



SNEC CALCULATION COVER SHEET

CALCULATION DESCRIPTION

Calculation Number E900-05-016	Revision Number 1	Effective Date 5/31/05	Page Number 1 of 1
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Subject

Northeast Dump Open Land Area OL5 – Survey Design

Question 1 - Is this calculation defined as "In QA Scope"? Refer to definition 3.5. Yes No

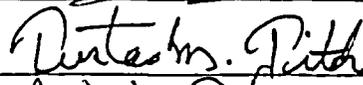
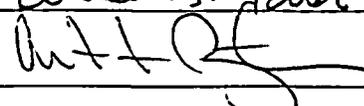
Question 2 - Is this calculation defined as a "Design Calculation"? Refer to definitions 3.2 and 3.3. Yes No

NOTES: If a "Yes" answer is obtained for Question 1, the calculation must meet the requirements of the SNEC Facility Decommissioning Quality Assurance Plan. If a "Yes" answer is obtained for Question 2, the Calculation Originator's immediate supervisor should not review the calculation as the Technical Reviewer.

DESCRIPTION OF REVISION

Revision 1 adds Attachment 2-3 which provides the calculation logic for the surrogate DCGLw and the action level.

APPROVAL SIGNATURES

Calculation Originator	W. J. Cooper CHPI 	Date	5/31/05
Technical Reviewer	T. Tritch/ 	Date	5/31/05
Additional Review	A. Paynter/ 	Date	31 May 2005
Additional Review		Date	

APPENDIX F
OL5

DCGLw Calculation Logic

- I. **Survey Unit:** Northeast Dump Open Land Area OL5, Class 1 Area
- II. **Description:** The purpose of this calculation is to determine a representative mix from available sample analyses results for the Northeast Dump area. The effective volumetric DCGLw is then determined in accordance with guidance provided by the SNEC License Termination Plan (LTP) and MARSSIM.
- III. **Data Selection Logic Tables:** The radionuclide selection logic and subsequent DCGLw calculations are provided in the tables described below. These tables were developed using Microsoft Excel and are validated in SNEC calculation E900-03-012. Table explanations follow:

Attachment 2-2: Data Listing – This table provides a list of the most representative sample analyses from the OL5 area. Results are from scoping and characterization surveys. The samples consist of soil media that was taken in support of the aforementioned surveys. As applicable, a sample number, sample location, description, radionuclide concentration, and analysis date are provided for each sample. Note that samples are identified as MA5. This survey area designation pre-dates the reassignment to the designator OL5. Of the data listed, only sample number SXSL4766 is used because none of the other results had any positive activity for the hard-to-detect nuclides of interest.

Note 1

With respect to the survey unit, the term "soil" is a generic term that can be used to describe individually or in combination traditional soils, fly ash, building rubble, and/or rock materials.

Attachment 2-1: Effective DCGLw Calculator for Cs-137 (in pCi/g) – This table provides the surrogate Cs-137 DCGLw calculation results for data derived from Attachment 2-2. It uses the ratios between the nuclides weighted for the DCGLs to determine an effective surrogate Cs137 DCGL.

- IV. **Summary** – Since the survey area is soil, coal debris, and rock materials, the existing release limit is based on the volumetric DCGLw. Using the above logic tables the calculated Cs-137 volumetric DCGLw is 6.28 pCi/g. This value would be reduced by 25% as part of the SNEC facilities requirement to apply an administrative limit of 4.71 pCi/g as discussed in the License Termination Plan (LTP).

Attachment 2-3
E900-05-016