< LLD
	White Sucker #2	<40.8	11.9	19684.0	<53.2	< 63.8	< 53.2	< 48.9	292.6	< LLD
NINE MILE POINT										
May 1981	Lake Trout #1	<18.9	< 5.4	9610.0	<27.3	< 40.3	< 34.1	< 21.7	189.1	< LLD
	Lake Trout #2	75.2	< 7.2	8729.0	<36.1	<105.4	<192.6	< 28.6	129.4	< LLD
	White Sucker	19.6	<10.8	16830.0	69.3	222.8	544.4	< 29.2	133.6	< LLD
October 1981	Lake Trout	<26.7	< 7.8	12400.0	<87.6	< 40.3	<116.8	< 29.4	210.8	< LLD
	White Sucker #1	<24.2	<11.0	17390.0	<34.8	< 43.2	< 44.6	< 32.4	470.0	< LLD
	White Sucker #2	<84.5	<29.5	17784.0	<49.4	< 59.3	< 59.3	< 47.9	355.7	< LLD

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TABLE 5B (continued)

Concentrations of Strontium-89 & 90 & Gamma Emitters in Fish Samples
Results in Units of pCi/kg (dry)

Sample Date	Sample Type	Sr-89	Sr-90	K-40	GAMMA EMITTERS		Co-60	Cs-134	Cs-137	Others
					Mn-54	Co-58				
OSWEGO										
May 1981	White Sucker	< 48.1	< 16.6	16960.0	<37.6	<48.8	< 58.3	< 30.7	148.4	< LLD
October 1981	Lake Trout	< 69.7	< 27.6	10080.0	<46.2	<46.2	< 50.4	< 39.5	243.6	< LLD
	White Sucker #1	< 39.3	< 16.5	18909.0	<39.0	<37.8	< 63.0	< 33.2	160.4	< LLD
	White Sucker #2	< 34.3	< 14.4	18662.0	<48.2	<53.6	< 53.0	< 47.6	180.6	< LLD
RICE CREEK										
May 1981	Lake Trout #1	< 47.3	< 8.5	9990.0	<40.0	<56.6	< 40.0	< 36.6	206.5	< LLD
	Lake Trout #2	< 47.1	< 11.3	9610.0	<37.2	<49.6	< 52.7	< 30.4	161.2	< LLD

August 1981

TABLE 11

CONCENTRATIONS OF GAMMA EMITTERS IN MONTHLY COMPOSITES OF NMP
AIR PARTICULATE SAMPLES

Results in Units of 10^{-3} pCi/m³

NUCLIDES	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE
OFF-SITE COMPOSITE: A-1						
Co-60	< 0.52	0.78	1.17	< 0.86	1.62	< 0.82
Mn-54	0.28	< 0.48	0.76	1.37	1.47	0.68
Cs-134	< 0.46	< 0.52	< 0.63	< 0.93	< 0.84	< 0.71
Cs-137	0.61	0.80	1.21	2.58	3.91	1.92
Nb-95	20.89	43.90	66.09	122.90	131.80	48.56
Zr-95	14.95	21.60	33.92	62.00	59.05	21.24
Ce-141	11.48	12.23	13.45	18.33	12.09	3.40
Ce-144	7.46	12.06	23.86	53.67	62.22	30.86
Ru-106	< 4.39	7.15	10.59	15.76	25.03	13.17
Ru-103	13.65	14.97	18.84	26.53	23.41	6.48
Be-7	86.73	74.24	82.35	112.20	143.20	84.54
K-40	5.26	< 5.28	< 5.51	12.73	7.57	< 8.92
La-140	18.62	LLD	LLD	LLD	LLD	LLD
ON-SITE COMPOSITE: B-2						
Co-60	0.51	0.60	0.52	0.71	1.73	0.38
Mn-54	< 0.38	0.28	0.71	1.24	1.42	1.29
Cs-134	< 0.36	< 0.33	< 0.44	< 0.61	< 0.64	< 0.48
Cs-137	0.45	0.68	0.89	2.38	3.42	1.81
Nb-95	20.87	36.14	53.73	100.40	103.50	41.19
Zr-95	12.76	16.60	27.67	47.22	45.62	17.95
Ce-141	8.08	9.56	9.22	12.52	9.82	3.14
Ce-144	4.60	8.94	17.05	38.91	52.95	24.67
Ru-106	2.34	3.99	4.54	11.25	19.40	9.41
Ru-103	10.44	12.93	14.40	20.48	17.65	5.44
Be-7	62.73	66.11	52.82	83.27	105.20	62.51
K-40	< 4.18	< 3.59	2.62	< 4.49	5.90	< 4.80
La-140	49.11	LLD	LLD	LLD	LLD	LLD
Ba-140	LLD	LLD	LLD	LLD	LLD	LLD

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TABLE 11 (continued)

CONCENTRATIONS OF GAMMA EMITTERS IN MONTHLY COMPOSITES OF NMP
AIR PARTICULATE SAMPLESResults in Units of 10^{-3} pCi/m³

NUCLIDES	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
OFF-SITE COMPOSITE: A-1						
Co-60	0.90	0.53	< 0.72	0.27	< 0.46	< 0.37
Mn-54	1.23	0.46	< 0.52	< 0.28	0.18	< 0.40
Cs-134	< 0.48	< 0.43	< 0.48	< 0.25	< 0.24	< 0.32
Cs-137	2.66	1.10	0.81	< 0.39	< 0.34	0.38
Nb-95	36.30	11.80	3.56	1.23	0.82	0.47
Zr-95	14.10	4.12	2.33	< 0.96	< 0.65	< 0.92
Ce-141	< 1.42	< 0.50	< 0.64	< 0.53	< 0.35	< 0.43
Ce-144	29.50	12.40	3.71	2.26	1.87	0.93
Ru-106	11.60	5.98	< 4.54	< 2.74	< 2.85	< 3.01
Ru-103	4.51	1.39	< 0.67	< 0.48	< 0.33	< 0.36
Be-7	122.00	126.00	92.30	83.60	71.50	77.00
K-40	< 3.48	< 8.13	< 6.27	5.21	< 4.19	4.49
La-140	LLD	LLD	LLD	LLD	LLD	LLD
ON-SITE COMPOSITE: B-2						
Co-60	0.28	0.47	< 0.49	0.51	0.60	0.43
Mn-54	0.90	0.57	< 0.33	< 0.24	< 0.24	< 0.30
Cs-134	< 0.34	< 0.34	< 0.28	< 0.20	< 0.20	< 0.22
Cs-137	1.93	0.84	0.41	0.30	0.34	0.18
Nb-95	37.70	10.90	2.78	0.86	0.68	0.50
Zr-95	15.20	3.76	1.43	< 0.54	< 0.70	< 0.66
Ce-141	1.55	0.44	< 0.42	< 0.35	< 0.31	< 0.34
Ce-144	30.30	10.10	3.75	1.33	0.78	0.56
Ru-106	14.20	3.59	< 3.07	< 2.00	< 2.32	< 2.35
Ru-103	4.12	0.47	< 0.42	< 0.29	< 0.26	< 0.30
Be-7	111.00	99.00	75.20	66.90	63.70	51.40
K-40	< 2.58	< 4.33	< 4.73	< 3.16	2.40	4.40
La-140	LLD	LLD	LLD	LLD	LLD	LLD
Ba-140	LLD	LLD	LLD	1.01	LLD	LLD

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TABLE 11 (continued)

CONCENTRATIONS OF GAMMA EMITTERS IN MONTHLY COMPOSITES OF NMP
AIR PARTICULATE SAMPLESResults in Units of 10^{-3} pCi/m³

NUCLIDES	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE
OFF-SITE COMPOSITE: A-2						
Co-60	< 0.63	< 0.56	0.88	0.77	< 1.45	0.54
Mn-54	< 0.40	0.42	0.79	1.35	1.58	1.39
Cs-134	< 0.48	< 0.56	< 0.66	< 0.91	< 2.62	< 0.70
Cs-137	< 0.54	0.69	1.23	2.91	4.16	2.65
Nb-95	22.52	54.70	68.69	129.90	134.20	53.25
Zr-95	16.11	28.29	36.73	63.87	60.94	23.45
Ce-141	11.98	13.98	13.93	18.81	13.12	3.45
Ce-144	7.15	12.37	21.71	55.51	69.95	34.70
Ru-106	< 4.81	< 6.09	10.69	17.97	24.14	15.49
Ru-103	13.55	15.94	20.13	28.46	20.22	7.09
Be-7	88.78	85.93	84.19	115.40	136.10	89.05
K-40	3.46	7.69	< 0.54	7.72	< 25.04	4.60
La-140	20.92	LLD	LLD	LLD	LLD	LLD
ON-SITE COMPOSITE: B-1						
Co-60	0.53	0.74	0.70	0.36	0.96	0.85
Mn-54	< 0.28	0.39	0.39	1.20	1.91	0.83
Cs-134	< 0.30	< 0.45	< 0.47	< 0.68	< 0.63	< 0.50
Cs-137	0.51	0.88	0.93	2.93	4.53	2.52
Nb-95	18.40	65.96	62.03	127.20	120.90	51.16
Zr-95	12.07	30.60	31.96	56.98	54.37	21.31
Ce-141	10.41	14.16	12.25	17.65	11.85	3.78
Ce-144	5.45	15.84	20.52	51.51	62.48	32.74
Ru-106	< 3.30	4.01	7.25	17.01	19.58	11.75
Ru-103	12.37	16.05	17.47	26.89	20.54	7.67
Be-7	82.46	82.63	67.27	103.20	118.50	76.72
K-40	< 4.34	< 4.13	< 0.41	< 3.36	4.24	< 5.20
La-140	44.14	LLD	LLD	LLD	LLD	LLD
Sb-124	< 0.77	< 1.05	< 0.66	< 0.75	< 0.96	< 1.19

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TABLE 11 (continued)

CONCENTRATIONS OF GAMMA EMITTERS IN MONTHLY COMPOSITES OF NMP
AIR PARTICULATE SAMPLESResults in Units of 10^{-3} pCi/m³

NUCLIDES	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
OFF-SITE COMPOSITE: A-2						
Co-60	< 0.38	< 0.63	< 0.63	< 0.29	< 0.48	0.74
Mn-54	0.99	0.69	< 0.51	< 0.28	< 0.30	< 0.36
Cs-134	< 0.44	< 0.39	< 0.48	< 0.26	< 0.30	< 0.31
Cs-137	2.88	1.28	0.80	0.30	0.32	< 0.40
Nb-95	38.60	11.80	2.82	1.12	0.78	0.66
Zr-95	14.50	4.03	1.63	< 0.87	< 0.79	< 0.90
Ce-141	< 1.53	< 0.70	< 0.65	< 0.45	< 0.39	< 0.47
Ce-144	29.80	10.70	3.13	2.02	1.44	1.01
Ru-106	12.00	5.51	< 0.50	< 2.88	< 2.91	3.02
Ru-103	4.74	0.83	< 0.64	< 0.40	< 0.37	< 0.46
Be-7	132.00	109.00	86.30	79.40	76.05	75.70
K-40	< 3.37	< 5.00	< 6.97	2.94	5.83	3.17
La-140	LLD	LLD	LLD	LLD	LLD	LLD
ON-SITE COMPOSITE: B-1						
Co-60	0.34	0.49	< 0.48	0.25	0.50	0.35
Mn-54	0.92	0.33	< 0.34	< 0.17	< 0.17	< 0.25
Cs-134	< 0.36	< 0.31	< 0.30	< 0.16	< 0.22	< 0.24
Cs-137	2.44	1.37	0.68	0.24	0.33	< 0.26
Nb-95	39.50	11.20	3.22	1.25	0.64	0.38
Zr-95	15.50	3.61	2.62	0.76	< 0.57	< 0.69
Ce-141	< 1.49	< 0.55	< 0.48	< 0.32	< 0.30	< 0.34
Ce-144	30.40	10.90	3.73	1.36	1.03	1.14
Ru-106	13.60	5.47	< 3.35	< 1.79	1.32	< 2.24
Ru-103	< 4.72	< 0.65	0.33	< 0.27	< 0.25	< 0.28
Be-7	123.00	107.00	91.70	75.60	76.90	65.30
K-40	< 3.19	< 4.09	< 4.65	< 2.74	< 3.62	< 3.47
La-140	LLD	LLD	LLD	LLD	LLD	LLD
Sb-124	< 0.54	< 1.01	< 0.98	< 0.52	< 0.88	< 0.41

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