

U. S. NUCLEAR REGULATORY COMMISSION
Attachment to JAIFP 83-1216
LICENSEE EVENT REPORT

CONTROL BLOCK:

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 (1)

(PLEASE PRINT OR TYPE ALL REQUIRED INFORMATION)

0	1	N	Y	J	A	F	1	2	0	0	-	0	0	0	0	-	0	0	0	3	4	1	1	1	1	4			5
7	8	14						15	25										26	57					CAT	58			
		LICENSEE CODE						LICENSE NUMBER										LICENSE TYPE					JO						

CON'T

0	1
7	8

REPORT
SOURCE

L	6	0	5	0	0	3	3	3	7	1	1	2	9	8	3	8	1	2	0	9	8	3	9
60	61	DOCKET NUMBER						68	EVENT DATE						74	REPORT DATE						80	

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES (10)

02 | Periphyton exceeded ten times control sample for cobalt-60. (See attached)

0	4	
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0	8
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7 8 9 10 11 12 13 14 15 16 17 18 19 20

0 9

SYSTEM CODE

CAUSE CODE

CAUSE SUBCODE

COMP. SUBCODE

VALVE SUBCODE

7 8 9 10 11 12 13 14 15 16 17 18 19 20

17	LER/RO REPORT NUMBER	EVENT YEAR	REPORT NO.	INCIDENT CODE	TYPE	NO.			
		8 3	0 5 9	0 4	T	0			
		21 22	23 24 25 26	27 28 29	30 31	32			
	ACTION TAKEN	FUTURE ACTION	EFFECT ON PLANT	SHUTDOWN METHOD	HOURS	ATTACHMENT SUBMITTED	NPRD-4 FORM SUB.	PRIME COMP. SUPPLIER	COMPONENT MANUFACTURER
	Z 18 Z 19		Z 20	Z 21	0 0 0 0	Y 22	N 23	Z 24	Z 25
	33 34	35	36	37 38 39 40	41 42	43	44 45 46 47		

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS (27)

1 0 | See attached.

1	1	
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1	2	
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1	3	
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1	4
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FACILITY STATUS (28) 1 5 E 29 0 9 9 NA OTHER STATUS (30) 31 B METHOD OF DISCOVERY (32) Routine Sample

ACTIVITY CONTENT:
RELEASED OF RELEASE

1 6 2 33 10 34

AMOUNT OF ACTIVITY (35)

NA

LOCATION OF RELEASE (36)

NA

PERSONNEL EXPOSURES

NUMBER				TYPE	DESCRIPTION
1	7	0	0	37 Z	39 NA

8401030235 821208

PERSONNEL INJURIES
NUMBER DESCRIPTION (41) NA
1 8 0 0 0 40 S PDR
PDR ADOCK 05000333 PDR

1 9 Z 42 NA

ISSUED 20 N 44 PUBLICITY 45 DESCRIPTION NA NRC USE ONLY

NAME OF PREPARER John A. Solini

PHONE: 315/342-3840

NEW YORK POWER AUTHORITY
JAMES A. FITZPATRICK NUCLEAR POWER PLANT

DOCKET NO. 50-333

Attachment to LER No. 83-059Page 1 of 2

The following environmental radiological monitoring sample is an anomalous measurement based on the criteria outlined in Section 5.6.2.B of the James A. FitzPatrick Environmental Technical Specifications (ETS):

PERIPHYTON SAMPLES

<u>Sample Location*</u>	<u>Date</u>	<u>Co-60 pCi/g (wet)</u>	<u>Recount</u>
1. Offsite (Control)	08/24/83	<0.0057 (LLD)	<0.0099 (LLD)
2. Onsite NMPP	08/23/83	0.14 ± 0.01	0.19 ± 0.02
3. Onsite FitzPatrick	08/23/83	0.25 ± 0.03	0.21 ± 0.02

*See Technical Specification, Appendix B, for location details.

The detected level of Co-60 in the NMPP (onsite) and FitzPatrick (onsite) periphyton samples was greater than 10 times the control location (offsite) results for the same sample period. The control station 10 times value is based on 10 times an LLD value (4.66 sigma).

The detected level of Co-60 is related to liquid effluents discharged from the Nine Mile Point Site. The total release of Co-60, via liquid effluent from the James A. FitzPatrick Nuclear Power Plant for the period of January 1, 1983 through August 24, 1983 was 0.271 curies. This represents 2.71 percent of the Technical Specifications quarterly limit.

The release of liquid effluent during this period was well within the objectives outlined in the James A. FitzPatrick Nuclear Power Plant ETS Appendix B Section 2.3.A.

A possible explanation for the detection of the 10 times concentration for Co-60 in the periphyton samples collected is the high bioaccumulation factor (concentration factor) for this element in comparison to other elements. Due to the fact that stable cobalt is an essential trace element important to fresh water algae, a bioaccumulation factor of up to 30,000 can exist (mean value = 6,760). The bioaccumulation factor will vary with the concentra-

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tion of cobalt in the lake. Because of this high concentration factor, trace quantities of Co-60 will be accumulated in the periphyton (fresh water algae) which are indigenous to the site.

There is no expected dose to man as a result of the radioactivity detected in the periphyton samples, as periphyton are not directly in the human food chain. A more direct calculation of dose to man can be made based on possible levels of Co-60 found in fish samples collected if such activity is present. The results of fish samples also collected in the second half of 1983 showed no detectable levels of Co-60 activity (all <LLD values) for both the NMPP (onsite) and FitzPatrick (onsite) locations. These results indicate that there has been an undetectable movement, if any, of Co-60 through the trophic levels of the food chain. Based on a dose to man concept the detection of Co-60 in the periphyton indigenous to the Nine Mine Point Site in trace amounts have no determinative environmental impact.

James A. FitzPatrick
Nuclear Power Plant
P.O. Box 41
Lycoming, New York 13093
315 342 3840



**New York Power
Authority**

Corbin McNeill
Resident Manager

December 8, 1983
JAFF 83-1216

United States Nuclear Regulatory Commission
Region 1
631 Park Avenue
King Of Prussia, PA 19406

Attention: Thomas E. Murley
Regional Administrator

Reference: Docket No. 50-333
Licensee Event Report: 83-059/04T-0

Gentlemen:

We have enclosed the referenced Licensee Event Report in accordance with Section 6.0 of Technical Specifications and USNRC Regulatory Guide 1.16.

If there are any questions concerning this report, please contact Mr. John Solini at 315/342-3840, Extension 248.

Very truly yours,

CORBIN A. McNEILL, JR.
RESIDENT MANAGER

CAM:EM:JAS:jaa
Enclosure (3 pp)

CC: USNRC Document Control Desk (1)
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INPO Records Center, Atlanta, GA (1)
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