

Major Findings of the DU PA Safety Evaluation Report

All conclusions in the depleted uranium (DU) performance assessment (PA) safety evaluation report (SER), including determinations that issues have been resolved, conditionally resolved, or not resolved, are tentative in that they are subject to notice and comment and reconsideration by the Utah Department of Environmental Quality (DEQ) in light of comments made during the public comment period and the record as a whole. A final approval of the DU PA will also be subject to the “Conditions for Approval.”

Conclusions

Resolved:

The DEQ evaluation found that for the following topics the EnergySolutions DU PA satisfactorily met the required regulatory criteria, and these topics have been resolved:

- Utah Administrative Code (UAC) R313-25-7(3)(c); R313-25-8(2)–(3); R313-25-9(5)(a); R313-25-19: Uranium Solubility
- UAC R313-25-20: Protection of the General Public from Releases of Radioactivity
- UAC R313-25-21: Protection of Individuals from Inadvertent Intrusion
- U.S. Environmental Protection Agency’s 40 CFR 141.66: Uranium Oral Toxicity

Conditionally Resolved:

The DEQ evaluation found that for the following topics the EnergySolutions DU PA satisfactorily met the required regulatory criteria, and the following topics can be resolved, based upon the demonstration that the “Additional Conditions for Approval” have been met:

- UAC R313-25-8(9): Kind, Amount, Classification, and Specifications of the Material
- UAC R317-6-4; Ground Water Quality Discharge Permit UGW450005: Compliance with Groundwater Protection Levels
- UAC R313-25-8(2), (3), (5), (6), and (10); R313-25-26(4), (5), and (10): Waste Emplacement and Backfill

Not Resolved:

The DEQ evaluation found that, for the following topics, the EnergySolutions DU PA has not satisfied all of the Department’s concerns and the topics are not resolved at this time (the principal concerns are shown in parentheses):

- UAC R313-25-8(2) and (3): Evapotranspiration Cover (lack of correlation between the alpha and hydraulic conductivity values, and other issues with the cover modeling)
- UAC R313-25-8(2): Infiltration (lack of correlation between the alpha and hydraulic conductivity values and other issues with the cover modeling)
- UAC R313-25-25: Erosion of Cover (clarification of certain issues relating to Appendix 10 to the DU PA version 1.2, June 5, 2014)
- UAC R313-25-25(3) and (4): Frost Damage (need to resolve concerns with assumed recurrence intervals, estimated frost penetration depths, and hydraulic property estimates)
- UAC R313-25-24(3) and (4): Effect of Biologicals on Radionuclide Transport (need to account for natural increases in cover permeability over time)
- UAC R313-25-8(2): Clay Liner (lack of increase in K_{sat} values over time; lack of correlation between the alpha and hydraulic conductivity values in the cover model)
- UAC R313-25-8(10): GoldSim Quality Assurance (the relationship between the process-level model [HYDRUS] abstractions and the primary model [GoldSim] results needs to be demonstrated)
- UAC R313-25-9(5)(a): Deep Time Analysis

Not Resolvable:

The DEQ evaluation found that, at this time, no topics in the EnergySolutions DU PA cannot be resolved because of affirmative information that standards cannot be met.