This document was prepared in conjunction with work accomplished under Contract No. DE-AC09-96SR18500 with the U. S. Department of Energy.

WSRC-TR-2005-00323

Revision 0

KEY WORDS: UDQE
MAVRC
EQUIPMENT DISPOSAL

Unreviewed Disposal Question Evaluation: Disposal of 0.2 Curie/gallon MAVRC Project Equipment in Vault 1

Prepared By:

Margaret R. Millings

July 7, 2005

Westinghouse Savannah River Company LLC

Savannah River Site

Aiken, SC 29808

SAVANNAH RIVER NATIONAL LABORATORY

Prepared for the U.S. Department of Energy under Contract No. DE-AC09-96SR1850

REVIEWS AND APPROVALS

Author:

7/28/05

Margaret R. Millings, Environmental Restoration Technology Section Geo-Modeling — Date

Design Check:

7/28/05

Greg Flach, Environmental Restoration Technology Section Geo-Modeling — Date
(per Manual E7, Procedure 2.6)

Approvals:

7/20/05

W. E. Stevens, Level 3, Waste Processing Technology — Date

7-20-05

B. T. Butcher, Level 4, Waste Disposal and Environmental Development — Date

7/20/05

J. R. Cook, Waste Disposal and Environmental Development — Date

7.20.05

D. G. Thompson, Facility Operations Safety Committee Chairman — Date

7-27.05

M. S. Miller, Waste Solidification Chief Engineer — Date

7-28-05

W. T. Goldston, SRS Disposal Authorization Statement Lead — Date

LIST OF ACRONYMS AND ABBREVIATIONS

CA	Composite Analysis
Ci	Curies
DAS	Disposal Authorization Statement
DSA	Documented Safety Analysis
MAVRC	Mixer At Vault Roof Concept
PA	Performance Assessment
SA	Special Analysis
UDQE	Unreviewed Disposal Question Evaluation
WAC	Waste Acceptance Criteria

Summary and Introduction

The Saltstone Facility 0.2 Curie/gallon MAVRC (Mixer At Vault Roof Concept) Project will utilize various pieces of process equipment that have not been analyzed from a Performance Assessment perspective for future disposal. The proposed activity will involve the disposal of Saltstone process equipment in an empty Vault 1 cell and encasing the equipment in clean (non-radioactive) grout. An examination of this activity indicates that the disposal of up to 20 pieces of each specified component should not affect the assumptions, results, and conclusions of the approved Performance Assessment (PA) and Special Analyses (SA) for Saltstone, and that the activity is within the bounds of the Disposal Authorization Statement (DAS).

Discussion

Table 1 provides the major equipment that will be used in the MAVRC Project that will require disposal in a Vault 1 cell (Technical Task Request HLW-SSF-TTR-2005-0007). The table also gives an estimate of the maximum grout holdup in each piece of equipment assuming that the interior of each piece of equipment is entirely filled with saltstone grout (i.e., a complete rockup event).

Table 1: Equipment for Future Disposal in Vault

Equipment	Maximum Grout Holdup	Dimensions or Reference
Grout Pump (including manifold)	14 gallons	M-DCP-Z-05007
Grout Hopper (including reducer)	120 gallons	P-PM-Z-00015
Overflow Container	330 gallons	B-12 Waste Container
Pulsation Damper	3 gallons	M-DCP-Z-05007
Existing Mixer	30 gallons	Datasheet DS-N-3-1
3-inch Process Piping (including Vault #4 grout line)	550 gallons	1500 feet

The radioactivity of the saltstone grout should be lower than the limits of the salt solution waste stream due to the mixing of the salt solution waste stream and the premix (cement, blast furnace slag and flyash). As specified in the Technical Task Request (HLW-SSF-TTR-2005-0007), the radioactivity of the saltstone grout was assumed to be 64% of the bounding Documented Safety Analysis (DSA) salt solution concentrations identified in WSP-SSF-2004-00030, Rev. 1 (Chandler 2005). The use of the DSA concentrations rather than the WAC limits (Chandler 2005) is a conservative approach since the DSA concentrations are greater than the WAC limits. For a few of the radionuclides, such as I-129 and Cs-137, the DSA is significantly greater than the WAC (e.g. WAC limit for I-129 = 1.13E+3 pCi/mL versus DSA concentration = 1.25E+5 pCi/mL).

For this evaluation, the vault disposal limits used for the calculations originated from the recent Vault 4 Special Analysis (Cook et al. 2005). This SA provides the most updated disposal limits incorporating revisions to the pathway analyses for groundwater, an inadvertent intruder, air pathways for potential exposure and radon emanation. The pathway which yielded the lowest limit (i.e. most conservative) determined the overall disposal limit for each radionuclide. The SA concluded that the disposal of the waste planned for Vault 4 will meet the performance objectives of DOE Order 435.1 and will not alter the conclusions of the Saltstone PA. Although this SA evaluated disposal limits for Vault 4, the similarity of the cells (e.g. location, materials, dimensions, disposal practices) in Vault 1 and Vault 4 make the pathway analyses also applicable to the Vault 1 cells.

This Unreviewed Disposal Question Evaluation (UDQE) only addresses radionuclides with disposal limits less than 1E+20 Ci. Disposal limits greater than 1E+20 Ci are considered "equivalent to unlimited quantities of that radionuclide being acceptable for disposal" (Cook et al. 2005, Section 7.1). Radionuclide limits per cell were calculated by taking the vault limits in the SA and dividing by the number of cells in Vault 4 (i.e. $1/12^{th}$ the Vault 4 limit = cell limit). Comparisons were performed between the calculated radioactivity of the saltstone grout holdup in the equipment and the disposal limits for one cell for the 1,000 year and 10,000 year times of compliance. The following two scenarios were assessed:

1. Disposal of one piece of each component (Table 1) totaling a maximum saltstone grout holdup of 1,047 gallons in the cell.
2. Disposal of 20 pieces of each component (Table 1) totaling a maximum saltstone grout holdup of 20,940 gallons in the cell.

Both scenarios assume that the equipment will be disposed in an empty cell of Vault 1 and enclosed in clean (non-radioactive) grout.

Results of the assessments for these two scenarios are provided on Tables 2 and 3. Both scenarios yield disposal inventories less than the limits per cell calculated for the 1,000 year and 10,000 year times of compliance. These tables also show the fraction of the radionuclide disposal limits attributed to each scenario. A sum of the individual fractions less than one indicates that disposal of that inventory will meet the USDOE performance objectives and requirements. For scenario #1, which assumes the disposal of one piece of each failed component, the sum of fractions is approximately 0.005 for the 1,000 year time of compliance and 0.027 for the 10,000 year time of compliance. For scenario #2, which assumes the disposal of 20 pieces of each failed component, the sum of fractions is 0.096 for the 1,000 year time of compliance and 0.542 for the 10,000 year time of compliance.

Table 2: Comparison of 1,000 Year Limit with Disposal Scenarios

Radionuclide	Disposal Limit per Cell (Ci)	Scenario 1 (Ci)	Fraction of Limit	Scenario 2 (Ci)	Fraction of Limit
Ac-227*	7.33E+06	3.17E-02	4.32E-09	6.34E-01	8.65E-08
Ag-108m*	4.75E+02	3.17E-02	6.68E-05	6.34E-01	1.34E-03
Al-26	1.33E+01	8.12E-03	6.09E-04	1.62E-01	1.22E-02
Am-241^T	4.00E+07	6.75E-01	1.69E-08	1.35E+01	3.37E-07
Am-242m*	1.33E+06	3.17E-02	2.38E-08	6.34E-01	4.76E-07
Am-243^T	2.50E+04	6.75E-01	2.70E-05	1.35E+01	5.40E-04
Ba-133*	1.00E+09	3.17E-02	3.17E-11	6.34E-01	6.34E-10
Bk-249*	4.08E+06	3.17E-02	7.76E-09	6.34E-01	1.55E-07
C-14	3.67E+06	3.17E-01	8.65E-08	6.34E+00	1.73E-06
Cf-249*	1.08E+04	3.17E-02	2.93E-06	6.34E-01	5.85E-05
Cf-250*	1.83E+16	3.17E-02	1.73E-18	6.34E-01	3.46E-17
Cf-251*	1.50E+05	3.17E-02	2.11E-07	6.34E-01	4.23E-06
Cf-252*	5.25E+12	3.17E-02	6.04E-15	6.34E-01	1.21E-13
Cl-36*	1.25E+18	3.17E-02	2.54E-20	6.34E-01	5.07E-19
Cm-242	1.00E+10	3.17E-02	3.17E-12	6.34E-01	6.34E-11
Cm-243*	5.83E+08	3.17E-02	5.44E-11	6.34E-01	1.09E-09
Cm-244^T	7.17E+15	6.75E-01	9.41E-17	1.35E+01	1.88E-15
Cm-245*	7.00E+05	3.17E-02	4.53E-08	6.34E-01	9.06E-07
Cm-246*	4.83E+13	3.17E-02	6.56E-16	6.34E-01	1.31E-14
Cm-247*	2.17E+03	3.17E-02	1.46E-05	6.34E-01	2.93E-04
Cm-248*	3.83E+07	3.17E-02	8.27E-10	6.34E-01	1.65E-08
Co-60	4.83E+08	3.17E+00	6.56E-09	6.34E+01	1.31E-07
Cs-134	3.42E+18	3.17E+00	9.28E-19	6.34E+01	1.86E-17
Cs-137	5.00E+05	3.35E+02	6.70E-04	6.70E+03	1.34E-02
Eu-152*	5.33E+05	3.17E-02	5.94E-08	6.34E-01	1.19E-06
Eu-154	1.00E+07	6.34E+00	6.34E-07	1.27E+02	1.27E-05
Eu-155	9.17E+17	3.17E-02	3.46E-20	6.34E-01	6.92E-19
H-3	4.58E+10	1.59E+00	3.46E-11	3.18E+01	6.93E-10
I-129	1.50E+06	3.17E-01	2.11E-07	6.34E+00	4.23E-06
K-40*	2.67E+02	3.17E-02	1.19E-04	6.34E-01	2.38E-03
Kr-85*	2.25E+10	3.17E-02	1.41E-12	6.34E-01	2.82E-11
Mo-93*	2.92E+08	3.17E-02	1.09E-10	6.34E-01	2.17E-09
Na-22*	6.50E+14	3.17E-02	4.88E-17	6.34E-01	9.76E-16
Nb-93m*	7.50E+07	3.17E-02	4.23E-10	6.34E-01	8.46E-09
Nb-94	8.33E+01	4.31E-02	5.17E-04	8.62E-01	1.03E-02
Np-237^T	6.42E+03	6.75E-01	1.05E-04	1.35E+01	2.10E-03
Pa-231*	1.83E+03	3.17E-02	1.73E-05	6.34E-01	3.46E-04
Pb-210*	3.25E+10	3.17E-02	9.76E-13	6.34E-01	1.95E-11
Pu-238^T	5.17E+07	6.75E-01	1.31E-08	1.35E+01	2.61E-07
Pu-239	2.50E+09	6.75E-01	2.70E-10	1.35E+01	5.40E-09

Radionuclide	Disposal Limit per Cell (Ci)	Scenario 1 (Ci)	Fraction of Limit	Scenario 2 (Ci)	Fraction of Limit
Pu-240[T]	1.92E+13	6.75E-01	3.52E-14	1.35E+01	7.04E-13
Pu-241	1.25E+09	2.36E+00	1.89E-09	4.72E+01	3.78E-08
Pu-242[T]	4.33E+10	6.75E-01	1.56E-11	1.35E+01	3.11E-10
Pu-244*	3.08E+02	3.17E-02	1.03E-04	6.34E-01	2.06E-03
Ra-226*	3.50E+01	3.17E-02	9.06E-04	6.34E-01	1.81E-02
Ra-228*	3.08E+07	3.17E-02	1.03E-09	6.34E-01	2.06E-08
Sb-125	1.17E+16	6.34E+00	5.44E-16	1.27E+02	1.09E-14
Se-79	4.00E+05	3.17E-01	7.93E-07	6.34E+00	1.59E-05
Sn-126	1.00E+02	5.07E-02	5.07E-04	1.01E+00	1.01E-02
Sr-90	2.00E+15	6.34E+01	3.17E-14	1.27E+03	6.34E-13
Tc-99	3.08E+12	1.19E+01	3.86E-12	2.38E+02	7.72E-11
Th-228*	1.58E+18	3.17E-02	2.00E-20	6.34E-01	4.01E-19
Th-229*	7.17E+02	3.17E-02	4.42E-05	6.34E-01	8.85E-04
Th-230*	7.25E+01	3.17E-02	4.37E-04	6.34E-01	8.75E-03
Th-232	1.33E+01	8.12E-03	6.09E-04	1.62E-01	1.22E-02
U-232*	7.50E+02	3.17E-02	4.23E-05	6.34E-01	8.46E-04
U-233	7.42E+03	3.17E-02	4.28E-06	6.34E-01	8.55E-05
U-234	1.50E+04	3.17E-02	2.11E-06	6.34E-01	4.23E-05
U-235	4.83E+04	3.17E-04	6.56E-09	6.34E-03	1.31E-07
U-236	2.67E+08	3.17E-02	1.19E-10	6.34E-01	2.38E-09
U-238	6.67E+03	3.17E-02	4.76E-06	6.34E-01	9.51E-05
		Sum of Fractions	**4.81E-03**		**9.62E-02**

* Very low levels of these radionuclides exist in the waste and therefore they do not have WAC limits and/or were not addressed in the DSA accident analysis. For this evaluation, a value of 1.25E+4 pCi/mL was used for calculating the radioactivity of the saltstone grout inside the equipment. This value was chosen because of the WAC requirement that any radionuclide not specifically listed in the WAC that has a concentration ≥1.25E+4 pCi/mL must be reviewed and authorized by WS Engineering and Operations before transfer to Saltstone (WSP-SSF-2004-00030 Rev. 1).

[T] The DSA Source Term for these radionuclides is listed as being "bounded by Pu-239". The sum of activities of these major alpha-emitting isotopes (Am-241, Am-243, Cm-244, Np-237, Pu-238, Pu-239, Pu-240, Pu-242) must be ≤2.66E+5 pCi/mL in order to protect assumptions made in the DSA accident analysis (WSP-SSF-2004-00030 Rev. 1). For this evaluation, they were assumed to be the same as the DSA source term listed for Pu-239 (2.66E+5 pCi/mL). This assumption is a conservative approach since it assumes that each of the alpha emitting isotopes is at the total limit (2.66E+5 pCi/mL).

Table 3: Comparison of 10,000 Year Limit with Disposal Scenarios

Radionuclide	Disposal Limit per Cell (Ci)	Scenario 1 (Ci)	Fraction of Limit	Scenario 2 (Ci)	Fraction of Limit
Ac-227[*]	7.33E+06	3.17E-02	4.32E-09	6.34E-01	8.65E-08
Ag-108m[*]	4.75E+02	3.17E-02	6.68E-05	6.34E-01	1.34E-03
Al-26	1.33E+01	8.12E-03	6.09E-04	1.62E-01	1.22E-02
Am-241[T]	2.83E+07	6.75E-01	2.38E-08	1.35E+01	4.76E-07
Am-242m[*]	8.17E+05	3.17E-02	3.88E-08	6.34E-01	7.76E-07
Am-243[T]	2.50E+04	6.75E-01	2.70E-05	1.35E+01	5.40E-04
Ba-133[*]	1.00E+09	3.17E-02	3.17E-11	6.34E-01	6.34E-10
Bi-207[*]	2.58E+04	3.17E-02	1.23E-06	6.34E-01	2.45E-05
Bk-249[*]	4.08E+06	3.17E-02	7.76E-09	6.34E-01	1.55E-07
C-14	3.67E+06	3.17E-01	8.65E-08	6.34E+00	1.73E-06
Cf-249[*]	1.08E+04	3.17E-02	2.93E-06	6.34E-01	5.85E-05
Cf-250[*]	2.58E+14	3.17E-02	1.23E-16	6.34E-01	2.45E-15
Cf-251[*]	1.50E+05	3.17E-02	2.11E-07	6.34E-01	4.23E-06
Cf-252[*]	5.25E+11	3.17E-02	6.04E-14	6.34E-01	1.21E-12
Cl-36[*]	4.33E+17	3.17E-02	7.32E-20	6.34E-01	1.46E-18
Cm-242[*]	2.08E+08	3.17E-02	1.52E-10	6.34E-01	3.04E-09
Cm-243[*]	5.83E+08	3.17E-02	5.44E-11	6.34E-01	1.09E-09
Cm-244[T]	9.17E+13	6.75E-01	7.36E-15	1.35E+01	1.47E-13
Cm-245[*]	7.00E+05	3.17E-02	4.53E-08	6.34E-01	9.06E-07
Cm-246[*]	6.92E+11	3.17E-02	4.58E-14	6.34E-01	9.17E-13
Cm-247[*]	2.08E+03	3.17E-02	1.52E-05	6.34E-01	3.04E-04
Cm-248[*]	3.83E+06	3.17E-02	8.27E-09	6.34E-01	1.65E-07
Co-60	4.83E+08	3.17E+00	6.56E-09	6.34E+01	1.31E-07
Cs-134	3.42E+18	3.17E+00	9.28E-19	6.34E+01	1.86E-17
Cs-135	6.75E+12	3.17E+00	4.70E-13	6.34E+01	9.39E-12
Cs-137	5.00E+05	3.35E+02	6.70E-04	6.70E+03	1.34E-02
Eu-152[*]	5.33E+05	3.17E-02	5.94E-08	6.34E-01	1.19E-06
Eu-154	1.00E+07	6.34E+00	6.34E-07	1.27E+02	1.27E-05
Eu-155	9.17E+17	3.17E-02	3.46E-20	6.34E-01	6.92E-19
H-3	4.58E+10	1.59E+00	3.46E-11	3.18E+01	6.93E-10
I-129	1.83E+01	3.17E-01	1.73E-02	6.34E+00	3.46E-01
K-40[*]	2.67E+02	3.17E-02	1.19E-04	6.34E-01	2.38E-03
Kr-85[*]	2.25E+10	3.17E-02	1.41E-12	6.34E-01	2.82E-11
Mo-93[*]	5.17E+04	3.17E-02	6.14E-07	6.34E-01	1.23E-05
Na-22[*]	6.50E+14	3.17E-02	4.88E-17	6.34E-01	9.76E-16
Nb-93m[*]	1.25E+04	3.17E-02	2.54E-06	6.34E-01	5.07E-05
Nb-94	8.33E+01	4.31E-02	5.17E-04	8.62E-01	1.03E-02
Ni-59	2.08E+16	3.17E-01	1.52E-17	6.34E+00	3.04E-16
Np-237[T]	5.58E+03	6.75E-01	1.21E-04	1.35E+01	2.42E-03
Pa-231	1.83E+03	6.75E-01	3.68E-04	1.35E+01	7.36E-03

Radionuclide	Disposal Limit per Cell (Ci)	Scenario 1 (Ci)	Fraction of Limit	Scenario 2 (Ci)	Fraction of Limit
Pb-210*	3.25E+10	3.17E-02	9.76E-13	6.34E-01	1.95E-11
Pd-107*	3.67E+15	3.17E-02	8.65E-18	6.34E-01	1.73E-16
Pu-238T	1.08E+06	6.75E-01	6.23E-07	1.35E+01	1.25E-05
Pu-239	1.17E+09	6.75E-01	5.78E-10	1.35E+01	1.16E-08
Pu-240T	2.50E+11	6.75E-01	2.70E-12	1.35E+01	5.40E-11
Pu-241	8.33E+08	2.36E+00	2.83E-09	4.72E+01	5.67E-08
Pu-242T	4.08E+09	6.75E-01	1.65E-10	1.35E+01	3.30E-09
Pu-244*	3.08E+02	3.17E-02	1.03E-04	6.34E-01	2.06E-03
Ra-226*	3.50E+01	3.17E-02	9.06E-04	6.34E-01	1.81E-02
Ra-228*	3.08E+07	3.17E-02	1.03E-09	6.34E-01	2.06E-08
Rb-87*	4.25E+08	3.17E-02	7.46E-11	6.34E-01	1.49E-09
Sb-125	1.17E+16	6.34E+00	5.44E-16	1.27E+02	1.09E-14
Se-79	8.33E+01	3.17E-01	3.80E-03	6.34E+00	7.61E-02
Sn-126	1.00E+02	5.07E-02	5.07E-04	1.01E+00	1.01E-02
Sr-90	2.00E+15	6.34E+01	3.17E-14	1.27E+03	6.34E-13
Tc-99	3.08E+12	1.19E+01	3.86E-12	2.38E+02	7.72E-11
Th-228*	1.58E+18	3.17E-02	2.00E-20	6.34E-01	4.01E-19
Th-229*	7.17E+02	3.17E-02	4.42E-05	6.34E-01	8.85E-04
Th-230*	2.75E+01	3.17E-02	1.15E-03	6.34E-01	2.31E-02
Th-232	1.33E+01	8.12E-03	6.09E-04	1.62E-01	1.22E-02
U-232*	7.50E+02	3.17E-02	4.23E-05	6.34E-01	8.46E-04
U-233	1.17E+03	3.17E-02	2.72E-05	6.34E-01	5.44E-04
U-234	3.75E+02	3.17E-02	8.46E-05	6.34E-01	1.69E-03
U-235	8.33E+03	3.17E-04	3.80E-08	6.34E-03	7.61E-07
U-236	2.67E+07	3.17E-02	1.19E-09	6.34E-01	2.38E-08
U-238	5.50E+03	3.17E-02	5.76E-06	6.34E-01	1.15E-04
		Sum of Fractions	**2.71E-02**		**5.42E-01**

* Very low levels of these radionuclides exist in the waste and therefore they do not have WAC limits and/or were not addressed in the DSA accident analysis. For this evaluation, a value of 1.25E+4 pCi/mL was used for calculating the radioactivity of the saltstone grout inside the equipment. This value was chosen because of the WAC requirement that any radionuclide not specifically listed in the WAC that has a concentration ≥1.25E+4 pCi/mL must be reviewed and authorized by WS Engineering and Operations before transfer to Saltstone (WSP-SSF-2004-00030 Rev. 1).

T The DSA Source Term for these radionuclides is listed as being "bounded by Pu-239". The sum of activities of these major alpha-emitting isotopes (Am-241, Am-243, Cm-244, Np-237, Pu-238, Pu-239, Pu-240, Pu-242) must be ≤2.66E+5 pCi/mL in order to protect assumptions made in the DSA accident analysis (WSP-SSF-2004-00030 Rev. 1). For this evaluation, they were assumed to be the same as the DSA source term listed for Pu-239 (2.66E+5 pCi/mL). This assumption is a conservative approach since it assumes that each of the alpha emitting isotopes is at the total limit (2.66E+5 pCi/mL).

Evaluation

This proposed disposal activity was evaluated using the following questions provided in the Unreviewed Disposal Question Procedure (Manual SW18, Procedure SW-ENG-0601, Revision 2).

a) Is the proposed activity or new information outside the bounds of the approved PA/CA (e.g., does the proposed activity or new information involve a change to the basic disposal concept as described in the PA/CA such as critical inputs/assumptions or an increase in inventory analyzed in the CA?

No. The proposed activity is not outside the bounds of the approved PA. Disposal of the failed MAVRC equipment will follow standard practices for disposal of the saltstone and so it will not change the basic disposal concept. The interior of the equipment will be filled with either processed grout (saltstone), which is approved for disposal in the vault cells, or with clean grout in order to eliminate void spaces. The equipment will be encased in clean grout, which will help to ensure that the disposal does not exceed allowable limits.

b) Does the proposed activity or new information cause the PA/CA performance measures to be exceeded?

No. The proposed activity should not cause the PA/CA performance measures to be exceeded. Tables 2 and 3 provide the projected cell inventories for the evaluated scenarios and radiological disposal limits, which are based on analyses of groundwater, inadvertent intruder, air pathways, radon exposure, and exposures from all pathways. The data show that the inventories are below the disposal limits calculated for a single vault cell. These tables also provide the fraction of the disposal limit attributed to the proposed activity for each radionuclide. For scenario #1, the sum of the fractions is well below 1 providing reasonable assurance that this proposed disposal activity will meet the USDOE performance objectives and requirements. Even for scenario #2, which addresses the disposal of 20 pieces of each component, the sum of the fractions is also below 1.

c) Would the radionuclide disposal limits in the approved PA need to be changed to implement the proposed activity?

No. Disposal of the proposed equipment in an empty cell in Vault 1 should not exceed the radionuclide disposal limits for the 1,000 year and 10,000 year times of compliance. Tables 2 and 3 provide a comparison between the projected cell inventories and the disposal limits calculated per cell. Both evaluated scenarios have inventories below the disposal limits.

d) Does the new information involve a change in the radionuclide disposal limits in the approved PA?

No. The proposed activity does not involve a change in the radionuclide disposal limits. Existing radionuclide disposal limits from the "Special Analysis: Revision of Saltstone Vault 4 Disposal Limits (U)" (Cook et al. 2005) were used for this evaluation of the proposed activity.

e) Does the proposed activity or new information involve a change to the DAS?

No. The Disposal Authorization Statement (DAS) will not be changed as a result of the proposed activity. There will be no disposal limit changes and no change in disposal operations.

Conclusion

The proposed disposal of process equipment for the 0.2 Curie/gallon MAVRC Project at Saltstone in an empty Vault 1 cell was evaluated from a PA perspective. The assessment indicates that the disposal of up to 20 pieces of each component 1) is not outside the bounds of the approved PA; 2) should not cause PA performance measures to be exceeded; 3) should not exceed radionuclide disposal limits or require a change in the radionuclide disposal limits; and 4) will not involve a change in the DAS.

References

Chandler, T. E., Recommended Radiological and Chemical WAC and Permit Limits for Low-Curie Salt Operations (0.2 Ci/gal) at the Saltstone Facility (not including Tank 48H), Interoffice Memorandum WSP-SSF-2004-00030, Rev. 1, February 7, 2005.

Cook, J.R., Wilhite, E.L, Hiergesell, R.A., and Flach, G.P., Special Analysis: Revision of Saltstone Vault 4 Disposal Limits (U), WSRC-TR-2005-00074, Rev. 0, Westinghouse Savannah River Company, Aiken, South Carolina. May 2005.

Technical Task Request HLW-SSF-TTR-2005-0007, Perform Analysis and UDQE for Disposal of 0.2 Curie MAVRC Project Equipment in Vault #1, June 6, 2005.

DISTRIBUTION

To:

D. G. Thompson
D. C. Sherburne
T. F. Berkery
P. D. Schneider
J. W. Ray
A. W. Knox
W. T. Goldston
M. R. Millings
J. R. Cook
W. E. Stevens
B. T. Butcher
E. L. Wilhite
M. K. Harris
STI (4)
WPT Files