



Southeast
Missouri State University

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June 18, 2010

Mr. Kevin Null
USNRC Region III
2443 Warrenville Road
Suite 210
Lisle, Illinois 60532-4352

Dear Mr. Null:

This letter is to convey the Project Survey Planning Form for the characterization of the potential soil contamination in the grassy area adjacent to the Magill Hall Radioactive Materials Storage Bunker.

The Project Planning form includes details regarding the design of the survey project. Attached is a Map showing the proposed sampling locations in the grassy area. There are 10 systematically defined sampling locations and two biased locations designed to assess the potential that contamination discovered in the soil near the bunker could have originated from the bunker itself.

If you have questions please feel free to call me. I will not be in town on June 23rd and June 24th, otherwise I should be available during regular hours next week.

Sincerely,

A handwritten signature in black ink, appearing to read 'Walt W. Lilly', written over a white background.

Walt W. Lilly
Radiation Safety Officer.

RECEIVED JUN 22 2010

**SOUTHEAST MISSOURI STATE UNIVERSITY
 DECONTAMINATION AND SURVEY PLAN FOR MAGILL AND RHODES HALLS
 (REV 1 – JUNE 2010)**

PROJECT SURVEY PLANNING FORM

Land Area	Impacted (Yes/No)	Total Area (m ²)
Surface soil	Yes	24
Subsurface soil	No	Not Applicable
<p>Comments: Magill Hall, Rhodes Hall and the associated paved areas surrounding the buildings have been in place in their current configuration without rework or disturbance to surface soils since the time that radioactive materials might have been released at the University; therefore, it is reasonable to conclude that any radioactive materials that might have been spread to the soil in the project area (outside Magill near the Radioactive Material Storage Area) would be present in the top 15 cm of surface soils and that no contamination would exist under paved surfaces. See attached figure.</p>		

Radionuclide COCs	DCGL (pCi/g)	Investigation Level (pCi/g)	Lab MDC (pCi/g)	Scan MDC ^a (pCi/g)
Am-241	2.1 ^b	1.05	< 0.5	31.5 ^c

^a Surface soil only.

^b Soil Screening Level (NUREG-1757)

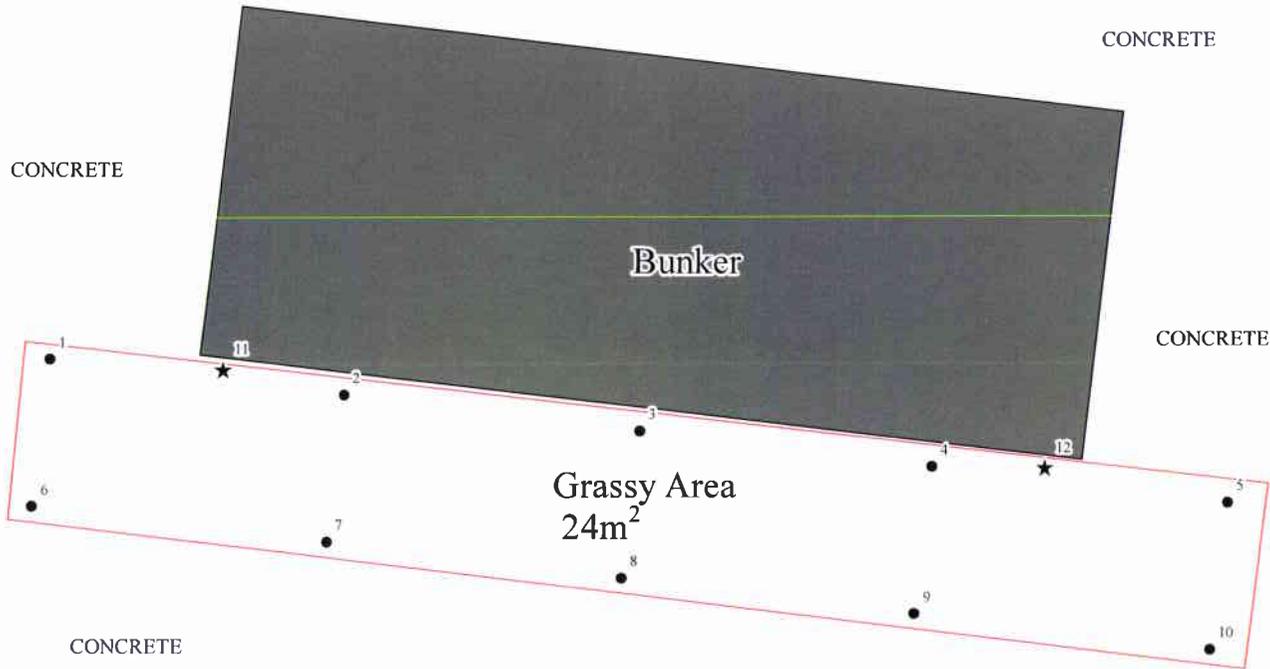
^c 2"x2" Sodium Iodide detector (NUREG-1507)

Parameter Name	Project Specific Value
Dose Criterion (mrem/yr)	25 mrem/yr
Statistical Test (Sign or WRS)	Sign
Number of Class 1 Survey Units	1
Number of Class 2 Survey Units	0
Number of Class 3 Survey Units	0
LBGR	1.05 pCi/g
Type I/Type II Errors	0.05/0.20
Estimated Standard Deviation	0.6 pCi/g
Relative Shift	1.8
Estimated # of Samples/Survey Unit	9
Detectors Used for Gamma Survey	NaI (2"x2") & FIDLER

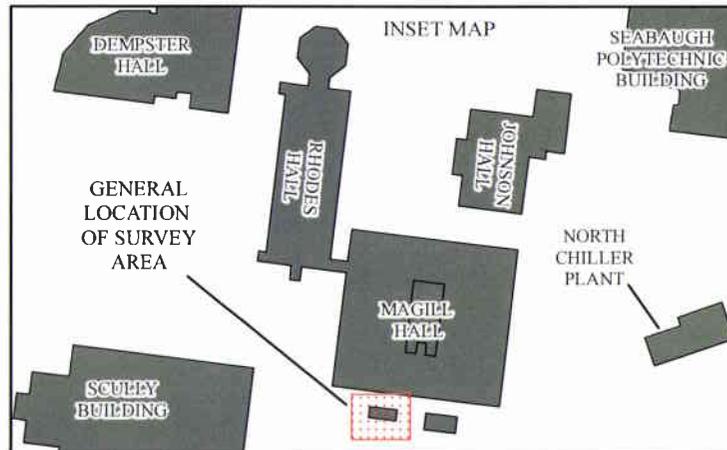
Nuclide	Area Factors ^a				
	0.24m ²	2.4 m ²	24 m ²	100 m ²	2,000 m ²
Am-241	56	30	15	12	1.0

^a Calculated using RESRAD Version 6.5. All default input parameters were used in modeling except contamination depth. A 15 cm thickness of contamination was used in lieu of the 2 m default based on the actual anticipated contamination profile and for consistency with modeling performed by NRC in the development of screening level DCGLs. The contamination area was varied from 2,000 m² to 0.24 m².

W:\SEM\GIS\SEMO_Proposed_Samples.mxd

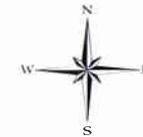


Id	X	Y	Type
1	1102419.0	541050.01	Systematic
2	1102428.9	541048.81	Systematic
3	1102438.9	541047.62	Systematic
4	1102448.8	541046.42	Systematic
5	1102458.7	541045.22	Systematic
6	1102418.4	541045.05	Systematic
7	1102428.3	541043.85	Systematic
8	1102438.3	541042.65	Systematic
9	1102448.2	541041.46	Systematic
10	1102458.1	541040.26	Systematic
11	1102424.8	541049.66	Biased
12	1102452.6	541046.38	Biased



Legend

- ★ Proposed Biased Sample Location
- Proposed Systematic Sample Location
- Systematic Sample Area
- Building



MO-East State Plane
(NAD 83, Feet)



Magill Hall Proposed Sample Locations
Southeast Missouri State University
Cape Girardeau, MO



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