March 12, 1999

LICENSEES: Saxton Nuclear Experimental Corporation (SNEC) and
GPU Nuclear Corporation (GPUN)

FACILITY: Saxton Nuclear Experimental Facility (SNEF)

SUBJECT: SUMMARY OF MEETING BETWEEN SNEC, GPUN AND THE NRC STAFF

On March 11, 1999, representatives of the NRC staff met at NRC headquarters with representatives of SNEC and GPUN, the licensees for the SNEF. Enclosure one is a list of meeting attendees. Enclosure two is the briefing material provided by the licensees at the meeting.

The purpose of the meeting was to present an overview of the Saxton decommissioning project and the recently submitted license termination plan (LTP). The licensees gave a brief description of the operational and licensing history of the facility. The licensees then presented an overview of their LTP and their final status survey including release criteria, final status survey methodology, determination of derived concentration guideline levels, quality assurance, training, conduct of the final status survey and reporting of final status survey results. The NRC staff commented that the first step in the NRC review of the LTP would be an acceptance review to determine if all required topics were discussed in the licensees' submittal.

In response to a question from the NRC staff, the licensees discussed the issue of buoyancy of the containment vessel (CV). The water table at the SNEF site is near the surface. The CV extends about 50 feet below ground level. There is a concern that as the weight of the CV is reduced by removal of contaminated and activated material, the CV may become buoyant and shift in position, raising structural stability concerns. The licensees are planning to drill soil cores near the CV to determine soil properties. Friction between the CV and soil could increase significantly the amount of material that could be removed from the CV without buoyancy becoming an issue. The licensees also plan to study the internal structure of the CV to understand the effect of the polar crane on the CV structure and the effect of removing concrete on the internal structural stability of the CV.

Docket No. 50-146
Enclosures: As stated
cc w/enclosures: See next page

ORIGINAL SIGNED BY:
Alexander Adams, Jr., Senior Project Manager
Non-Power Reactors and Decommissioning
Project Directorate
Division of Regulatory Improvement Programs
Office of Nuclear Reactor Regulation

1/1
DFol

DISTRIBUTION:

HARD COPY
Docket File 50-146
PUBLIC
PDND r/f
AAdams
OGC (O15-B18)
EHylton

E-MAIL COPY
SCollins/RZimmerman (SJC1/RPZ)
BBoger (BAB2)
DMatthews (DBM)
SWeiss (SHW)
TMartin (SLM3)
LPittiglio (CLP)
BMCabe (BCM)
TMichaels (TSM1)
CBassett (CHB1)
TBurdick (TMB)
PDoyle (PVD)
TDragoun (TFD)
WEresian (EJW)
SHolmes (SWH)
MMendonca (MMM)

PDND:PM	PDND:LA	PDND:D
AAdams	EHylton	SWeiss
3/12/99	3/12/99	3/11/99

OFFICIAL RECORD COPY DOCUMENT NAME: G:\SECY\ADAMS\146MEET2.SUM

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

March 12, 1999

LICENSEES: Saxton Nuclear Experimental Corporation (SNEC) and GPU Nuclear Corporation (GPUN)

FACILITY: Saxton Nuclear Experimental Facility (SNEF)

SUBJECT: SUMMARY OF MEETING BETWEEN SNEC, GPUN AND THE NRC STAFF

On March 11, 1999, representatives of the NRC staff met at NRC headquarters with representatives of SNEC and GPUN, the licensees for the SNEF. Enclosure one is a list of meeting attendees. Enclosure two is the briefing material provided by the licensees at the meeting.

The purpose of the meeting was to present an overview of the Saxton decommissioning project and the recently submitted license termination plan (LTP). The licensees gave a brief description of the operational and licensing history of the facility. The licensees then presented an overview of their LTP and their final status survey including release criteria, final status survey methodology, determination of derived concentration guideline levels, quality assurance, training, conduct of the final status survey and reporting of final status survey results. The NRC staff commented that the first step in the NRC review of the LTP would be an acceptance review to determine if all required topics were discussed in the licensees' submittal.

In response to a question from the NRC staff, the licensees discussed the issue of buoyancy of the containment vessel (CV). The water table at the SNEF site is near the surface. The CV extends about 50 feet below ground level. There is a concern that as the weight of the CV is reduced by removal of contaminated and activated material, the CV may become buoyant and shift in position, raising structural stability concerns. The licensees are planning to drill soil cores near the CV to determine soil properties. Friction between the CV and soil could increase significantly the amount of material that could be removed from the CV without buoyancy becoming an issue. The licensees also plan to study the internal structure of the CV to understand the effect of the polar crane on the CV structure and the effect of removing concrete on the internal structural stability of the CV.

Alexander Adams, Jr., Senior Project Manager
Non-Power Reactors and Decommissioning
Project Directorate
Division of Regulatory Improvement Programs
Office of Nuclear Reactor Regulation

Docket No. 50-146

Enclosures: As stated
cc w/enclosures: See next page

March 12, 1999

LICENSEES: Saxton Nuclear Experimental Corporation (SNEC) and
GPU Nuclear Corporation (GPUN)

FACILITY: Saxton Nuclear Experimental Facility (SNEF)

SUBJECT: SUMMARY OF MEETING BETWEEN SNEC, GPUN AND THE NRC STAFF

On March 11, 1999, representatives of the NRC staff met at NRC headquarters with representatives of SNEC and GPUN, the licensees for the SNEF. Enclosure one is a list of meeting attendees. Enclosure two is the briefing material provided by the licensees at the meeting.

The purpose of the meeting was to present an overview of the Saxton decommissioning project and the recently submitted license termination plan (LTP). The licensees gave a brief description of the operational and licensing history of the facility. The licensees then presented an overview of their LTP and their final status survey including release criteria, final status survey methodology, determination of derived concentration guideline levels, quality assurance, training, conduct of the final status survey and reporting of final status survey results. The NRC staff commented that the first step in the NRC review of the LTP would be an acceptance review to determine if all required topics were discussed in the licensees' submittal.

In response to a question from the NRC staff, the licensees discussed the issue of buoyancy of the containment vessel (CV). The water table at the SNEF site is near the surface. The CV extends about 50 feet below ground level. There is a concern that as the weight of the CV is reduced by removal of contaminated and activated material, the CV may become buoyant and shift in position, raising structural stability concerns. The licensees are planning to drill soil cores near the CV to determine soil properties. Friction between the CV and soil could increase significantly the amount of material that could be removed from the CV without buoyancy becoming an issue. The licensees also plan to study the internal structure of the CV to understand the effect of the polar crane on the CV structure and the effect of removing concrete on the internal structural stability of the CV.

Docket No. 50-146
Enclosures: As stated
cc w/enclosures: See next page

ORIGINAL SIGNED BY:
Alexander Adams, Jr., Senior Project Manager
Non-Power Reactors and Decommissioning
Project Directorate
Division of Regulatory Improvement Programs
Office of Nuclear Reactor Regulation

DISTRIBUTION:

HARD COPY
Docket File 50-146
PUBLIC
PDND r/f
AAdams
OGC (O15-B18)
EHylton

E-MAIL COPY
SCollins/RZimmerman (SJC1/RPZ)
BBoger (BAB2)
DMatthews (DBM)
SWeiss (SHW)
TMartin (SLM3)
LPittiglio (CLP)
BMCabe (BCM)
TMichaels (TSM1)
CBassett (CHB1)
TBurdick (TMB)
PDoyle (PVD)
TDragoun (TFD)
WEresian (EJW)
SHolmes (SWH)
MMendonca (MMM)

PDND:PM	PDND:LA	PDND:D
AAdams	EHylton	SWeiss
3/12/99	3/12/99	3/12/99

OFFICIAL RECORD COPY DOCUMENT NAME: G:\SECY\ADAMS\146MEET2.SUM

cc:

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 16678

Mr. Ernest Fuller
R. D. #1
Six Mile Run, PA 16679

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

Ms. Norma Ickes, Chair
Bedford County Commissioners
County Court House
203 South Juliana Street
Bedford, PA 15522

Mr. Larry Sather, Chairman
Huntingdon County 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. Box 1715
Baltimore, MD 21203

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

Mr. William G. Heysek
Licensing Department
TMI Nuclear Station
P.O. Box 480
Middletown, PA 17057

cc:

Mr. Arthur Rone
Vice President Nuclear
Safety and Technical Services
GPU Nuclear Inc.
1 Upper Pond Road
Parsippany, NJ 07054

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

Mr. Eric Blocher
216 Logan Avenue
Wyomissing, PA 19610

Ernest L. Blake, Jr., Esquire
Shaw, Pittman, Potts, and
Trowbridge
2300 N Street, NW
Washington, D.C. 20037

Mr. David Sokolsky
4241 Liberty Bell Ct.
Eureka, CA 95503

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

Mr. Dick Spargo
1004 Main Street
Saxton, PA 16678

Mr. Tom Strnad
TLG Services
148 New Milford Road East
Bridgewater, CT 06752

Charles Barker
RD 1 Box 143
James Creek, PA 16657

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

Enclosure 1

MEETING BETWEEN THE NRC STAFF AND SAXTON

March 11, 1999

NAME	TITLE ORGANIZATION	PHONE
Alexander Adams Jr	Sr Project Mgr, NRC	301-415-1127
PERRY G. CARNEL	SNEC Site Supervisor	814-635-3480
Pat Donnachie	Env Rad. Lab. Mgr. (GPUN)	717-948-8110
Sylvia Morris	Sr. Public Affairs Rep. GPU-Nuclear	814-635-3387
DENNIS KELLY	GPU Nuclear Licensing	(609) 971-4211
THOMAS DRAGOUN	INSPECTOR, NRC	610-337-5373
LARRY PITTIGLIO	DWM, NRC	301 415 6702
Seymour H. Weiss	NRC/NRR	34-415-2170
Ernest Fuller	Citizen	814-928-5416

MEETING BETWEEN THE NRC STAFF AND SAXTON

March 11, 1999

NAME	TITLE ORGANIZATION	PHONE
Tim Lyons	Deputy Branch Chief Events Assessment / Non-Power Reactors	301-415-7803
Tim Johnson	NRC/DIV OF WASTE MGMT	301-415-7299
Rodger Grazlund	Saxton Independent Inspector	814 863-0902
Barry Brandy	GPU NUC.	717 948-8330
G.A. KUEHN	VP/PROG DIR SNEC	717 9488730
Michael	SR. PROJECT MGR.	301-415-1102
CHARLES J POLLOCK	SAXTON TASK FORCE	814-658-3973
MORT FAIRTILE	NRC PROJ. MGR	(301) 415-1-42
JAMES A. FOCKLER	SAXTON TASK FORCE	(814) 635-2083

MEETING BETWEEN THE NRC STAFF AND SAXTON

March 11, 1999

NAME	TITLE ORGANIZATION	PHONE
WILLIAM HEYSEK	~~GPUN LICENSING~~	717-948-8191

Saxton Nuclear Experimental Corporation (SNEC) Facility Site License Termination Plan Meeting

USNRC

Rockville MD

March 11, 1999

SNEC License Termination Plan

- SNEC Overview:
  - SNEC Organization
  - Transition Information
  - Citizens Task Force
  - Saxton Independent Inspector Program

SNEC License Termination Plan

- SNEC Overview:
  - Decommissioning Funding:
  - Schedule:
    Concrete Removal: till Spring 2000
    Site Remediation:Spring- Summer 2000
    Final Survey: Fall - Winter 2000/01
    License Termination: Spring 2001

SNEC License Termination Plan

- Brief History:
  - Westinghouse PWR Design
  - 23.5 MWTh/ ~ 7 MWE
  - Single Loop
  - Construction Authorization February 1960
  - Initial Critically April 1962

SNEC License Termination Plan

- Brief History:
  - Operational Period 1962 - 1972

    Three Fuel cycles
    Mixed Oxides Fuels
    Failed Fuel Operation
    Unplanned Releases

SNEC License Termination Plan

- Brief History:
  - Final Shutdown May 1972
  - Spent Fuel Removed 1972
  - Placed in "SAFSTOR" February 1975

SNEC License Termination Plan

- Brief History:
  - Phased Remediation:
    Decontamination and Demolition of Support Buildings (1986-1989)
    Soil Remediation Project (1994)
    CV Characterization (1995-)
    Asbestos Abatement (1996-1997)
    Electrical System Modifications (1996-1997)

SNEC License Termination Plan

- Brief History:
  - Decommissioning T/S Approved April 1998
  - Major Decommissioning Activities:
    CV Ventilation System
    System Dismantlement
    Large Component Removal
    Demins Disposal
    Shield Plug / Concrete Removal

License Termination Plan

- Covers Issues in the Standard Review Plan (NUREG-1700):
  - Site Characterization
  - Remaining Dismantlement Activities
  - Site Remediation Plans

License Termination Plan

- Covers Issues in the Standard Review Plan (NUREG-1700):
  - End use of site
  - Project Funding
  - Environmental Changes
  - Final Status Survey Plan

License Termination Plan

- LTP process:
  - The LTP has been submitted as a supplement to the SNEC Facility Updated Safety Analysis Report (USAR)

Final Status Survey

- Purpose:
  - Demonstrates compliance to the NRC that the SNEC Facility Site is below the unrestricted radiological release criteria.

Final Status Survey

- Site Specific Release Criteria:
  - Below USNRC Unrestricted Site Release Criteria (10 CFR Part 20). Less than 25 mrem per year (TEDE) to the average member of the critical group
  - Below the EPA National Primary Drinking Water Standard for Radioactivity (40 CFR Part 141) Less than 4 mrem per year

Final Status Survey

- Site Specific Release Criteria:
  - Exposure rates from gamma emitters:
    5 micro- rem per hour @ 1 meter (average)
    10 micro- rem per hour (maximum)
  - Below the applicable Derived Concentration Guideline Levels (DCGL) valves for soil, concrete and other structural materials.

Final Status Survey

- FSS Methodology:
  - Taken mainly from MARSSIM (NUREG-1575)
  - Using a form of the Data Quality Objectives (DQO) Process
    Seven steps per MARSSIM
    Use to plan the FFS process

Final Status Survey

- FSS Methodology:
  - Impacted:
  - Areas that have the potential for radioactive contamination.
  - Impacted areas are further divided into three classifications.
  - Initial screening indicates possibly as much as 29 acres

Final Status Survey

- FSS Methodology:
  - Class 1 Areas:
    Areas or locations that have a potential for radioactive contamination based on knowledge of site operating history, of known contamination levels or previous radiological surveys.

Final Status Survey

- FSS Methodology:
  - Class 2 Areas:
    These areas have or had a potential for radioactive contamination that is not expected to exceed the $DCGL_W$.

Final Status Survey

- FSS Methodology:
  - Class 3 Areas:
    Any impacted areas that are not expected to contain any residual radioactivity, or are expected to contain levels of residual radioactivity at a very small fraction of the $DCGL_W$.

Final Status Survey

- FSS Methodology:
  - Non-impacted:
    Areas that have no reasonable potential for residual contamination
  - Background reference areas will be selected from non-impacted areas

Final Status Survey

- Contamination Identification:
  - Based on continued site characterization process
  - Radiological surveys
  - Historical Site Assessment (HSA)

Final Status Survey

- Determination of Derived Concentration Guideline Levels (DCGL)
  - Current work in progress
  - Establishing background level
  - Establishing Site Modeling

Final Status Survey

- Quality Assurance:
  - Instrumentation Selection Calibration and operation
  - Survey Documentation
  - Quality Control Surveys (internal)
  - Written Procedures

Final Status Survey

- Quality Assurance:
  - Chain of Custody
  - Records Management
  - Access Controls
  - Control of Vendor Supplied Services
  - Independent Review of Survey Results

Final Status Survey

- Training:
  - Overview and Objectives
  - Procedures
  - Instrumentation
  - Sample Collection
  - Documentation

Final Status Survey

- Final Survey Phases:
  - CV Structure
  - Remaining Structures
  - All On-site areas
  - Remaining Impacted Areas

Final Status Survey

- Area Turnover for FSS:
  - Decommissioning activities that have the potential to re-contaminate the survey area must be completed
  - Housekeeping effort completed

Final Status Survey

- Turnover for FSS:
  - Final Remediation support surveys are completed and may consist of:

    Scan surveys
    Smear (loose surface) surveys

  - Access control measures in place

Final Status Survey

- Access Control Measures (one or more of the following):
  - Site personnel awareness
  - Barriers
  - Postings
  - Locking entrances

Final Status Survey

- FFS Performed:
  - Basically per MARSSIM
  - Per FSS Table 4-4

Final Status Survey

- Final Survey Results Report:
  - Consist of:

    Detailed and summary data reporting for each survey unit.

    Final TEDE Evaluation

    Independently Verified

SNEC License Termination Plan

- Conclusions:
  - No On-site spent fuel

  - Decommissioning Costs are covered

  - Unrestricted Release Criteria and Drinking Water Limits)

SNEC License Termination Plan

- Conclusions:
  - MARSSIM Methodology
  - LTP Ongoing Process
  - License Termination: Spring 2001