# SUPPLEMENTAL VOTE

## Commissioner Jaczko's Revised Comments on SECY-08-0147
## Response to Commission Order CLI-05-20 Regarding Depleted Uranium

In my original vote on SECY-08-0147, I approved Option 3 (determine classification for depleted uranium within existing classification framework) and I disapproved the staff's recommendation for Option 2 (rulemaking to specify requirement for site-specific analyses for the disposal of large quantities of depleted uranium). Since that vote, which was dated November 3, 2008, more information has come to light that I would like to address in my vote.

The disposal of large quantities of depleted uranium (DU) is a unique challenge because, unlike typical low-level waste, the doses increase over time rather than decrease. The technical analysis included with SECY-08-0147 indicates that additional requirements are likely needed for disposal of large quantities of DU in order to protect public health and safety; for example, increased waste disposal depth or robust radon barriers may be required. However, Option 2 does not explicitly change the classification of DU as presently provided for in 10 CFR 61.55 and therefore the waste would remain classified as Class A. I do not believe that it is logical to argue that that waste that requires additional requirements for disposal (similar to those required for Class C waste) can still be labeled as Class A waste.

The work of analyzing DU in a manner similar to the analysis done for other radionuclides has already been done in the Draft Environmental Impact Statement (DEIS) for 10 CFR 61 (NUREG-0782, Vol. 2). Table 7.2, Waste Classification Table, of the DEIS presents concentration values for various radionuclides for determining classification. This table gives a value of 0.05 $\mu Ci/cm^3$ for depleted uranium. In other words, DU that is above concentrations of 0.05 $\mu Ci/cm^3$ would not be considered Class A. In addition, staff has indicated that the previous analysis done to obtain the value of 0.05 $\mu Ci/cm^3$ in the DEIS likely did not include what may be a significant contribution from radon, which may require that the limit should be even lower. The concentrations of DU that will be produced by the commercial enrichment facilities is expected to be approximately 0.5 $\mu Ci/cm^3$, which is ten times higher than the value given for the limit for Class A for DU in the DEIS. I do not believe that these facts should be ignored.

Although the value for depleted uranium was not subsequently carried forward into the final tables in 10 CFR 61, this was a policy decision, made simply because "[A]nalysis of the data bases for the Part 61 EIS indicates that the types of uranium-bearing wastes being typically disposed of by NRC licensees do not present a sufficient hazard to warrant limitation on the concentration of this naturally occurring material." The staff explicitly excluded from its analysis any consideration of depleted uranium from uranium enrichment facilities, which at the time were owned by the Federal government. However, now that large-scale commercial enrichment will be taking place, this type of waste does need to be considered and should not be allowed to fall through the loophole given by 10 CFR 61.55(a)(6).

I agree that DU is a low-level waste, and I understand that some people may be concerned that this waste may be orphaned if it is decided that this waste stream is not Class A. I also understand that the staff recommendation would require that a site-specific analysis would be required for disposal of large quantities of DU and this is meant to protect public health and safety regardless of what class the waste is designated. It is important to note that a site-specific analysis does not guarantee that the waste will not eventually end up orphaned regardless; for example, if a site-specific analysis shows that the DU would need to be disposed of at least 8 meters below ground, a disposal facility may not be willing or able to do so.

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In summary, I do not believe the Commission should undermine the entire waste classification system, which is designed in such a way that Class A waste is meant to be that waste that poses the least hazard and requires the fewest restrictions on waste form and disposal. DU certainly does not fit this description.

I continue to believe the staff should, in a future budget request, include the necessary resources to completely revise 10 CFR 61 using updated methodologies and assumptions, and taking into consideration advances and changes that have taken place in the low-level waste arena since the original 10 CFR 61 was promulgated.

**/RA/ 03/06/2009**
**SIGNATURE Date**

**Commissioner Jaczko's Comments on SECY-08-0147**
**Response to Commission Order CLI-05-20 Regarding Depleted Uranium**

I approve Option 3 (determine classification for depleted uranium within existing classification framework) and I disapprove the staff's recommendation for Option 2 (rulemaking to specify requirement for site-specific analyses for the disposal of large quantities of depleted uranium). The disposal of large quantities of depleted uranium (DU) is a unique challenge because, unlike typical low-level waste, the doses increase over time rather than decrease. The technical analysis included with SECY-08-0147 indicates that additional requirements are likely needed for disposal of large quantities of DU in order to protect public health and safety; for example, increased waste disposal depth or robust radon barriers may be required. However, Option 2 does not explicitly change the classification of DU as presently provided for in 10 CFR 61.55 and therefore the waste would remain classified as Class A. I do not believe that it is logical to argue that that waste that requires additional requirements for disposal (similar to those required for Class C waste) can still be labeled as Class A waste.

I agree that the staff needs to take action with respect to disposal of large quantities of DU. A more transparent and unambiguous approach would be to classify DU within the current waste classification system. Therefore, I believe the staff should implement Option 3 and classify DU within the existing classification framework, and the waste classification tables in 10 CFR 61.55 should be revised to include depleted uranium. Regardless of what waste class the DU is determined to be through this process, the staff analysis has shown that it may still be disposed of in a manner that is protective of public health and safety under certain circumstances.

I also believe the staff should, in a future budget request, include the necessary resources to completely revise 10 CFR 61 using updated methodologies and assumptions, and taking into consideration advances and changes that have taken place in the low-level waste arena since the original 10 CFR 61 was promulgated.

I commend the staff for the thorough technical analysis that was included with SECY-08-0147 and for the comprehensive range of options that were analyzed and provided for Commission consideration.

**/RA/** 11/03/08
Gregory B. Jaczko Date