

FEB 10 1971

Anthony Z. Roisman, Esq.  
Berlin, Roisman & Kessler  
1910 N Street, N. W.  
Washington, D. C.

In the Matter of Consolidated Edison Company of New York, Inc.  
Indian Point Nuclear Generating Unit No. 2  
Docket No. 50-247

Dear Mr. Roisman:

The following are the responses of the AEC regulatory staff to questions 1 and 2 of the further series of questions (List B) submitted by you during the recess at the hearing in the above-captioned matter on December 18, 1970. The remaining questions on the list are for the applicant, and have been responded to by them.

Question 1

Monitor reports on radioactive releases from the Ginna reactor.

Question 2

Report on number and causes of shutdowns on Ginna reactor.

Answers

Attached herewith are the pertinent sections of the semi-annual report #1 submitted by the Rochester Gas and Electric Corporation pursuant to the technical specifications appended to its license related to the operations of the Ginna Station. This report was submitted on June 24, 1970, and a copy has been in our public document room since that time. No later such reports have been received from the utility on the Ginna Station.

Sincerely,

Myron Karman  
Counsel for AEC Regulatory Staff

Enclosures:  
As stated above

cc: See page 2

OFFICE ▶

SURNAME ▶

DATE ▶

8110310284 710210  
PDR ADOCK 05000244  
G PDR

*Heating*

Anthony Z. Roisman, Esq.

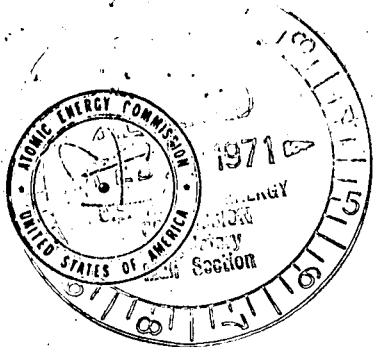
- 2 -

FEB 10 1971

cc: Samuel W. Jensch, Esq.  
J. D. Bond, Esq.  
Dr. John C. Geyer  
Mr. R. B. Briggs  
Dr. Walter H. Jordan  
Arvin E. Upton, Esq.  
Algie A. Wells, Esq.  
Mr. Stanley T. Robinson, Jr.  
Hendrik Hudson High School

bcc: OGC Files Beth/G'twn/Docket  
DRL  
REG Central  
REG Reading

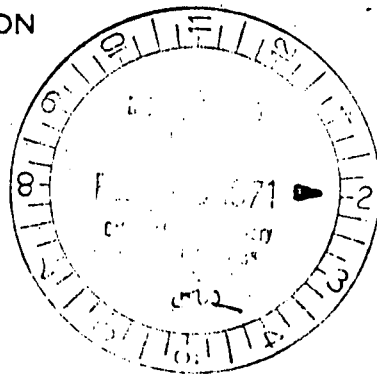
OFFICE ▶	OGC	DRL	CO		
SURNAME ▶	MKarman/jls	PAMorris	LKornblith		
DATE ▶	2-9-71	2-9-71	2-9-71		



DOCKET NUMBER  
PROD. & UTIL. TAG. 50-247

UNITED STATES  
ATOMIC ENERGY COMMISSION  
WASHINGTON, D.C. 20545

February 10, 1971



Anthony Z. Roisman, Esq.  
Berlin, Roisman & Kessler  
1910 N Street, N. W.  
Washington, D. C.

In the Matter of Consolidated Edison Company of New York, Inc.  
Indian Point Nuclear Generating Unit No. 2  
Docket No. 50-247

Dear Mr. Roisman:

The following are the responses of the AEC regulatory staff to questions 1 and 2 of the further series of questions (List B) submitted by you during the recess at the hearing in the above-captioned matter on December 18, 1970. The remaining questions on the list are for the applicant, and have been responded to by them.

Question 1

Monitor reports on radioactive releases from the Ginna reactor.

Question 2

Report on number and causes of shutdowns on Ginna reactor.

Answers

Attached herewith are the pertinent sections of the semi-annual report #1 submitted by the Rochester Gas and Electric Corporation pursuant to the technical specifications appended to its license related to the operations of the Ginna Station. This report was submitted on June 24, 1970, and a copy has been in our public document room since that time. No later such reports have been received from the utility on the Ginna Station.

Sincerely,

Myron Karman  
Counsel for AEC Regulatory Staff

Enclosures:  
As stated above

cc: See page 2

Anthony Z. Roisman, Esq.

- 2 -

February 10, 1971

cc: Samuel W. Jensch, Esq.  
J. D. Bond, Esq.  
Dr. John C. Geyer  
Mr. R. B. Briggs  
Dr. Walter H. Jordan  
Arvin E. Upton, Esq.  
Algie A. Wells, Esq.  
Mr. Stanley T. Robinson, Jr.  
Hendrik Hudson High School

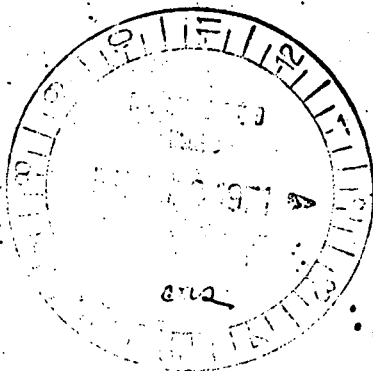
November Reactor Trips

<u>Date</u>	<u>Reactor Power</u>	<u>Hours Out</u>	<u>Reason</u>
Nov. 29, 1969	2%	1.34	High Condenser Pressure. (Valve to bistable closed by I. & C. man to calibrate bistable. Valve left closed. Was not on Check Off List).
Nov. 30, 1969	2%	.83	Manual trip during operator training. (An order was given by the Nuclear Engineer for the trainee to trip the Reactor. This was a demonstration that an operator should always trip the Reactor on an order from an S.R.O.).

November Reactor Shutdowns

Nov. 1969 (22 times)	2%	24.58	Training of operating personnel in preparation for AEC licensing exams.
Nov. 10, 1969	2%	134.33	Re-calibration of Pressurizer Level Instrumentation.
Nov. 16, 1969	2%	254.78	Remove Pressurizer Sealed Reference Leg Level tubing and replace it with open type reference leg level tubing.

Totals: 26 times 415.86 hours



December Reactor Trips.

<u>Date</u>	<u>Reactor Power</u>	<u>Hours Out</u>	<u>Reason</u>
Dec. 3, 1969	20%	5.10	Lo Lo Steam Generator Level. (Motorized suction valve to 1B Feedwater Pump was closed by mistake by the Shift Foreman. He was supposed to close the suction valve to the 1A F.W. Pump which was out of service.)
Dec. 3, 1969	20%	.83	Lo Lo Steam Generator Level. (Operator did not realize he had to manually reset the F.W. bypass valve after a high level swing.)
Dec. 3, 1969	20%	.70	Lo Lo Steam Generator Level. (Feedwater bypass valves put in automatic before Turbine was latched up.)
Dec. 4, 1969	24%	.83	Loss of both Reactor Coolant Pumps. (Operator removed the field from the generator before transferring 4160 V busses to startup supply.)
Dec. 6, 1969	22%	.72	Lo Lo Steam Generator Level. (Feedwater pump tripped out due to excessive vibration of seal water differential pressure mercoid.)
Dec. 15, 1969	2%	.72	Lo Lo Steam Generator Level. (Low seal water differential pressure to F.W. Pump tripped out the F.W. Pump.)
Dec. 30, 1969	1%	.35	Feedwater Flow/Steam Flow Mismatch with Lo Steam Generator Level. (1A Aux. F.W. Pump was not operable and trip occurred before steam driven feedwater pump could be put in service. 1B Aux. F.W. Pump did not supply enough water for the load.)

December Reactor Shutdowns

<u>Date</u>	<u>Reactor Power</u>	<u>Hours Out</u>	<u>Reason</u>
Dec. 1969 (29 times)	2%	89.67	Training of operating personnel in preparation for AEC licensing exams.
Dec. 14, 1969	30%	15.03	Manual trip to check Turbine Condenser Hotwell problem.
Dec. 16, 1969	30%	36.85	Tech. Spec. requirement to shut down due to failure of Safeguard Valve 850B to open all the way during monthly surveillance test.
Dec. 30, 1969	2%	16.97	1B Motor Driven Aux. F.W. Pump Discharge Valve was found to be inoperable and unit was shut down to comply with Tech. Specs.
Totals:	39 times	167.77 hours	

January Reactor Trips

<u>Date</u>	<u>Reactor Power</u>	<u>Hours Out</u>	<u>Reason</u>
Jan. 3, 1970	2%	1.80	Safety injection signal resulting from 2/3 signals of low pressure from "B" Main Steam Line. I & C men were calibrating pressure channel 483 and at the same time they closed the valve to pressure channel 478 due to a steam leak from the valve packing.
Jan. 27, 1970	50%	.42	Lo Lo Steam Generator Level (Turbine trip due to loss of E.H. governor pump pressure F.W. Pump put in pull stop by operator when S.G. level reached 80%. Pump was not put back in service soon enough with Manual F.W. Control to avoid the Reactor trip.)
Jan. 27, 1970	50%	.53	Overtemperature $\Delta T$ trip. (Operator tested N.I.S. Channel IV per P-6 and returned Channel IV to normal. Tested N.I.S. Channel III per P-6. When overtemp. $\Delta T$ bistable was put in trip no Reactor trip occurred. Only the "A" trip breaker opened. Testing could not repeat problem. The Reactor was returned to power with testing conducted at each 50 MW <sub>E</sub> .)
Jan. 28, 1970	23%	.85	Overtemp. $\Delta T$ trip. (React at 100 MW <sub>E</sub> testing for cause of above trip. The problem was located as dirty contact on Channel IV Overtemp. $\Delta T$ relay in the "B" Reactor Trip Logic. This caused only the "A" trip breaker to open on 2/4 logic.)
Jan. 28, 1970	40%	.32	Feedwater Flow/Steam Flow Mismatch plus Lo Steam Generator Level. ("A" F.W. valve closed on high level. F.W. valve controller put in the manual mode and the val



<u>Date</u>	<u>Reactor Power</u>	<u>Hours Out</u>	<u>Reason</u>
			reset. Operator was unable to control the swing in level that occurred.)
<u>January Reactor Shutdown</u>			
Jan. 3, 1970	2%	15.73	MOV 878B valve inoperable. This is the Safety Injection line to the "B" Cold Leg.
Jan. 5, 1970	2%	11.21	Completion of low power physics testing.
Jan. 6, 1970	2%	241.13	Last of AEC exam. demonstration. Reactor taken to cold shutdown conditions and primary loop drained for maintenance work.
Jan. 17, 1970	2%	6.37	Steam leak through gasket on Turbine Stop Valve.
Jan. 17, 1970	2%	1.58	Malfunction of the Rod Step Counters.
Jan. 18, 1970	2%	1.00	To do the natural circulation startup test.
Jan. 1970 (13 times)	2%	22.72	Scheduled AEC operator exams
<b>Totals:</b>	<b>24 times</b>	<b>303.66 hours</b>	



March Reactor Trips

None

March Reactor Shutdowns

None

April Reactor Trips

<u>Date</u>	<u>Reactor Power</u>	<u>Hours Out</u>	<u>Reason</u>
March 30, 1970	100%	585.32	"A" Steam Generator low level in conjunction with Feedwater Flow/Steam Flow Mismatch. (When the operator switched from automatic F.W. Control to Manual F.W. Control while the I & C men were doing a surveillance test, the level in the "A" Steam Generator began to oscillate and the operator could not catch it in time on Manual Control.) The unit was left out for scheduled maintenance work in the primary & secondary plant.

April Reactor Shutdowns

None

Totals: 1 time 585.32 hours

### 6.6.5.5 RADIOACTIVE LIQUID WASTE

The following table is a summary of the liquid waste discharged from Ginna Station during the first six months of operation. It shows a total of 23.883 curies of radioactive material was discharged, of this 19.712 Ci was tritium, for an average concentration in the discharge canal of  $1.4 \times 10^{-8} \mu \text{ ci/cc}$  exclusive of tritium. Eight-eight percent of this radioactive material other than tritium was discharged in the month of April. This was due to increased activity in the primary coolant leaking from the leakoffs on the plungers of the charging pumps. This source of liquid waste has been lowered and should be reflected in reduced amounts of radioactive waste on subsequent reports.

As seen in the second table, some releases were made using an MPC value greater than  $1 \times 10^{-7} \mu \text{ ci/cc}$ . At these times, the waste was analyzed and the isotopes identified so that a higher MPC value could be used. At all times releases which were made were less than MPC values in the discharge canal.

	(a)	(b)	(c)	(d)	(e)
Month	Total Curie Discharged Including Tritium	Volume of Liquid Waste Gallons	Volume of Dilution Water Gallons	Avg. Conc. in Discharge Canal $\mu \text{Ci/cc}$ Exclusive of Tritium	Avg. Conc. of Tritium in Discharge Canal
Nov. 1969	$1.76 \times 10^{-3}$	97,800	$8.3 \times 10^9$	$5.6 \times 10^{-11}$	-
Dec. 1969	1.275	100,870	$13.4 \times 10^9$	$3.40 \times 10^{-10}$	$2.48 \times 10^{-8}$
Jan. 1970	1.036	79,905	$13.7 \times 10^9$	$1.42 \times 10^{-9}$	$1.85 \times 10^{-8}$
Feb. 1970	5.703	81,510	$14.5 \times 10^9$	$1.34 \times 10^{-9}$	$1.03 \times 10^{-7}$
Mar. 1970	6.523	55,773	$13.4 \times 10^9$	$6.87 \times 10^{-9}$	$1.22 \times 10^{-7}$
Apr. 1970	9.346	74,081	$14.3 \times 10^9$	$6.75 \times 10^{-8}$	$1.05 \times 10^{-7}$

### 6.6.5.5 Radioactive Liquid Waste

Time and date of maximum concentration released:

Hours	Date	Concentrations uCi/cc
0001 to 0545	11 Nov 1969	$6.8 \times 10^{-9}$
1730 to 1840	11 Dec 1969	$6.1 \times 10^{-9}$
0015 to 1245	13 Jan 1970	$5.9 \times 10^{-9}$
0455 to 1330	15 Feb 1970	$5.3 \times 10^{-9}$
2250 25 Mar to 0255	26 Mar 1970	$2.4 \times 10^{-7}$
2115 24 Apr to 0350	25 Apr 1970	$2.4 \times 10^{-7}$

- (f) 1. At times the concentration in the discharge canal exceeded  $1 \times 10^{-7} \mu \text{ Ci/cc}$  for fission products. Isotopic analysis showed Iodine 131 to be the only isotope discharged at a concentration greater than 1/10 of its MPC. Therefore,  $3 \times 10^{-7}$  was used as the MPC value to calculate a discharge rate.
2. At no time did the concentration of tritium in the discharge canal exceed  $3 \times 10^{-3} \mu \text{ Ci/cc}$ .

### 6.6.5.6 GASEOUS WASTE

During this period there was no gaseous waste released which would result in greater than, or equal to, the MPC values at the Site boundary. In fact at no time did the concentration of radioactive materials in the plant vent exceed the unrestricted MPC value.

	a.		b.
	Total Curies Discharged per Month	Maximum Release Rate	Time & Date of Max. Conc.
Nov. 69	0	-	-
Dec. 69	0	-	-
Jan. 70	$4.04 \times 10^{-5}$	$3.4 \times 10^{-9}$	1715 - 2030 29 Jan. 70
Feb. 70	0	-	-
Mar. 70	0	-	-
Apr. 70	131.2	.013	1700 - 1945 8 Apr. 70

c. At no time were MPC values greater than the following used in determining the release rate for radioactive gases:

$3 \times 10^{-8}$   $\mu\text{Ci/cc}$  (Noble & activation gases)

$1 \times 10^{-10}$   $\mu\text{Ci/cc}$  (Halogens with greater than 8 day half life)

$3 \times 10^{-11}$   $\mu\text{Ci/cc}$  (Particulates with greater than 8 day half life)

6.6.5.7 SOLID RADIOACTIVE WASTE

No radioactive solids have been released from the site to date.