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Consolidated Decommissioning Guidance, Characterization, Survey, and Determination of Radiological Criteria

Comment On: NRC-2020-0192-0001
Consolidated Decommissioning Guidance, Characterization, Survey, and Determination of Radiological Criteria

Document: NRC-2020-0192-DRAFT-0004
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General Comment

Document ID-NRC-2020-0192

SUGGESTIONS TO NUREG 1757 VOL 2 REV 2 DRAFT
1. I reviewed NUREG 1757 VOL 2 Rev 1 and Rev 2.
Excellent work: Lot of hard work to address the complicated issues.
2. Suggestion #1: Addition of YouTube link in all Statistical terms in Rev 2 (Advantages- Three years ago, my toilet was leaking. I bought a Canister toilet flushing valve-new model from Home Depot. I could not fix the valve. The manual was not clear. I called plumber and he told me it would cost 100 to 150 dollars. I am frugal. I went to You Tube and understood how to fix the valve then I could fix it within 15 minutes.)
Khan Academy gives excellent basic concepts of Statistical terms with examples in YouTube. There is a Null Hypothesis: (https://www.youtube.com/watch?v=_3_6wjycJdk). If there are some concepts such as Scenario A and Scenario B of Null Hypothesis which are not found in Khan Academy, then we can request Khan Academy to introduce the concepts. This way a technicians in the field as well as regulators can understand the statistical concept better. Khan Academy You Tubes are excellent to get the concepts of statistical terms in simple language with examples.
3. Appendix J: ASSESSMENT STRATEGY FOR BURIED MATERIAL: Geo –statistic is addressed. More examples are needed for surveys, decommissioning plan and Final
Status Surveys etc. More common in Department of Defense (DoD), as before 1970, the NRC/former US Atomic Energy Commission allowed to bury the rad waste in the
back side of the facility.

4. Referenced NUREG/CR-7021 (A Subsurface Decision Model for Supporting Environmental Compliance). Very useful publication. More actual real situation of DoD
buried waste site and the decommissioning of a nuclear power reactor would be helpful.
5. Suggestion # 2: Last month, I was a science Fair Judge for Fairfax County and Loudoun county Science Fair. Some students have done outstanding Science Fair projects of using Machine Language and Deep Learning of Artificial Intelligence (AI) on real life situations. Two examples are given below:
One student took hundreds of X ray images of Covid patients. The present system gives 70 to 75 % accuracy. The student used AI and increased the accuracy to 85 %.
Another student took hundreds of patients of Magnetic Resonance Imaging (MRI) and

Positron Emission Tomography (PET) scans which have again 75 % accuracy. The student combined both PET and MRI images and merged and got higher accuracy than
75% using AI.
Request to higher some high school /college students who have proven records of AI for 2 months in summer vacation. Request each student to apply all data of each Decommissioned nuclear power reactor using AI. They will come out with better accuracy within a short time. This gives you the idea about what is the accuracy of
Decommissioned of each nuclear power reactor. This may help to proceed with the existing 20 nuclear power reactors undergoing Decommissioning. This may save lot of Money and time.
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Attachments

SUGGESTIONS TO NUREG 1757 VOL 2 REV 2

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