

SAXTON NUCLEAR EXPERIMENTAL CORPORATION

1984

ANNUAL REPORT

January 1, 1984 - December 31, 1984

8503190432 841231  
PDR ADOCK 05000146  
R PDR

*A020  
1/1*

Annual Report in compliance with Paragraph B.5.b of the Technical Specifications

B.5.b(1) "Information relating to changes in those staff positions that are designated as being responsible for the deactivated facility."

On January 25, 1984 the SNEC Board of Directors elected the following SNEC officers:

R. W. Heward, Jr. - President SNEC  
M. B. Roche - V. P. SNEC  
J. G. Graham - Treasurer SNEC  
W. B. Murray - Secretary SNEC  
R. B. Heist - Asst. Secretary SNEC  
A. Muchoney - Comptroller SNEC

B.5.b(2) "A summary of entries into the Containment Vessel or Radioactive Waste Disposal Facility and reasons for entry."

Entries were made into the Containment Vessel (CV) and/or Radioactive Waste Disposal Facility (RWDF), as follows:

<u>Date</u>	<u>Purpose</u>	<u>Buildings Entered</u>
1) 03-07-84	Radiological survey mapping of buildings and First Quarterly Radiological and Environmental Survey	RWDF, CV,
2) 03-15-84	Radwaste assessment survey	CV, RWDF
3) 05-15-84	Board of Directors meeting and Second Quarterly Radiological and Environmental Survey	CV, RWDF
4) 06-25-84 to 06-29-84	Maintenance of RWDF tank dike, radiological maintenance of RWDF, contractors meeting for painting of CV, and Second Quarterly TLD change	RWDF
5) 07-20-84	CV Sump Maintenance	CV, RWDF
6) 08-07-84 to 08-09-84	Annual grid survey and Third Quarterly Radiological and Environmental Survey	CV, RWDF
7) 10-30-84	Fourth Quarterly Radiological and Environmental Survey, solidification of CV sump water stored on CV operating deck, and Mobile Maintenance meeting	CV, RWDF
8) 12-11-84	Maintenance inspection	RWDF

B.5.b(3) "A summary of maintenance and design changes made to the deactivated facility."

On June 25-29, 1984, loose surface contamination was cleaned up from within the RWDF and the floor sealed to prevent further mobilization of fixed contamination. The RWDF tank dike was also covered with a tarp to prevent precipitation from entering and collecting within the dike.

In July 1984, weeds were cut down from the entire site, including the area around the CV, the Filled Drum Storage Bunker (FDSB), and the Exclusion Area (EA).

Also in July 1984, the CV sump was dried and lined with Herculite plastic. The condensate pipe leading to the sump was fitted with a plastic tube and routed into a six-gallon container.

In August 1984, the exterior of the CV was sandblasted and painted.

In December 1984, the C&A Building's double doors leading to the CV area were replaced and painted. The BWST access plate was sealed and painted.

B.5.b(4) "Results of surveys of radioactivity levels and of water sample analyses."

Results of the 1984 quarterly inspections of the facility are as follows:

Analysis results of water samples from the CV sump, RWDF, and CV pipe tunnel are presented in Tables 1, 2, and 3, respectively. The water samples from the CV sump were the only samples to yield radioisotopic concentrations in excess of 10 CFR 20, Table II, Column 2, Units for Unrestricted Areas.

Dose rates at the 20 permanently marked survey points in the CV ranged from <0.1 mR/hr to 0.4 mR/hr. The results are presented in Table 4. Smear surveys from the same 20 points yielded a range of <1,000 to 4,000 dpm. The survey results are presented in Table 5.

Dose rates measured every quarter at the EA fence, the CV HEPA filter and the CV operating deck above elevation 812' are presented in Table 6. The levels are consistent with previous years.

B.5.b(5) "A summary of the performance of security and surveillance measures."

During late May and early June 1984, two break-ins occurred at the Saxton Line office adjacent to the SNEC facility. Malicious vandalism occurred on both occasions and 22 environmental TLD's were stolen or destroyed. There were no attempted break-ins or vandalism at the SNEC facility. Increased security has since been installed at the Line office and the vandalized TLD stations (11) have been replaced. The above incidents were reported to the USNRC.

TABLE 1

SNEC CV Sump Analysis Results 1984( $\mu\text{Ci/ml}$ )

<u>Radio-nuclides</u>	<u>1st Qtr.</u> <u>03-07-84</u>	<u>2nd Qtr.</u> <u>05-15-84</u>	<u>3rd Qtr.</u> <u>08-09-84</u>	<u>4th Qtr.*</u> <u>10-30-84</u>
Cs-137	4.4E-3	4.1E-3	7.4E-3	- - -
Cs-134	4.4E-5	4.1E-5	6.5E-5	- - -
Co-60	<9.4E-6	<4.9E-7	1.4E-5	- - -
Gr. Alpha	<3.2E-7	Not Analyzed**	<2.9E-7***	- - -
Gr. Beta	1.6E-2	3.9E-3	1.2E-2	- - -
H-3	1.1E-3	3.8E-4	1.0E-3	- - -
Sr-90	1.1E-5	1.7E-4	6.6E-6	- - -

\* CV Sump was empty. No sample.

\*\* Laboratory oversight

\*\*\* Originally reported as  $2.0\text{E-}6 + 7.2\text{E-}7$   
Recount result gave LLD value in table.

TABLE 2

SNEC RWDF Analysis Results 1984( $\mu\text{Ci/ml}$ )

	<u>1st Qtr.</u> <u>03-07-84</u>	<u>2nd Qtr.</u> <u>05-15-84</u>	<u>3rd Qtr.</u> <u>08-09-84</u>	<u>4th Qtr.</u> <u>10-30-84</u>
Cs-137	2.7E-7	2.1E-7	2.1E-7	2.1E-7
Cs-134	<2.4E-8	<8.2E-8	<2.5E-7	<2.8E-8
Co-60	<3.0E-8	<1.1E-7	<3.3E-7	<3.6E-8
Gr. Alpha	<4.0E-9	Not Analyzed*	<2.9E-9	<3.3E-9
Gr. Beta	3.7E-7	2.7E-7	3.0E-7	2.5E-7
H-3	<3.6E-6	5.2E-6	<3.9E-6	<3.9E-6
Sr-90	<3.4E-7	<5.7E-8	<4.3E-8	<3.1E-6

\* Laboratory oversight

TABLE 3

SNEC Pipe Tunnel Analysis Results 1984( $\mu\text{Ci/ml}$ )

	<u>1st Qtr.</u> <u>03-07-84</u>	<u>2nd Qtr.</u> <u>05-15-84</u>	<u>3rd Qtr.</u> <u>08-09-84</u>	<u>4th Qtr.</u> <u>10-30-84</u>
Cs-137	2.3E-7	1.7E-7	3.1E-7	5.1E-7
Cs-134	<4.1E-8	<8.2E-8	<1.4E-7	<1.3E-7
Co-60	<5.4E-8	<1.1E-7	<1.8E-7	<1.9E-7
Gr. Alpha	<3.7E-9	Not Analyzed*	<2.9E-9	<3.3E-9
Gr. Beta	1.5E-7	1.4E-7	9.5E-7	4.0E-7
H-3	<3.7E-6	<4.1E-6	<3.9E-6	<3.8E-6
Sr-90	<3.2E-7	<6.2E-7	1.5E-7	<3.4E-6

\* Laboratory oversight

TABLE 4

SNEC CV Dose Rates 1984  
20 Permanent Survey Points

(mR/hr)

<u>Survey Point No.</u>	<u>1st Qtr.</u> <u>03-07-84</u>	<u>2nd Qtr.</u> <u>05-15-84</u>	<u>3rd Qtr.</u> <u>08-09-84</u>	<u>4th Qtr.</u> <u>10-30-84</u>
1	<.1	<.1	<.1	<.1
2	<.1	<.1	<.1	<.1
3	<.1	<.1	<.1	<.1
4	<.1	<.1	<.1	<.1
5	<.1	<.1	<.1	<.1
6	<.1	<.1	<.1	<.1
7	<.1	<.1	.4	<.1
8	.1	<.1	.15	<.1
9	<.1	<.1	<.1	<.1
10	<.1	<.1	<.1	<.1
11	<.1	<.1	<.1	<.1
12	<.1	<.1	.15	<.1
13	<.1	<.1	.1	<.1
14	<.1	<.1	.1	<.1
15	<.1	<.1	.1	<.1
16	<.1	<.1	<.1	<.1
17	<.1	<.1	<.1	<.1
18	<.1	<.1	<.1	<.1
19	<.1	<.1	<.1	<.1
20	<.1	<.1	<.1	<.1

TABLE 5

SNEC CV Smear Surveys 1984  
20 Permanent Survey Points

(dpm)

<u>Survey Point No.</u>	<u>1st Qtr.</u> <u>03-07-84</u>	<u>2nd Qtr.</u> <u>05-15-84</u>	<u>3rd Qtr.</u> <u>08-09-84</u>	<u>4th Qtr.</u> <u>10-30-84</u>
1	<1,000	<1,000	<1,000	<1,000
2	<1,000	<1,000	<1,000	<1,000
3	<1,000	<1,000	<1,000	<1,000
4	<1,000	1,200	<1,000	<1,000
5	<1,000	<1,000	<1,000	<1,000
6	<1,000	<1,000	<1,000	<1,000
7	<1,000	<1,000	<1,000	<1,000
8	<1,000	3,000	4,000	<1,000
9	<1,000	<1,000	<1,000	<1,000
10	<1,000	<1,000	<1,000	<1,000
11	<1,000	<1,000	<1,000	<1,000
12	2,080	4,000	3,000	<1,000
13	<1,000	<1,000	<1,000	<1,000
14	1,100	<1,000	<1,000	<1,000
15	<1,000	<1,000	<1,000	<1,000
16	<1,000	<1,000	1,000	<1,000
17	<1,000	<1,000	<1,000	<1,000
18	<1,000	<1,000	<1,000	2,600
19	<1,000	<1,000	<1,000	3,100
20	<1,000	<1,000	<1,000	<1,000

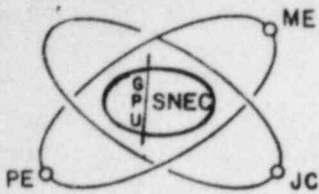


TABLE 6

SNEC CV Dose Rate Surveys 1984

(mR/hr)

	<u>1st Qtr.</u> <u>03-07-84</u>	<u>2nd Qtr.</u> <u>05-15-84</u>	<u>3rd Qtr.</u> <u>08-09-84</u>	<u>4th Qtr.</u> <u>10-30-84</u>
Exclusion Area Fence	.03	<.05	<.1	<.1
CV 812' (operating deck)	.12	.05	<.1	<.1
HEPA Filter	.02	.05	<.1	<.1



# SAXTON NUCLEAR EXPERIMENTAL CORPORATION

GENERAL PUBLIC UTILITIES SYSTEM

JERSEY CENTRAL POWER & LIGHT COMPANY

PENNSYLVANIA ELECTRIC COMPANY

METROPOLITAN EDISON COMPANY

**MAILING ADDRESS:**

100 INTERPACE PARKWAY  
PARSIPPANY, N.J. 07054

**TELEPHONE:**

717-948-8741

February 28, 1985  
SNEC-85-0010

Mr. Cecil O. Thomas  
Director of Nuclear Reactor Regulation  
c/o S.S.P.B./D.L.  
Mail Stop NO. 340  
U. S. Nuclear Regulatory Commission  
Washington, DC 20545

Docket NO. 50-146  
License No. DPR-4

**SUBJECT:** SAXTON NUCLEAR EXPERIMENTAL CORPORATION  
1984 ANNUAL REPORT

Dear Mr. Thomas:

The Saxton Technical Specifications require that Saxton Nuclear Experimental Corporation (SNEC) submit to the Nuclear Regulatory Commission, on an annual basis, a written report covering the status of the decommissioned facility. In compliance with Paragraph B.5.b of the Technical Specifications, SNEC herewith submits a report for the period January 1, 1984 through December 31, 1984. Forty (40) copies of the report are enclosed.

Sincerely,

R. W. Heward, Jr.  
President

*WR*  
RWH:cls  
Enclosures

cc: R. Carter (NRC) (w/encl)

File: 2412.5.1

A020