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September 29, 2005  
E910-05-068

U. S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, DC 20555

Gentlemen:

Subject: Saxton Nuclear Experimental Corporation  
Operating License No. DPR-4  
Docket 50-146  
Response to Additional Comments on SNEC Final Status Survey Reports

Enclosed are the responses to additional comments provided on the SNEC Final Status Survey Reports as discussed per our telephone conversation with Mr. T. Dragoun on September 29, 2005. Changes to the reports are provided in detail where required. These changes are administrative and for clarification purposes and do not change the final conclusions of the reports. Each response is provided with the original GPU Nuclear transmittal letter number.

If there are any questions regarding this letter, please contact Mr. Art Paynter of my staff at (717) 948-8425.

Sincerely,

A handwritten signature in dark ink, appearing to read "J. Byrne", is written over the printed name.

James J. Byrne  
Program Director, SNEC

cc:  
NRC Project Manager  
NRC Project Scientist, Region I  
T. Vitkus, ORISE Project Leader

A001

**Survey Report OL13 Open Land**

(GPU Nuclear Letter E910-05-024 comments from ORISE Letter dated July 20, 2005)

- 2) A page was missing from the appendix. The two pages of the COMPASS soil report for OL13-3 are provided below to replace the first page and provide the missing page of Appendix D.

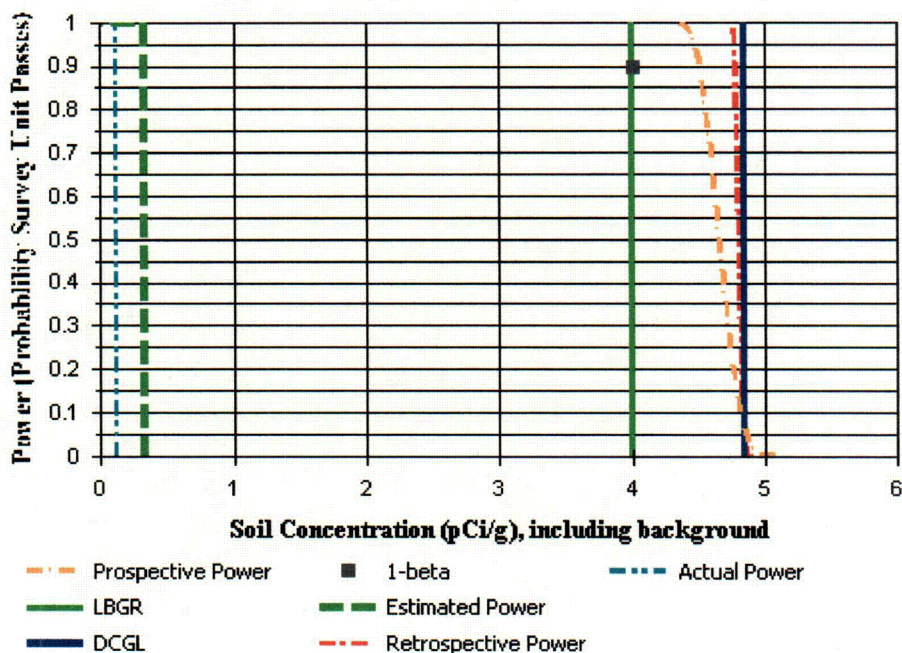


# DQA Surface Soil Report

## Assessment Summary

Site:	OL13		
Planner(s):	Tristian M. Tritch		
Survey Unit Name:	OL13-3		
Report Number:	1		
Survey Unit Samples:	14		
Reference Area Samples:	0		
Test Performed:	Sign	Test Result:	Not Performed
Judgmental Samples:	0	EMC Result:	Not Performed
Assessment Conclusion:	<b><i>Reject Null Hypothesis (Survey Unit PASSES)</i></b>		

## Retrospective Power Curve





# DQA Surface Soil Report

## Survey Unit Data

NOTE: Type = "S" indicates survey unit sample.  
Type = "R" indicates reference area sample.

Sample Number	Type	Cs-137 (pCi/g)
1	S	0.11
2	S	0.1
3	S	0.07
4	S	0.09
5	S	0.12
6	S	0.14
7	S	0.05
8	S	0.13
9	S	0.14
10	S	0.09
11	S	0.13
12	S	0.12
13	S	0.09
14	S	0.32

## Basic Statistical Quantities Summary

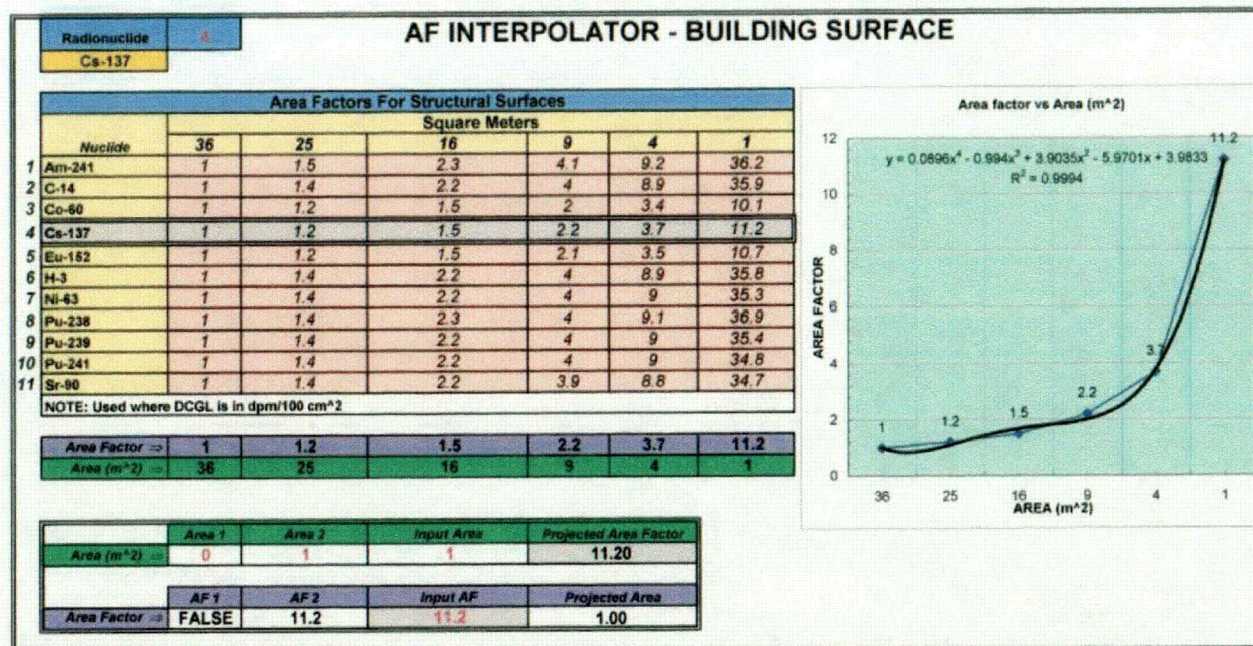
Statistic	Survey Unit	Background	DQO Results
Sample Number	14	N/A	N=11
Mean (pCi/g)	0.12	N/A	0.33
Median (pCi/g)	0.12	N/A	N/A
Std Dev (pCi/g)	0.06	N/A	0.3063
High Value (pCi/g)	0.32	N/A	N/A
Low Value (pCi/g)	0.05	N/A	N/A

**Survey Report SSGS Discharge Tunnel**

(GPU Nuclear Letter E910-05-044 comments from ORISE Letter dated August 17, 2005)

Two pages from the appendix were inadvertently omitted from Appendix E. These pages are attached below.





## Site Report

Analysis Based on MARSSIM Equation 8-2

### EMC CALCULATOR

**Units** ☐ dpm/100 cm<sup>2</sup> ☒ cpm/100 cm<sup>2</sup>

**Survey Unit Mean** 278.7 cpm/100 cm<sup>2</sup>

**Reference Bkgnd Mean** 243.5 cpm/100 cm<sup>2</sup>

**SU Mean** 35.1 ncpm/100 cm<sup>2</sup>

**AP-1** 961.5 ncpm/100 cm<sup>2</sup>

**AP-2** 636.5 ncpm/100 cm<sup>2</sup>

**AP-3** ncpm/100 cm<sup>2</sup>

**Unity Fraction** 0.4046 Equation 8-2, MARSSIM

**GA** 424 ncpm/100 cm<sup>2</sup>

**DCGLw** 424 ncpm/100 cm<sup>2</sup>

Survey Unit AF	AF	m <sup>2</sup>	EMC
	1	108	PASS
AF-1	11.2	0.19	PASS
AF-2	11.2	0.19	PASS
AF-3			PASS

PASS

NOTE: Required input values in RED.

**LOCATION**

Ceiling of Discharge Tunnel at ~ 120' near turn to river.  
 Survey Unit (SS4) = 108 m<sup>2</sup>  
 SS4-011A is Subset of SS4 and is ~4.4 m<sup>2</sup>  
 EMC 1 & 2 are < 0.19m<sup>2</sup> each, residing in SS4-011A.

ATTACHMENT 8 - 1

C-02



37122N21	Instrument 95348	RLM6220	Time	Detector	Counts	Count Time (sec)	Mode	Designator	FSS-001	BHB
0	BKGND	1/4/2002	8:52	1	7.26E+03	1800	SCL	Initial Background	$\beta$	
1	Source Check	1/4/2002	9:07	1	1.79E+05	60	SCL	Source	$\beta$	
2	BKGND	1/4/2002	10:05	2	4.40E+01	1800	SCL	Initial Background	$\alpha$	
14	Source Check	1/4/2002	10:39	2	1.51E+05	60	SCL	Source	$\alpha$	
15	CON A1S	1/4/2002	13:00	1	2.78E+02	60	SCL	Shielded	$\beta$	2.78E+02
16	CON A1U	1/4/2002	13:02	1	3.88E+02	60	SCL	Unshielded	$\beta$	3.32E+02
17	CON A2S	1/4/2002	13:20	1	2.39E+02	60	SCL	Shielded	$\beta$	2.39E+02
18	CON A2U	1/4/2002	13:21	1	2.22E+02	60	SCL	Unshielded	$\beta$	1.66E+02
19	CON A3S	1/4/2002	13:28	1	2.39E+02	60	SCL	Shielded	$\beta$	2.39E+02
20	CON A3U	1/4/2002	13:30	1	2.62E+02	60	SCL	Unshielded	$\beta$	2.06E+02
21	CON A4S	1/4/2002	13:36	1	2.45E+02	60	SCL	Shielded	$\beta$	2.45E+02
22	CON A4U	1/4/2002	13:38	1	2.71E+02	60	SCL	Unshielded	$\beta$	2.15E+02
23	CON A5S	1/4/2002	13:58	1	2.00E+02	60	SCL	Shielded	$\beta$	2.00E+02
24	CON A5U	1/4/2002	14:00	1	2.82E+02	60	SCL	Unshielded	$\beta$	2.26E+02
25	CON A6S	1/4/2002	14:03	1	1.84E+02	60	SCL	Shielded	$\beta$	1.84E+02
26	CON A6U	1/4/2002	14:05	1	3.10E+02	60	SCL	Unshielded	$\beta$	2.54E+02
27	CON A7S	1/4/2002	14:09	1	1.98E+02	60	SCL	Shielded	$\beta$	1.98E+02
28	CON A7U	1/4/2002	14:10	1	3.15E+02	60	SCL	Unshielded	$\beta$	2.59E+02
29	CON A8S	1/4/2002	14:19	1	2.34E+02	60	SCL	Shielded	$\beta$	2.34E+02
30	CON A8S	1/4/2002	14:22	1	2.31E+02	60	SCL	Shielded	$\beta$	2.31E+02
31	CON A8U	1/4/2002	14:24	1	2.88E+02	60	SCL	Unshielded	$\beta$	2.32E+02
32	CON A9S	1/4/2002	14:31	1	2.65E+02	60	SCL	Shielded	$\beta$	2.65E+02
33	CON A9U	1/4/2002	14:33	1	2.89E+02	60	SCL	Unshielded	$\beta$	2.33E+02
34	CON A10S	1/4/2002	14:42	1	2.46E+02	60	SCL	Shielded	$\beta$	2.46E+02
35	CON A10U	1/4/2002	14:43	1	3.16E+02	60	SCL	Unshielded	$\beta$	2.60E+02
36	CON A11S	1/4/2002	15:10	1	1.95E+02	60	SCL	Shielded	$\beta$	1.95E+02
37	CON A11U	1/4/2002	15:12	1	2.94E+02	60	SCL	Unshielded	$\beta$	2.38E+02
38	CON A12S	1/4/2002	15:13	1	2.21E+02	60	SCL	Shielded	$\beta$	2.21E+02
39	CON A12U	1/4/2002	15:14	1	2.84E+02	60	SCL	Unshielded	$\beta$	2.28E+02
40	CON A13S	1/4/2002	15:23	1	1.74E+02	60	SCL	Shielded	$\beta$	1.74E+02
41	CON A13U	1/4/2002	15:24	1	2.94E+02	60	SCL	Unshielded	$\beta$	2.38E+02
42	CON A14S	1/4/2002	15:25	1	1.96E+02	60	SCL	Shielded	$\beta$	1.96E+02
43	CON A14U	1/4/2002	15:26	1	3.33E+02	60	SCL	Unshielded	$\beta$	2.77E+02
44	CON A15S	1/4/2002	15:28	1	2.16E+02	60	SCL	Shielded	$\beta$	2.16E+02
45	CON A15U	1/4/2002	15:29	1	3.45E+02	60	SCL	Unshielded	$\beta$	2.89E+02
46	CON A16S	1/4/2002	15:30	1	1.83E+02	60	SCL	Shielded	$\beta$	1.83E+02
47	CON A16U	1/4/2002	15:31	1	3.13E+02	60	SCL	Unshielded	$\beta$	2.57E+02
48	CON A17S	1/4/2002	15:33							

ATTACHMENT

9.2

C-03



### **Survey Report OL1-6 Trench**

(GPU Nuclear Letter E910-05-052 comments from ORISE Letter dated August 11, 2005)

- 3) In Appendix A-1 the Microshield model is slightly different than those of other reports. Different cases may involve calculations of gamma flux in different models. Microshield calculations are then repeated in order to provide appropriate conversion factors. Engineering judgment is used in all of these cases to develop appropriate model conditions. In this case, the difference between 11-inch radius and 11.1-inch radius produces a 1% difference in the MDCscan for the assumed source. This difference is trivial compared to the variance associated with the judgment involved in developing the models and changes in assumptions that are case –to case and then comparing that to the actual surfaces scanned. No changes to the report are needed.



**Survey Report Weir Discharge Area**

(GPU Nuclear Letter E910-05-053 comments from ORISE Letter dated August 11, 2005)

8) Different cases may involve calculations of gamma flux in different models.

Microshield calculations are then repeated in order to provide appropriate conversion factors. Engineering judgment is used in all of these cases to develop appropriate model conditions. In this case, the difference between 11-inch radius and 11.1-inch radius produces a 1% difference in the MDCscan for the assumed source. This difference is trivial compared to the variance associated with the judgment involved in developing the models and changes in assumptions that are case –to case and then comparing that to the actual surfaces scanned. No changes to the report are needed.