December 15, 2000

Mr. G. A. Kuehn, Jr. Program Director SNEC Facility GPU Nuclear, Inc. 2574 Interstate Drive Harrisburg, PA 17110

SUBJECT: NRC INSPECTION REPORT NO. 50-146/2000202

Dear Mr. Kuehn:

On November 15, 2000, the NRC completed an inspection of decommissioning activities at the Saxton Nuclear Experimental Facility. The enclosed report represents the results of that inspection.

Areas examined during the inspection are identified in the report. Within these areas, the inspection consisted of selective examinations of procedures and representative records, interviews with personnel, and observations of activities in progress.

No violations of regulatory requirements or significant safety issues were identified during this inspection. Accordingly, no response to this letter is required.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at (the Public Electronic Reading Room) <u>http://www.nrc.gov/NRC/ADAMS/index.html.</u> If you have any questions, please contact Mr. Thomas Dragoun at 610-337-5373.

Sincerely,

/RA/

Ledyard B. Marsh, Chief Events Assessment, Generic Communications and Non-Power Reactors Branch Division of Regulatory Improvement Programs Office of Nuclear Reactor Regulation

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

Enclosure: NRC Inspection Report No. 50-146/2000202

cc w/enclosure: Please see next page CC:

Mr. Sandy Levin Chief Nuclear Officer GPU Inc. 300 Madison Avenue P.O. Box 1911 Morristown, NJ 07962-1911

Mr. Manuel Delgado 2799 Battlefield Road Fishers Hill, VA 22626

Mr. Eric Blocher 216 Logan Avenue Wyomissing, PA 19610

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Mr. David Sokolsky 1000 King Salmon Avenue Eureka, CA 95503

Mr. Gene Baker 501 16th Street Saxton, PA 16678

Mr. Dick Spargo 1004 Main Street Saxton, PA 16678

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James Fockler, Chairman Saxton Citizens Task Force 1505 Liberty Street Saxton, PA 16678

Dr. Rodger W. Granlund Saxton Independent Inspector Radiation Science and Engineering Center The Pennsylvania State University Breazeale Nuclear Reactor University Park, PA 16802-2301 Mr. Gareth McGrath Altoona Mirror 301 Cayuga Avenue Altoona, PA 16603

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Dr. William Vernetson Director of Nuclear Facilities Department of Nuclear Engineering Sciences University of Florida 202 Nuclear Sciences Center Gainesville, FL 32611

Mr. Michael P. Murphy, Nuclear Engineer Bureau of Radiation Protection Department of Environmental Protection 13th Floor, Rachel Carson State Office Building P.O. Box 8469 Harrisburg, PA 17105-8469

Mr. Jim Tydeman 1402 Wall Street Saxton, PA 16678

Mr. James H. Elder, Chairman Concerned Citizens for SNEC Safety Wall Street Ext. Saxton, PA 16679

Mr. Ernest Fuller 1427 Kearney Hill Road Six Mile Run, PA 16679

Saxton Borough Council ATTN: Peggy Whited, Secretary 9th and Spring Streets Saxton, PA 16678

Mr. David J. Thompson, Chair Bedford County Commissioners County Court House 203 South Juliana Street Bedford, PA 15522 Mr. Larry Sather, Chairman Huntingdon Country Commissioners County Court House Huntingdon, PA 16652

Saxton Community Library Front Street Saxton, PA 16678

Carbon Township Supervisors ATTN: Penny Brode, Secretary R. D. #1, Box 222-C Saxton, PA 16678

Hopewell Township Supervisors ATTN: Sally Giornesto, Secretary RR 1 Box 95 James Creek, PA 16657-9512

Mr. D. Bud McIntyre, Chairman Broad Top Township Supervisors Broad Top Municipal Building Defiance, PA 16633

Mr. Don Weaver, Chairman Liberty Township Supervisors R. D. #1 Saxton, PA 16678 U.S. Army Corps of Engineers Baltimore District ATTN: S. Snarski/P. Juhle P.O. Box1715 Baltimore, MD 21203

The Honorable Robert C. Jubelirer President Pro-Temp Senate of Pennsylvania 30th District State Capitol Harrisburg, PA 17120

Mr. James Byrne GPU Nuclear, Inc. P.O. Box 480 Middletown, PA 17057

Mr. Edwin Fuhrer AmerGen Energy Co., LLC P.O. Box 480 Middletown, PA 17057

Mr. Mark E. Warner AmerGen Energy Co., LLC P.O. Box 480 Middletown, PA 17057 Mr. G. A. Kuehn, Jr. Program Director SNEC Facility GPU Nuclear, Inc. 2574 Interstate Drive Harrisburg, PA 17110

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U.S. NUCLEAR REGULATORY COMMISSION OFFICE OF NUCLEAR REACTOR REGULATION

Docket No:	50-146
License No:	DPR-4
Report No:	2000202
Licensees:	GPU Nuclear Corporation and Saxton Nuclear Experimental Corporation
Facility:	Saxton Nuclear Experimental Facility
Location:	Saxton, Pennsylvania
Dates:	November 13-15, 2000
Inspector:	Thomas F. Dragoun
Approved by:	Ledyard B. Marsh, Chief Events Assessment, Generic Communications and Non-Power Reactors Branch Division of Regulatory Improvement Programs Office of Nuclear Reactor Regulation

EXECUTIVE SUMMARY

This routine, announced inspection included onsite review of selected aspects of the steam plant remediation, planned final status survey, training and qualification program, radiological environmental monitoring program (REMP), control of liquid effluent, and the TMI-2/SNEC Oversight Committee.

STEAM PLANT REMEDIATION

Safety controls during the steam plant excavation were satisfactory.

TRAINING AND QUALIFICATION

The training program is up-to-date with changing site conditions and work scope as required by Technical Specification (TS) 3.4.

<u>REMP</u>

The REMP was implemented consistent with the Offsite Dose Calculation Manual.

LIQUID EFFLUENT CONTROL

Control of liquid effluent releases were in accordance with regulatory requirements.

OVERSIGHT COMMITTEE

Activities of the Oversight Committee were in accordance with the TS.

REPORT DETAILS

Summary of Plant Status

Concrete scabbling inside the Containment Vessel was on hold after finding that radioactive contamination had migrated extensively through the walls and between the concrete and inner surface of the CV. A proposal to completely remove most of the concrete was under review. Two office trailers and weather enclosures for the water tank farm and steam plant discharge tunnel access openings were added to the site. The discharge tunnel was dewatered and desilted in preparation for radiological characterization. Excavation of the previously demolished and backfilled steam plant area was underway using heavy equipment to allow access to contaminated sumps. The TMI-2/SNEC Oversight Committee held a meeting on site during the inspection.

1. <u>STEAM PLANT REMEDIATION</u>

a. <u>Scope (IP 93001)</u>

The inspector reviewed selected aspects of:

- access controls
- industrial safety
- b. <u>Observations and Findings</u>

The areas occupied by the steam plant turbine and generator were being excavated. Asbestos, transformers containing PCB, and oil were found in the backfill. A contractor (Mountain Research) was monitoring for asbestos. Asbestos controls during removal and disposal were satisfactory. Hazardous materials are transferred to GPU Energy for disposal. However, extensive chemical and biological analysis of sump water did not detect any other hazardous materials.

The excavation area was surrounded by a chain link fence with gates for access control. Safety railings were installed on the exposed wall.

c. Conclusions

Safety controls during the steam plant excavation were satisfactory.

2. TRAINING AND QUALIFICATION

a. <u>Scope (IP 36801)</u>

The inspector reviewed selected aspects of:

- instructor qualifications
- training records
- training content

b. Observations and Findings

Personnel who author the policies or procedures are usually designated as the instructor by the Program Director SNEC Facility.

The Radiation Safety Officer (RSO) maintains a spreadsheet record of the training and qualification status of all site personnel based on sign-in records.

Each Radiological Controls Technician satisfied the requirements of ANSI N18.1-1971 and successfully completed an extensive site specific qualification program. Records indicated that all Technicians also completed additional training in specialized tasks including final status survey protocols, post remediation isolation, and control of water releases via the tank farm.

Selected site workers received recent training in asbestos controls and operation of the tank farm.

c. Conclusions

The training program is up-to-date with changing site conditions and work scope as required by TS 3.4.

3. RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM (REMP)

a. <u>Scope (IP 84750)</u>

The inspector reviewed selected aspects of:

- environmental sampling techniques
- laboratory analysis
- procedures
- record keeping

b. Observations and Findings

The GPU Environmental Radiation Laboratory (ERL) will be closed by the new owners, AmerGen, within the next few months. The ERL staff had previously performed the sampling and analysis required by the SNEC REMP, except for Thermo-Luminescent Dosimeters (TLDs). During the past two calender quarters, the ERL staff has trained the SNEC staff in sampling techniques. Recent samples were sent to offsite contractor laboratories for analysis (Teledyne or B&W). Environmental TLDs will continue to be sent to the Three Mile Island generating station (TMI) for forwarding to the processor (ICN).

Site procedures for REMP sampling were satisfactory. Sampling of milk, previously required "as needed", has been dropped. The cognizant Group Radiological Controls Supervisor has developed a sampling schedule to track timely completion by the site staff.

The RSO stated an intention to obtain additional analytical equipment and establish an on-site lab for analysis of low level environmental samples, liquid effluent, and license termination survey samples. This would be located separately from the routine HP sample analysis lab to prevent crosscontamination of samples. The Program Director stated that funding for the equipment has been budgeted. This matter will be reviewed in a future inspection.

Sample results for the third quarter were not available due to turn-around delays. Previous quarterly results were within specifications. Record keeping was adequate.

c. <u>Conclusions</u>

The REMP was implemented consistent with the Offsite Dose Calculation Manual.

4. <u>CONTROL OF LIQUID EFFLUENT</u>

a. <u>Scope (IP 84750)</u>

The inspector reviewed selected aspects of:

- effluent tank farm configuration
- procedures
- release calculations

b. <u>Observations and Findings</u>

Three large polymer tanks and a larger carbon steel tank are used to store water prior to discharge and were enclosed in a heated building. Locks on valves and switches are used to prevent inadvertent discharges. Additionally, a temporary hose must be laid to the river for discharges to the river. A recirculating system was used to mix tanks to ensure representative sampling.

Detailed, approved procedures were available for operation of the tank farm and analysis of water samples. Only trained and qualified personnel are authorized to perform these functions.

Analysis of samples and calculation of doses to the public were based on requirements in 10 CFR Part 20 and Offsite Dose Calculation Manual requirements for batch releases. The calculation of doses will be done using a computer program reviewed by the NRC during inspection 1999201 (February 1999).

There have been no releases to the river. All releases have been to the leach field.

c. <u>Conclusions</u>

Control of liquid effluent releases were in accordance with regulatory requirements.

5. TMI-2/SNEC OVERSIGHT COMMITTEE

a. <u>Scope (IP 36801)</u>

The inspector reviewed selected aspects of:

- committee membership
- committee meeting
- b. <u>Observations and Findings</u>

On August 10, 2000, the NRC approved Amendment 16 to the TSs which replaced, among other things, the Radiation Safety Committee with the TMI-2/SNEC Oversight Committee. Membership of the new committee was as required and included personnel with substantial expertise with decommissioning and radiological controls. On November 15, 2000, the second meeting of the committee was held. The conduct and subject matter of the meeting was as specified in TS.

c. <u>Conclusions</u>

Activities of the Oversight Committee were in accordance with the TS.

6. <u>EXIT MEETING</u>

The inspector presented the inspection results to members of licensee management at the conclusion of the inspection on November 15, 2000. The licensee acknowledged the findings presented.

PARTIAL LIST OF PERSONS CONTACTED

<u>Licensee</u>

- R. Case, SNEC Group Radiological Controls Supervisor
- P. Carmel, SNEC Site Supervisor
- G. A. Kuehn, SNEC Program Director
- A. Paynter, SNEC Radiation Safety Officer
- D. Sarge, SNEC Group Radiological Controls Supervisor
- M. Williams, SNEC D&D Engineering

Independent Assessor

R. Granlund, The Pennsylvania State University

INSPECTION PROCEDURES USED

- IP 36801 Organization, management, and cost controls at permanently shutdown reactors
- IP 83801 Inspection of final surveys at permanently shutdown reactors
- IP 84750 Radioactive waste treatment, and effluent, and environmental monitoring
- IP 93001 OSHA interface activities

ITEMS OPENED, CLOSED, AND DISCUSSED

- OPENED: None
- CLOSED: None

LIST OF ACRONYMS USED

CFR	Code of Federal Regulations
CV	Containment Vessel
DCGL	Derived Concentration Guideline Levels
GPU	General Public Utility
IP	Inspection Procedure
LTP	License Termination Plan
REMP	Radiological Environmental Monitoring Program
RSO	Radiation Safety Officer
SNEC	Saxton Nuclear Experimental Corporation
TLD	Thermo-Luminescent Dosimeters
TMI	Three Mile Island generating station
TS	Technical Specifications