From: Michael Reimer
To: Snyder, Amy
Subject: [External_Sender] resent with comment
Date: Friday, August 18, 2017 9:48:00 AM

Dear Ms Snyder:
I am sorry if my supplemental information has thrown a wrench into the 2.206 gearbox for you. When I was reviewing documents for the petition, there remained this nagging question of why the Davy Crockett pistons were at PTA. Then seeing the photographs of the main warhead components with a coating of what could be oxidized uranium, representative of a chemical form indicative of high temperatures that could be generated by explosions, I just had the feeling that there has been less than full disclosure on the usage of Davy Crockett munitions at Pohakuloa. I thought it important to bring this to NRC's attention. The resend follows:

Michael Reimer
GeoMike5@att.net
August 16, 2017

Ms Amy Snyder, Senior Project Manager
Materials Decommissioning Branch (MDB)
Division of Decommissioning, Uranium Recovery, and Waste Programs (DUWP)
Office of Nuclear Material Safety and Safeguards (NMSS)
U.S. Nuclear Regulatory Commission (NRC)
Washington, D.C. 20555

Dear Ms Snyder,

Thank you so much for your contact with me today on the update of progress with the 2.206 petition. I trust I was able to provide information to help in your decision how to proceed with my July 24, 2017 supplemental submission.

I hope you understand that my primary objective is to assist the NRC in having the most complete and accurate information possible to make a decision on the underlying health and safety issues originating from DU use at Pohakuloa Training Area. I do not believe this to be a trivial issue. This reflects on truth, transparency, integrity, and ethics of the U.S. government, civilian and military, in protecting its citizens from harm.

The presence of DU is of great concern to many Island residents. The quantity, fate and transport of DU at PTA are important in increasing or decreasing this concern. For them, radiation is a scary issue and has not been helped any by the threat by a foreign government of atomic weapon usage against Pacific islands. They seek assistance from the NRC and welcome decisions that will serve to truly protect them from excess exposure to radiation.

I never could understand why the DU issue at PTA was focused on the spotting rounds. It was the location of the discarded pistons used in the firing of the main warhead of the Davy Crockett that was used to estimate location the RCAs. Then seeing the photographs of the DU fragments at PTA and the coloration of parts suggesting uranium oxidization from the main warhead components and not the spotting rounds, that then strongly suggested that the main warhead, at least the dummy version, was also used there and that it contained DU. Why this was not brought up to NRC is a mystery. Whether an oversight or intentional omission is something you should be concerned about. From my standpoint and that of the residents, this is important because it could greatly increase the amount of DU present and that would make calculations of exposure and risk incorrect and the license possession quantity underestimated.

The information I have found suggests it is highly probable that more DU is present than originally allowed to be used. The use of high explosives in the RCAs, as part of the live-fire ranges, has been ongoing since 1968. It is unlikely that most spotting rounds are wholly intact. The same is true for the dummy warhead components. The argument that for a HE munition to strike a spotting round is statistically unlikely is somewhat specious. How many HE munitions could have been used in 50 years? It is not unlikely that the entire area could have been impacted by HE munitions and their blast area, enough to aerosolize DU and resuspend previously generated particles many times over. But we must not be misled into thinking only HE blasts can release DU from spotting rounds. Most importantly, it must be kept in mind that DU oxides need not only be derived by big blasts. Just wind and saltation by soil

particles is enough to release DU oxides from DU fragments. I apologize for stating what you already know, that oxides form immediately upon exposure to ambient air and do not adhere to the substrate because of the different crystalline structures of the two materials. As I have pointed out before, aerosols of respirable DU oxides can travel many miles before they are precipitated.

This of course reflects on one of the arguments presented in the original 2.206 petition. For the determination of the fate and transport of DU away from the RCAs and PTA, sediment sampling is woefully inadequate and air monitoring for DU would be highly superior.

I want to make sure that the HE fire issue is sufficiently clarified. The Department of Defense Directive DoD 4715.11 requiring HE not to be used in DU areas is dated 2004.

In ML 15161A459, Programmatic Approach for Preparation of Site-Specific Environmental Radiation Monitoring Programs, the Army gives 4 arguments why air monitoring is not necessary. Argument 2 against the use of air monitoring includes the statement:

"The Army notes that until 2011, when the NRC placed the restrictions on HE fire into M101 impact areas, the Army had no such restrictions on its HE fire."

Therefore, it is clear the Army did not adhere to the intent of the DoD Directive. I can suggest that HE was also used during the period of NRC restriction but it is up to NRC to confirm this as they have the resources to do so, and whether or not NRC was notified properly when and if it occurred.

Please feel free to call or e-mail me if you feel I can answer any additional questions or clarify comments for you.

Sincerely,

/s/

Michael Reimer, Ph.D.
GeoMike5@att.net