

**ORISE**  
OAK RIDGE INSTITUTE FOR SCIENCE AND EDUCATION

June 22, 2005

Mr. Thomas Dragoun  
NRR/DRIP  
U.S. Nuclear Regulatory Commission  
475 Allendale Road  
King of Prussia, PA 19406

**SUBJECT: DOCUMENT REVIEW—FINAL STATUS SURVEY REPORTS, SAXTON  
NUCLEAR EXPERIMENTAL CORPORATION, SAXTON,  
PENNSYLVANIA (DOCKET NO. 50-146; TASK 1)**

Dear Mr. Dragoun:

The Environmental Survey and Site Assessment Program (ESSAP) of the Oak Ridge Institute for Science and Education (ORISE) has reviewed Saxton Nuclear Experimental Corporation (SNEC) final status survey reports submitted to the U.S. Nuclear Regulatory Commission (NRC) on June 8, 2005. These documents describe the final status survey results for the following SNEC-designated areas: Open Land Area MA2, East Yard Excavation OL1-7, Open Land Area OL5, Open Land Area OL9, and Spray Pond Area SP1.

Comments identified are enclosed for your consideration. If you have any questions, please contact me at (865) 576-3356 or Alex J. Boerner at (865) 574-0951.

Sincerely,



Timothy J. Bauer  
Health Physicist  
Environmental Survey and  
Site Assessment Program

TJB:ar

Enclosure

cc: A. Adams, NRC/NRR/OWFN 12G13      A. Boerner, ORISE/ESSAP  
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*A Adams*

**Comments on  
Final Status Survey Reports  
Saxton Nuclear Experimental Corporation  
Saxton, Pennsylvania**

**June 2005**

Saxton Nuclear Experimental Corporation (SNEC) submitted final status survey reports (FSSR) to the U.S. Nuclear Regulatory Commission (NRC) on June 8, 2005. These documents described the final status survey (FSS) results for the following SNEC-designated areas: Open Land Area MA2, East Yard Excavation OL1-7, Open Land Area OL5, Open Land Area OL9, and Spray Pond Area SP1. The FSSRs were reviewed for completeness and conformance to the SNEC License Termination Plan (LTP, GPU 2004) and the MARSSIM (NRC 2000). Comments noted during the reviews are identified below.

***General Comments***

1. Quality Control (QC) comparisons in four of the FSSRs reviewed (GPU 2005a through d) do not compare the QC result against the sample result for agreement. LTP Section 5.4.5.1.3, *Soil and Bulk Materials*, specifies that the "original analytical results are then compared with the replicate analysis results for agreement." The section continues to describe that the replicate analysis process is implemented through procedure E900-QAP-4220.02, *SNEC Count Room Quality Assurance Program*. ESSAP recommends that the replicate analysis be included in the four FSSRs noted.
2. Reproduction errors were noted in the FSSRs reviewed. The reproduction errors did not affect the review of the FSSRs, but are noted because these records document the final radiological status of the subject areas and the NRC may wish the errors to be corrected by the licensee. Specific errors are noted in the sections below.

***Open Land Area MA2 (GPU 2005a)***

1. Appendix A, Attachment 2-3—The provided black and white reproduction does not allow the reader to distinguish between yellow and gray shaded sample results in Tables 1 and 2. This is also the case for the electronic version provided on CD.
2. Appendix A, Attachment C-2—The reference to the COMPASS computer program should likely be changed to reference the VSP computer program.

***East Yard Excavation OL1-7 (GPU 2005b)***

1. Section 5.0, Table 1—The listed LBGR value cannot be used with the DCGL<sub>w</sub> or 75% Action Level to calculate a relative shift of 3.0. Additionally, the table value for the LBGR does not match the value provided in Appendix A, Attachment 7-2.

2. Appendix A, Attachment 2-2—The provided black and white reproduction does not allow the reader to distinguish between yellow and gray shaded sample results in Tables 1 and 2. This is also the case for the electronic version provided on CD.
3. Appendix A, Attachment 3-1—The reproduction of this page was in error and is not completely legible. This is also the case for the electronic version provided on CD.
4. Appendix A, Attachment 8-1—The provided black and white reproduction does not allow the reader to distinguish highlighted results <MDA. This is also the case for the electronic version provided on CD.

***Open Land Area OL5 (GPU 2005c)***

1. Section 5.0, Table 1—The DQO parameter for “Number of static points” indicated in the table is 11 for OL5-1 and 12 for OL5-2, OL5-3, and OL5-4. The relative shift for each area is 3.0. Appendix A, Calculation E900-05-016, Section 2.1.6 indicates the DQO derived number of samples to collect was 11. What is the basis for the 12 listed for the noted survey units?
2. Section 6.1.1—This section compares the MDCscan to the DCGL<sub>w</sub> and since the MDCscan is less than the DCGL<sub>w</sub>, the scan sensitivity is adequate. However, the MDCscan is not less than the Action Level (AL). Appendix A, Calculation E900-05-016, Section 2.1.7 describes that the AL multiplied by the area factor for a one square meter area is greater than the MDCscan, and as such meets MARSSIM (and LTP) requirements. The main report text discussion should follow the Calculation text. This comment is also applicable to Sections 6.2.1, 6.3.1, and 6.4.1.
3. Appendix A, Attachment 4-1—The reproduction of this page was in error and is not completely legible. This is also the case for the electronic version provided on CD.
4. Appendix B—The reproduction of the first page was in error and is not completely legible. This is also the case for the electronic version provided on CD.

***Open Land Area OL9 (GPU 2005d)***

1. Appendix A, Attachment 2-2—The provided black and white reproduction does not allow the reader to distinguish between yellow and gray shaded sample results in Table 1. This is also the case for the electronic version provided on CD.
2. Appendix A, Attachment 2-8—The provided black and white reproduction does not allow the reader to distinguish between yellow and gray shaded sample results in Tables 1 and 2. This is also the case for the electronic version provided on CD.
3. Appendix C—The reproduction of this appendix was in error and the second page is not legible because it was copied onto the bottom of the first page. This is also the case for the electronic version provided on CD.

***Spray Pond Area SP1 (GPU 2005e)***

Section 7.3, *Quality Control Measurements*, provides a discussion of the two quality control samples results compared to the original results. Refer to General Comment #1 for additional discussion of the QC samples. ESSAP recommends that a reference to the LTP and/or SNEC procedure be provided that was used in the comparison presented in this section.

## REFERENCES

- GPU Nuclear, Inc. (GPU). Saxton Nuclear Experimental Corporation Facility License Termination Plan. Saxton, Pennsylvania; Revision 3, February 2004.
- GPU Nuclear, Inc. FSS Report for Open Land Area MA2. Saxton, Pennsylvania; June 8, 2005a.
- GPU Nuclear, Inc. FSS Report for East Yard Excavation OL1-7. Saxton, Pennsylvania; June 8, 2005b.
- GPU Nuclear, Inc. FSS Report for Open Land Area OL5. Saxton, Pennsylvania; June 8, 2005c.
- GPU Nuclear, Inc. FSS Report for Open Land Area OL9. Saxton, Pennsylvania; June 8, 2005d.
- GPU Nuclear, Inc. FSS Report for Spray Pond Area SP1. Saxton, Pennsylvania; June 8, 2005e.
- U.S. Nuclear Regulatory Commission (NRC). Multi-Agency Radiation Survey and Site Investigation Manual (MARSSIM). Washington, DC; NUREG-1575; Revision 1, August 2000.