January 9, 2004

Mr. G. A. Kuehn, Jr.
Vice President SNEC and
Program Director SNEC Facility
GPU Nuclear, Inc.
Route 441 South
P.O. Box 480
Middletown, PA 17057-0480

SUBJECT: SAXTON NUCLEAR EXPERIMENTAL CORPORATION — AMENDMENT RE: REMOVAL OF CONTAINMENT VESSEL UPPER DOME (TAC NO. MB5029)

Dear Mr. Kuehn:

The U.S. Nuclear Regulatory Commission has issued the enclosed Amendment No. 19 to Amended Facility License No. DPR-4 for the Saxton Nuclear Experimental Facility. The amendment consists of changes to the technical specifications (TSs) in response to your application of April 22, 2002, as supplemented on December 5, 2002, and September 30 and December 22, 2003.

The amendment changes the TSs to allow the removal of the containment vessel (CV) upper dome. The amendment also adds the position of Vice-President GPU Nuclear Oversight to the organizational structure.

A copy of the safety evaluation supporting Amendment No. 19 is also enclosed. The Notice of Issuance will be included in the Commission's biweekly *Federal Register* notice.

Sincerely,

/RA/

Alexander Adams, Jr., Senior Project Manager
Research and Test Reactors Section
New, Research and Test Reactors Program
Division of Regulatory Improvement Programs
Office of Nuclear Reactor Regulation

Docket No. 50-146

Enclosures: 1. Amendment No. 19
2. Safety Evaluation

cc w/enclosures:
See next page

Saxton Nuclear
Experimental Corporation

Docket No. 50-146

cc:

Mr. Michael P. Murphy
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Department of Environmental Protection
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Harrisburg, PA 17105-8469

Mr. Jim Tydeman
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Saxton, PA 16678

Mr. James H. Elder, Chairman
Concerned Citizens for SNEC Safety
Wall Street Ext.
Saxton, PA 16678

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

Saxton Borough Council
ATTN: Judy Burket
707 9th Street
Saxton, PA 16678

Mr. David J. Thompson, Chair
Bedford County Commissioners
County Court House
203 South Juliana Street
Bedford, PA 15522

Mrs. Alexa Cook, Chairman
Huntingdon County Commissioners
County Court House
Huntingdon, PA 16652

Saxton Community Library
P.O. Box 34
Saxton, PA 16678

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

Hopewell Township - Huntingdon County Supervisors
ATTN: Reba Fouse, 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. Box 1715
Baltimore, MD 21203

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

Mr. James J. Byrne
Three Mile Island Nuclear Generating Station
P.O. Box 480
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Mr. Robert F. Saunders
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Mr. Dick Spargo
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James Fockler, Chairman
Saxton Citizens Task Force
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Saxton Independent Inspector
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Altoona Mirror
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Department of Nuclear Engineering
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Mrs. Bunny Barker
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James Creek, PA 16657

Mr. Gary Leidich
Executive Vice President
First Energy Nuclear Operating Corp.

76 South Main Street
Akron, OH 44308

Docket No. 50-146

2. Safety Evaluation

Amendment No. 19

Jan

Manager

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MMendonca

DISTRIBUTION:

\RNRP r/f

ADAMS ACCESSION NO.: ML030920457

***Please see previous concurrence**

TEMPLATE #: NRR-106

OFFICE	RNRP:LA	TechEd	RNRP:PM	OGC	RNRP:SC
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C = COVER

E = COVER & ENCLOSURE

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OFFICIAL RECORD COPY

1.

E. D. C. B. A. The U.S. Nuclear Regulatory Commission (the Commission) has found

stated [illegible] License

SAXTON NUCLEAR EXPERIMENTAL
AMENDMENT TO AMENDED FACILITY LICENSE

DOCKET NO. 50-146 GPU NUCLEAR, INC.

License No. DPR-4 Amendment No. 19

Date of Issuance: January 9, 2014

Enclosure: Appendix A, Technical Specifications Changes

3.

2.

This license amendment is effective as of the date

(2) Facility Operating License No. DPR-

Specifications Changes

Specifications contained

Office of Nuclear Reactor Regulation

Division of Operating Reactor Licensing

REGULATORY COMMISSION

indicate the areas of change.

ENCLOSURE

AMENDED FACILIT

2013121110 9 6 5 4 3 1 Remove

DOCKET NO. 50-146

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1.0 DEFINITIONS

1.0.1 CONTAINMENT VESSEL -

Term used to describe the vertical steel cylinder which housed the Saxton Nuclear Experimental Corporation Facility Nuclear Steam Supply System (NSSS) and related components, also known as the CV.

1.0.2 Deleted

1.0.3 DECOMMISSIONING ACTIVITIES -

The term DECOMMISSIONING ACTIVITIES describes all of those activities needed to decommission the SNEC Facility and return the site to unrestricted use. Examples of these activities include; PRODUCTION ACTIVITIES needed to conduct decommissioning such as physical dismantlement; radioactive waste preparation, treatment, packaging and shipment; radiation protection activities, construction and installation of support systems, structures and components, and final status survey.

1.0.4 Deleted

1.0.5 Deleted

1.0.11 PROCESS CONTROL PROGRAM (PCP) -

The PROCESS CONTROL PROGRAM (PCP) shall contain the current formulas, sampling, analyses, test, and determinations to be made to ensure that processing and packaging of solid radioactive wastes based on demonstrated processing of actual or simulated wet solid wastes will be accomplished in such a way as to assure compliance with 10 CFR Parts 20, 61, and 71, State regulations, burial ground requirements, and other requirements governing the disposal of solid radioactive waste.

1.0.12 PRODUCTION ACTIVITIES -

PRODUCTION ACTIVITIES include all of the physical activities needed to conduct the decommissioning of the SNEC facility site. Included are such activities as the removal of systems, structures and components, demolition of structures and associated components, removal of contaminants to allow free release, excavation, trenching and removal of underground facilities.

These activities are a sub-set of DECOMMISSIONING ACTIVITIES.

1.0.13 RADIOACTIVE WASTE MANAGEMENT ACTIVITIES -

The term RADIOACTIVE WASTE MANAGEMENT ACTIVITIES is defined as those activities which involve the handling of radioactive waste materials.

1.0.14 Deleted

1.0.15 SITE BOUNDARY -

The SITE BOUNDARY used as the basis for the limits on the release of gaseous effluents is the line formed by a 200 meter radius from the center of the containment vessel.

1.0.16 SNEC -

The term SNEC is an acronym for the Saxton Nuclear Experimental Corporation.

1.0.17 SUBSTANTIVE CHANGE(S) -

SUBSTANTIVE CHANGE(S) are those which affect the activities associated with a document or the document's meaning or intent. Examples of non-substantive changes are: (1) correcting spelling; (2) adding (but not deleting) sign-off spaces; (3) blocking in notes, cautions, etc.; (4) changes in corporate and personnel titles which do not reassign responsibilities and which are not referenced in the Technical Specifications; and (5) changes in nomenclature or editorial changes which clearly do not change function, meaning or intent.

1.0.18 UNRESTRICTED AREA -

An UNRESTRICTED AREA shall be any area at or beyond the SITE BOUNDARY access to which is not controlled by the licensee for purposes of protection of individuals from exposure to radiation and radioactive materials, or any area within the SITE BOUNDARY used for residential quarters or for industrial, commercial, institutional, and/or recreational purposes.

As used here the term is used as it applies to radioactive effluents. The definitions as they apply to 10CFR Parts 20 and 100 still apply.

1.1 SITE

1.1.1 Location

The Saxton Nuclear Experimental Corporation (SNEC) facility is on a 1.148 acre tract deeded from the Pennsylvania Electric Company to the SNEC. It is located within the property of the Pennsylvania Electric Company near the Borough of Saxton, Pennsylvania, in Liberty Township, Bedford County, Pennsylvania. The Pennsylvania Electric Company property consists of approximately 150 acres along the Raystown Branch of the Juniata River.

1.1.2 Deleted

1.1.3 Deleted

1.1.3.1 Deleted

1.1.3.2 Deleted
1.1.3.3 Deleted

2.0 PRINCIPAL ACTIVITIES

Activities permitted at the SNEC facility shall include the routine and emergency inspections, maintenance associated with the possession of the SNEC facility, characterization activities and activities delineated in section 1.0.3, DECOMMISSIONING ACTIVITIES, of these Technical Specifications.

2.1 Limiting Conditions for Performing DECOMMISSIONING ACTIVITIES

2.1.1 During activities involving removal of the upper dome of the CV that have the potential to cause a MEASURABLE RELEASE to the environment of airborne radioactivity, appropriate ventilation will be operating in a manner such that the release pathway is via the monitored ventilation system exhaust.

2.1.2 When the ventilation exhaust is in operation, the exhaust monitoring instrumentation will be operated simultaneously. The ventilation system will be shutdown if the exhaust monitoring instrumentation is inoperable.

2.1.3 Verification by analysis that release criteria have been satisfied is required prior to making any batch release of liquid waste process effluent. Effluent release calculations will be made in accordance with the OFFSITE DOSE CALCULATION MANUAL.

3.0 ADMINISTRATIVE CONTROLS

3.1 Organization and Responsibilities

GPU NUCLEAR has the responsibility for safely performing DECOMMISSIONING ACTIVITIES. Lines of authority, responsibility and communication are procedurally defined and established. The relationships shall be identified and updated, as appropriate, in organizational charts, departmental functional responsibility and relationship descriptions, job descriptions for key

personnel positions, or in equivalent forms of documentation. These requirements shall be documented in the SNEC Facility USAR.

3.1.1 The GPU NUCLEAR Cognizant Officer is responsible for and provides full-time dedicated staff for the purpose of conducting all activities safely, effectively and in accordance with corporate policies, applicable laws, regulations, licenses and Technical Specifications (TSs).

3.1.2 The Program Director SNEC Facility is responsible for administration of all SNEC facility functions, for direction of all DECOMMISSIONING ACTIVITIES, and for assuring that the requirements of License No. DPR-4 and these TSs are implemented.

3.1.3 The SNEC Facility Site Supervisor provides on-site management and continuing oversight of PRODUCTION ACTIVITIES.

3.1.4 The Radiation Safety Officer (RSO) is responsible for the conduct and oversight of all SNEC radiation safety activities through implementation of the Radiation Protection Plan. All radiological controls personnel shall have stop work authority in matters relating to or impacting radiation safety.

3.1.5 The Group Radiological Controls Supervisor (GRCS) directly supervises radiation safety activities.

3.1.6 Other GPU Inc. personnel provide SNEC facility management with technical support, project management capabilities and manpower.

3.2 Facility Staffing Requirements:

3.2.1 Deleted

3.2.2 The RSO or a GRCS shall be present on site whenever PRODUCTION ACTIVITIES, maintenance, characterization and/or RADIOACTIVE WASTE MANAGEMENT ACTIVITIES are being performed in Radiologically Controlled Areas (RCA's).

3.5.1.10 Records of the review activities performed in accordance with 3.5.1.2 through 3.5.1.7 shall be maintained in accordance with section 3.9.

3.5.2 Independent Safety Review

3.5.2.1 The GPU NUCLEAR Cognizant Officer is responsible for ensuring the independent safety review of the subjects described in section 3.5.2.3.

3.5.2.2 Independent safety review shall be completed by an individual or group not having direct responsibility for the performance of activities under review, but who may be from the same functionally cognizant organization as the individual or group performing the original work.

3.5.2.3 GPU NUCLEAR shall collectively have or have access to the experience and competence required to independently review subjects in the following areas:

- nuclear unit operations
- electrical, mechanical and nuclear engineering
- chemistry and radiochemistry
- metallurgy
- instrumentation and control
- radiological safety
- administrative controls and quality assurance practices
- other appropriate fields such as radioactive waste management.

3.5.2.4 Consultants may be utilized as determined by the GPU NUCLEAR Cognizant Officer to provide expert advice.

3.5.2.5 The following subjects shall be independently reviewed by Independent Safety Reviewers:

3.5.2.5.1 Written safety evaluations of changes in the facility and changes of procedures described in the Safety Analysis Report, and of tests or experiments not described in the Safety Analysis Report, which are completed without prior NRC approval under the provisions of 10 CFR 50.59(c). This review is to verify that such changes, tests or

January 9, 2004

experiments did not involve a change to the TS or require NRC approval pursuant to 10 CFR 50.59. Written safety evaluations associated with the direct performance of a change, test or experiment shall be completed prior to the initiation of the activity.

3.5.2.5.2 Proposed changes in procedures, in the facility or tests or experiments, any of which involves a change in the TS or require NRC approval pursuant to 10 CFR 50.59. Matters of this kind shall be reviewed prior to their submittal to the NRC.

3.5.2.5.3 Proposed changes to TS or license amendments shall be reviewed prior to submittal to the NRC for approval.

3.5.2.5.4 Violations, deviations and reportable events which require reporting to the NRC in writing. Such reviews are performed after the fact. Review of events covered under this subsection shall include results of any investigations to prevent or reduce the probability of recurrence of the event.

3.5.2.5.5 Written summaries of audit reports identified in section 3.5.4.

3.5.2.5.6 Any other matter involving the facility which a reviewer deems appropriate for consideration or which is referred to the independent reviewers.

3.5.2.6 The Independent Safety Reviewers shall either have a Bachelors Degree in Engineering or the Physical Sciences and five years professional level experience in the area being reviewed or have nine years of appropriate experience in the field of specialty. An individual performing reviews may possess competence in more than one specialty area. Credit toward experience will be given for advanced degrees on a one-for-one basis up to a maximum of two years.

3.5.2.7 Records of reviews encompassed in section 3.5.2.5 shall be maintained in accordance with section 3.9.

3.5.3 Inspection

3.5.3.1 Facility inspections shall be performed in accordance with approved procedures. The inspection activities shall include:

a. Deleted

b. Deleted

c. The station ventilation system effluent particulate monitor channel checks, source checks, channel test and channel calibration shall be performed at a frequency specified in the ODCM.

d. The ventilation system HEPA Filter will be tested to verify efficiencies in accordance with the requirements of the ODCM.

3.5.4 Audits

The audit function is independent of the SNEC facility management. Audits shall be performed by qualified individuals, as a minimum, for those activities designated within the scope of the SNEC facility's Quality Assurance Program. Audits are generally conducted biennially, however, frequency is based on the level of activity at the SNEC facility. Audits may also be performed at the request of the GPU NUCLEAR Cognizant Officer or Vice-President GPU Nuclear Oversight. Audits are performed in accordance with approved Quality Assurance Plan procedures. The audit procedures identify areas which may be included in the audit scope. Audit reports shall be forwarded to the GPU NUCLEAR Cognizant Officer and the Vice-President GPU Nuclear Oversight within 60 days of completion of the audit.

3.5.5 TMI-2/SNEC Oversight Committee

3.5.5.1 The TMI-2/SNEC Oversight Committee shall report to the Vice-President GPU Nuclear Oversight. The Committee will consist of at least four members. Membership will be on the recommendation of the Committee Chairman and approval of the Vice-President GPU Nuclear Oversight. Three members shall constitute a quorum.

3.5.5.2 It shall be responsible to provide independent overview and assessment of all matters with radiological safety implications relative to activities at the SNEC facility. The Committee will review proposed License and Technical Specification changes, DECOMMISSIONING ACTIVITIES, special nuclear and radioactive material activities, facility changes, radiological conditions, audit reports and NRC Inspection reports and corrective actions for deficiencies identified.

3.5.5.3 Meetings shall be held at least three times per year.

3.5.5.4 Written minutes of all meetings shall be prepared and distributed to the Vice-President GPU Nuclear Oversight and the GPU NUCLEAR Cognizant Officer within 30 days of the meeting date.

3.6 Procedures, Programs and Manuals

3.6.1 Procedures

3.6.1.1 Activities which are designated as within the scope of the SNEC facility's Quality Assurance Program shall be prescribed by written, reviewed and approved procedures of a type appropriate to the circumstances.

3.6.1.2 Written procedures shall be established, implemented and maintained for the activities listed below:

3.6.1.2.1 Characterization, decommissioning and maintenance activities determined to be within the scope of the QA program.

3.6.1.2.2 Access control, emergency actions (including fire protection program implementation), facility inspections and audits.

3.6.1.2.3 Radiological exposure control, survey activities and radwaste shipping and handling.

3.6.1.2.4 Activities which could result in a MEASURABLE RELEASE to the environment.

3.6.1.3 These procedures shall require that the following actions be taken:

3.6.1.3.1 All DECOMMISSIONING ACTIVITIES and maintenance work under Health Physics control shall be consistent with 10 CFR Part 20 requirements to minimize the radiation exposure of personnel and to prevent the release of radioactivity in excess of allowable limits to the environment.

3.6.1.3.2 All radiation surveys, tests, counting work, radiation exposure control measures and all other work performed in radiologically controlled areas shall conform with the requirements of the Radiation Protection Plan.

3.6.1.3.3 Facility inspections shall meet specific requirements of section 3.5.3 of these TS.

3.6.1.4 These procedures and any subsequent revisions shall be prepared, reviewed and approved in accordance with the requirements of the applicable administrative procedure requirements prior to their initial use.

3.6.2 Programs

The following programs shall be established, implemented, and maintained during DECOMMISSIONING ACTIVITIES:

3.6.2.1 Radioactive Effluent Controls Program

A program shall be provided conforming with 10 CFR, Section 50.36(a) for the control of radioactive effluents and for maintaining the doses to MEMBER(S) OF THE PUBLIC from radioactive effluents as low as reasonably achievable. The program (1) shall be contained in the ODCM, (2) shall be implemented by operating procedures, and (3) shall include remedial actions to be taken whenever the program limits are exceeded. The program shall include the following elements:

3.6.2.1.1 Limitations on the OPERABILITY of radioactive effluent monitoring instrumentation, including surveillance tests and setpoint determination in accordance with the methodology in the ODCM;

3.6.2.1.2 Limitations on the concentrations of radioactive material released in liquid effluents to UNRESTRICTED AREAS conforming to 10 times the concentrations specified in 10 CFR 20, Parts 20.1001 - 20.2402, Appendix B, Table 2, Column 2;

3.6.2.1.3 Monitoring, sampling, and analysis of radioactive effluents in accordance with 10 CFR, Part 20.1302 and with the methodology and parameters in the ODCM;

3.6.2.1.4 Limitations on the annual and quarterly doses or dose commitment to a MEMBER(S) OF THE PUBLIC from radioactive materials in liquid effluents released to UNRESTRICTED AREAS conforming to Appendix I to 10 CFR, Part 50;

FIGURE 1
SAXTON NUCLEAR EXPERIMENTAL CORP. FACILITY LAYOUT

Figure deleted

After [illegible]

SAFETY EVALUATION B

SAXTON NUCLEAR EXPERIMENTAL C

AMENDED FACILITY LICENSE NO

SUPPORTING AMENDMENT

DOCKET NO. 50-146

GPU NUCLEAR, INC.

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