

Attachment 3a  
Proposed Revised License- 1 Page  
(as revised from the License Amendment  
Request Submittal of November 11, 1995)

and

Attachment 3b  
Proposed Decommissioning Technical Specifications  
16 Pages

- 2) SNEC, pursuant to the Act and 10 CFR Part 50, is licensed to possess, but not to manage, use, maintain or operate, the Saxton facility at the designated location in Liberty Township, Bedford County, Pennsylvania, in accordance with the procedures and limitations set forth in the facility license; and
  - 3) GPU Nuclear, pursuant to the Act and 10 CFR Part 30, "Rules of General Applicability to Licensing of Byproduct Material", is licensed to possess, but not to separate, such byproduct material as may have been produced by operation of the Saxton facility.
- C. This license shall be deemed to contain and be subject to the conditions specified in Part 20, Section 30.34 of Part 30, Sections 50.54 and 50.59 of Part 50, 10 CFR Chapter I, and to all applicable provisions of the Act and to the rules, regulations and orders of the Commission now or hereafter in effect, and to the additional conditions specified below:
- 1) GPU Nuclear shall not reactivate the facility without prior approval of the Commission.
  - 2) GPU Nuclear shall not dismantle or dispose of the facility or the property occupied by the facility without prior approval of the Commission.
  - 3) The Technical Specifications contained in Appendix A as revised through Amendment No. 13 are hereby incorporated in the license. SNEC and GPU Nuclear shall possess the facility in accordance with the Technical Specifications.
3. This license is effective as of the date of issuance and shall expire at midnight on February 11, 2000, or upon expiration of the corporate charter of Saxton Nuclear Experimental Corporation, whichever occurs first.

## 1.0 SITE

### 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.

### 1.2 Exclusion Area Boundary

- 1.2.1 The exclusion area consists of that portion of the SNEC property enclosed within a fence and building boundaries as posted. See Figure 1.

### 1.3 Exclusion Area Controls

- 1.3.1 Except for authorized entry, access points to the exclusion area will be secured.
- 1.3.2 The Containment Vessel (CV) and the Decommissioning Support Building (DSB) shall be equipped with an intrusion alarm system. Intrusion alarms will be activated whenever the site is not manned. Operability shall be verified in accordance with section 3.5.3.1.b.

## 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 1.2.1 of the SNEC Facility Decommissioning Plan.

## 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. The SNEC organization is depicted on Figures 2.3-1 and 2.3-2 of the SNEC Facility Decommissioning Plan.

- 3.1.1 The President GPU Nuclear is responsible for and provides full-time dedicated staff for the purpose of conducting all nuclear activities safely and effectively.
- 3.1.2 The Vice President Nuclear Services Division (NSD) assures that all division and corporate activities are performed in accordance with corporate policies, applicable laws, regulations, licenses and Technical Specifications (TSs).
- 3.1.3 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.
- 3.1.4 The SNEC Facility Site Supervisor provides on-site management and continuing oversight of production activities.
- 3.1.5 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.
- 3.1.6 The Group Radiological Controls Supervisor (GRCS) directly supervises radiation safety activities.
- 3.1.7 Other GPU Nuclear personnel provide SNEC facility management with technical support, project management capabilities and manpower.

3.2 Facility Staffing Requirements:

- 3.2.1 At least two individuals, one of which must be knowledgeable in radiation monitoring and the radiological hazards associated with the facility, shall perform radiological surveys necessary to support planned activities within the Containment Vessel if the Containment has been secured (Containment Vessel is sealed except for the breather opening) for a period greater than 24 hours.
- 3.2.2 The RSO or a GRCS shall be present on site whenever radioactive waste management activities are in progress.

3.3 Facility Staff Qualifications

3.3.1 Each Radiological Controls Technician/GRCS shall meet or exceed the qualifications of ANSI N18.1-1971, paragraph 4.5.2 and 4.3.2 respectively or shall be formally qualified through an NRC approved radiological controls training program.

3.3.2 All personnel performing decommissioning or associated activities shall be briefed on the SNEC site specific conditions and applicable requirements of the SNEC Decommissioning Plan for the task assigned.

3.4 Training

GPU Nuclear shall maintain a training program for those personnel performing decommissioning work functions at the SNEC facility.

3.4.1 Job specific training shall be performed as delineated by Section 2.4 of the SNEC Facility Decommissioning Plan.

3.4.2 In lieu of training, performance of specialized tasks, techniques and equipment operation shall be permitted, provided competency is demonstrated to the Program Director SNEC Facility.

3.5 Review, Inspection and Audit

3.5.1 Technical Review

3.5.1.1 The Vice President of each division within GPU Nuclear shall be responsible for ensuring the preparation, review, and approval of documents required by the activities described in sections 3.5.1.2 and 3.5.1.7 within his functional area as assigned in the Review and Approval Matrix. Implementing approvals shall be performed at the cognizant manager level or above.

3.5.1.2 Each procedure required by section 3.6.1 and other procedures including those for tests and experiments and substantive changes thereto shall be prepared by a designated individual or group knowledgeable in the area of the affected procedure. Each procedure and substantive change thereto, shall be given a technical review by an individual or group other than the preparer, but who may be from the same organization as the individual who prepared the procedure or change.

3.5.1.3 Proposed changes to the TS shall be reviewed by a knowledgeable individual or group other than the individual(s) or group who prepared the change.

- 3.5.1.4 Proposed tests and experiments shall be reviewed by a knowledgeable individual or group other than the preparer but who may be from the same division as the individual who prepared the tests and experiments.
- 3.5.1.5 Proposed modifications to facility structures systems and components as described in the SNEC Facility Decommissioning Plan shall be designed by an individual/organization knowledgeable in the areas affected by the proposed modification. Each such modification shall be technically reviewed by an individual/group other than the individual/group which designed the modification but may be from the same group as the individual who designed the modification.
- 3.5.1.6 Investigation of all violations of the TS including the preparation and forwarding of reports covering evaluation and recommendations to prevent recurrence, shall be reviewed by a knowledgeable individual/group other than the individual/group which performed the investigation.
- 3.5.1.7 All reportable events shall be reviewed by an individual/group other than the individual/group which prepared the report.
- 3.5.1.8 Individuals responsible for reviews performed in accordance with sections 3.5.1.2 through 3.5.1.7 shall include a determination of whether or not additional cross disciplinary review is necessary. If necessary, such reviews shall be performed by the appropriate personnel. Individuals responsible for reviews considered under sections 3.5.1.2 through 3.5.1.6 shall render determinations in writing with regard to whether or not 3.5.1.2 through 3.5.1.6 constitute an unreviewed safety question.
- 3.5.1.9 Responsible Technical Reviewers shall meet or exceed the qualifications of ANSI/ANS 3.1 of 1978 Section 4.6, or 4.4 for applicable disciplines, or have seven years of appropriate experience in the field of specialty. Credit toward experience will be given for advanced degrees on a one-to-one basis up to a maximum of two years. Responsible Technical Reviewers shall be designated in writing.
- 3.5.1.10 Records of the 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 Vice President of each division within GPU Nuclear shall be responsible for ensuring the independent safety review of the subjects described in section 3.5.2.3 within his assigned area of review responsibility, as assigned by the Review and Approval Matrix.

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 cognizant Vice President to provide expert advice.

3.5.2.5 The following subjects shall be independently reviewed by Independent Safety Reviewers in the functionally assigned divisions:

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(a)(1). This review is to verify that such changes,

tests or experiments did not involve a change to the TS or an unreviewed safety question as defined in 10 CFR 50.59(a)(2). Such reviews need not be performed prior to implementation.

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 in an unreviewed safety question as defined in 10 CFR 50.59(c). 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.

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 Bachelor's 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. Verification that exclusion area access points are secured at the completion of each authorized entry.
- b. Verification of the operability of the exclusion area intrusion alarms shall be performed monthly.

#### 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 President. Audits are performed in accordance with the GPU Nuclear audit program procedures. The audit procedures identify areas which may be included in the audit scope. Audit reports shall be forwarded to the GPU Nuclear President within 60 days of completion of the audit.

#### 3.5.5. Radiation Safety Committee

3.5.5.1 The Radiation Safety Committee shall report to the Vice President Nuclear Services Division (NSD). The Committee will consist of at least four members. Membership will be on the recommendation of the Vice President NSD. Three members shall constitute a quorum.

3.5.5.2 It shall be responsible to review 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 annually to review and discuss the events of the preceding period.

3.5.5.4 Written minutes of all meetings shall be prepared and distributed to the Vice President NSD 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 requiring Health Physics controls consistent with 10 CFR, Part 20 requirements.

3.6.1.2.2                    Access control, emergency actions, 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 associated with the Containment Vessel and DSB 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 and access controls shall meet specific requirements of the 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 50.36a for the control of radioactive effluents and for maintaining the doses to members 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 liquid and gaseous 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 liquid, and gaseous effluents in accordance with 10 CFR, Part 20.1301 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 of the public from radioactive materials in liquid effluents released from each unit to unrestricted areas conforming to Appendix I to 10 CFR, Part 50;

- 3.6.2.1.5 Determination of cumulative and projected dose contributions from radioactive effluents for the current calendar quarter and current calendar year in accordance with the methodology and parameters in the ODCM at least every 31 days;
- 3.6.2.1.6 Limitations on the operability and use of the liquid and gaseous effluent treatment systems to ensure that the appropriate portions of these systems are used to reduce releases of radioactivity when the projected doses in a 31-day period would exceed 2% of the guidelines for the annual dose or dose commitment conforming to Appendix I to 10 CFR, Part 50;
- 3.6.2.1.7 Limitations on the dose rate resulting from radioactive material released in gaseous effluents to areas at or beyond the site boundary to less than or equal to 1500 mrem/yr to any organ;
- 3.6.2.1.8 Limitations on the annual and quarterly doses to a member of the public from tritium, and all radionuclides in particulate form with half-lives greater than eight days in gaseous effluents released to areas beyond the site boundary conforming to Appendix I to 10 CFR, Part 50;
- 3.6.2.1.9 Limitations on the annual dose or dose commitment to any member of the public due to releases of radioactivity and to radiation from uranium fuel cycle sources conforming to 40 CFR, Part 190.
- 3.6.2.2 Radiological Environmental Monitoring Program
- 3.6.2.2.1 A program shall be provided to monitor the radiation and radionuclides in the environs of the plant. The program shall provide:
- 3.6.2.2.1 a. Representative measurements of radioactivity in the highest potential exposure pathways, and
- b. Verification of the accuracy of the Effluent Monitoring Program and modeling of environmental exposure pathways.

#### 3.6.2.2.2

The program shall (1) be contained in the ODCM; (2) conform to the guidance of Appendix I to 10 CFR, Part 50; and (3) include the following:

- a. Monitoring, sampling, analysis, and reporting of radiation and radionuclides in the environment in accordance with the methodology and parameters in the ODCM,
- b. A Land Use Census to ensure that changes in the use of areas at and beyond the site boundary are identified and that modifications to the monitoring program are made if required by the results of this census, and;
- c. Participation in an Interlaboratory Comparison Program to ensure that independent checks on the precision and accuracy of the measurements of radioactive materials in environmental sample matrices are performed as part of the Quality Assurance Program for environmental monitoring.

#### 3.6.2.3

##### Process Control Program (PCP)

The PCP shall contain the current formulas, sampling, analyses, tests, and determinations to be made to ensure that the processing and the packaging of solidified radioactive wastes will be accomplished to ensure compliance with 10 CFR, Part 20; 10 CFR, Part 61; and 10 CFR, Part 71; burial ground requirements and other requirements governing the disposal of solid radioactive wastes.

#### 3.6.2.3.1

##### Changes to the PCP:

- a. Shall be documented and records of reviews performed shall be retained as required. This documentation shall contain:
  1. Sufficient information to support the change together with the appropriate analyses or evaluation justifying the change(s), and
  2. A determination that the change will maintain the overall conformance of the solidified waste product to existing requirements of federal, state, or other applicable regulations.

- b. Shall become effective after review and approval by the Program Director, SNEC Facility.

### 3.6.3 Manuals

#### 3.6.3.1 Off-Site Dose Calculation Manual (ODCM)

##### 3.6.3.1.1 Content:

- a. The ODCM shall contain the methodology and parameters used in the calculation of off-site doses resulting from radioactive gaseous and liquid effluents, in the calculation of radioactive gaseous and liquid effluent monitoring alarm and trip setpoints, and in the conduct of the Radiological Environmental Monitoring Program; and
- b. The ODCM shall also contain the Radioactive Effluent Controls Program and the Radiological Environmental Monitoring Program required by Specifications 3.6.2.1 and 3.6.2.2 respectively, and descriptions of the information that should be included in the Annual Radiological Environmental Monitoring Report required by Specification 3.8.10.

##### 3.6.3.1.2 Changes to the ODCM:

- a. Shall be documented and records of reviews performed shall be retained as required by Specification 3.9.10. This documentation shall contain:
  - 1. Sufficient information to support the change together with the appropriate analyses or evaluation justifying the change(s), and
  - 2. A determination that the change will maintain the level of the radioactive effluent control required by 10 CFR, Part 20.1301; 40 CFR, Part 190; 10 CFR, Section 50.36a; and Appendix I to 10 CFR, Part 50 and not adversely impact the accuracy or reliability of effluent, dose, or setpoint calculations.
- b. Shall become effective after review and approval of the Program Director, SNEC Facility.



- c. Shall be submitted to the Commission in the form of a complete, legible copy of the entire ODCM as part of or concurrent with the Annual Radioactive Effluent Release Report for the period of the report in which any change to the ODCM was made. Each change shall be identified by markings in the margin of the affected pages, clearly indicating the areas of the page that was changed, and shall indicate the date (e.g., month/year) the change was implemented.

### 3.7 Fire Protection

- 3.7.1 Procedures will be established and implemented for fire prevention and responding to fires.
- 3.7.2 Portable fire extinguishing equipment shall be available to support decommissioning activities in progress.
- 3.7.3 Personnel standing fire watch will be trained and requalified on an annual frequency.

### 3.8 Reporting

In addition to those reports required by applicable NRC regulations (ie, violation of license or technical specification condition) SNEC shall submit the following:

- 3.8.1 A report of any occurrence of a possible unsafe condition relating to the facility or to the public. For each occurrence, SNEC shall promptly, within 24 hours of discovery, notify by telephone or telegraph, the Administrator of Region I, or designee, and the NRC Operations Center, and shall submit a written follow-up report to the Document Control Desk and the Administrator of Region I within 30 days, which describes the circumstances and the corrective action taken. These reports shall include:
  - 3.8.1.1 Any unplanned or uncontrolled release of radioactive material beyond the facility boundaries.
  - 3.8.2 An annual report shall be submitted to the Document Control Desk and the Administrator of Region I, within 6 months after the end of the calendar year, of the status of the deactivated facility including:

- 3.8.2.1 Information relating to changes in those management and supervisory positions designated in section 3.1 as being responsible for decommissioning the facility;
- 3.8.2.2 A summary of entries into the Containment Vessel involving Radiation Work Permits and reasons for the entries;
- 3.8.2.3 A summary of decommissioning, design, and maintenance changes made to the deactivated facility;
- 3.8.2.4 Results of surveys and monitoring performed in accordance with Specification 3.6.2.1 and .2;
- 3.8.2.5 A review of the performance of access control and surveillance measures;

3.9 Records

In addition to the records required by applicable NRC regulations, including Subpart L of 10 CFR, Part 20, 20.2101 through 20.2110 inclusive, GPU Nuclear shall retain records of the following for the duration of the license:

- 3.9.1 Records of all reportable events submitted to the Commission;
- 3.9.2 Records of logs and principal decommissioning activities;
- 3.9.3 Records of training and qualification of members of the facility staff;
- 3.9.4 Records of entries into the Containment Vessel involving radiation work permits and the reason for the entry;
- 3.9.5 Radioactivity releases or discharges into the air or water beyond the effective control of SNEC as measured at or prior to the point of such release or discharge;
- 3.9.6 Records of reviews performed for changes made to procedures or equipment pursuant to 10 CFR 50.59;
- 3.9.7 Records of Quality Assurance activities required by section 7 of the SNEC Facility Decommissioning Plan entitled "Quality Assurance Provisions in Place During Decommissioning" which are classified as permanent records by applicable regulations, codes and standards;
- 3.9.8 Records of reviews or audits required by Specification 3.5.4;

- 3.9.9 Records of analyses required by the Radiological Environmental Monitoring Program that would permit evaluation of the accuracy of the analysis at a later date; and
- 3.9.10 Records of reviews performed and changes made to the Offsite Dose Calculation Manual and the Process Control Program.

Figure 1  
Saxton Nuclear Facility Layout

