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OCAS
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Trip Report
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On April 2nd I observed the initial meeting of the National Academy of Sciences committee that is reviewing the dose reconstruction program of the Defense Threat Reduction Agency (DTRA). This review was mandated by Public Law 106-419, Section 305 which specified that the DTRA enter into a contact with the NAS to carry out periodic reviews of their dose reconstruction program. The committee currently consists of five members (see below) but will expand to 10 or 12 members as soon as possible.

NAS Committee Reviewing the DTRA's Dose Reconstruction Program	
John Till (Chairman)	Risk Assessment Corporation
William Brady	Retired Principal Health Physicist
Eric Kearsley	Consultant
David Kocher	SENES Oak Ridge
Clarice Weinberg	NIEHS

Also in attendance at the meeting were representatives from the National Research Council, the DTRA, SAIC and Jaycor (see below).

Other Meeting Participants	
Evan Douple	NAS Study Director
Rick Jostes	NAS
D. Michael Schaeffer	DTRA, Senior Program Manager
John Pommerville	DTRA staff
W. Jeffrey Klemm	SAIC
Steve Powell	Jaycor

After an introduction of members and participants by Evan Douple of the NAS, Mike Schaeffer provided the charge to the committee. The DTRA is requesting the NAS to determine: 1)

whether or not the reconstruction of doses is accurate; 2) whether or not the reconstructed doses are accurately reported; 3) whether or not the assumptions made regarding radiation exposure are credible; and 4) whether or not the data from nuclear tests used by DTRA are accurate. The review is funded through a $1.2 million contract with the NAS that extends over a 28 month period. Much discussion was held at this point concerning the interpretation of the word "accurate" in the charge to the committee. John Till expressed his opinion that accurate dose estimates and dose estimates that are appropriate for the compensation program are not necessarily the same thing. This will need to be addressed in their review.

Following the introductions, Mike Schaeffer provided an overview of DTRA's program. Although Jeff Klemm of SAIC was scheduled next to provide a discussion of the dose reconstruction program, Mike Schaeffer decided to deliver this presentation as well. A copy of the presentation overheads has been provided to OCAS technical team members. Any additional staff members that would like a copy should let me know.

The balance of the meeting consisted of Mike Schaeffer (with help from SAIC and Jaycor) answering committee members questions regarding DTRA's program. Some of the more interesting facts that were learned during this discussion were:

- The DTRA's program was previously reviewed by an NAS committee chaired by Merril Eisenbud in 1985. At that time, the committee found that the methods used by the current contractor were insufficiently documented. It was very difficult for the 1985 committee to determine exactly how dose reconstructions were being performed. Also, methods used to assign internal doses associated with inhalation or ingestion of radioactive material were found to be based on unsupported assumptions. I have a copy of this report if anyone is interested in reviewing it.

- Some discussion was held on the accuracy of the film badge results. The 1989 NRC review of the film badge program[1] tends to support SAIC's contention that the DTRA's approach to interpretation of external dosimetry results is conservative.

  [1] Lalos G, ed. [1989]. Film Badge Dosimetry in Atmospheric Tests, National Academy Press.

- A total of twelve public laws have been written that relate to the three Federal regulations published by DoD (32 CFR 218), DoJ (28 CFR 79) and VA (38 CFR 3). The DoD regulations contained in 32 CFR 218 are similar in scope to OCAS's mandated dose reconstruction regulations.

- Currently, DoD receives about 80 - 120 pieces of correspondence per month related to the compensation program.

- For internal dose calculations, DTRA uses the ICRP 30 methodology. Interestingly, they

assign all the internal dose delivered over 50 years to the year of intake. This, of course, will provide an upper estimate of the dose, but it raises questions as to how this might effect the probability of causation calculation when latency and time since exposure are factors. Also, the current radioepidemiologic tables do not consider the inverse relationship that exists between DDREF and high LET radiation.

- Although eye and skin dose are not considered in 32 CFR 218, the VA has asked DTRA to evaluate these exposures as well.

- The plutonium urine sampling campaign of 100 veterans found two individuals with detectable levels of Pu in their urine. One of these was consistent with the known exposure scenario while the other is still being evaluated. There was some discussion by John Till of the importance of collecting contemporaneous samples whenever possible to validate exposure models.

- Thus far, the VA has been contacted by 60,000 eligible participants out of an eligible pool of approximately 400,000 claimants.

- According to the DTRA, internal doses are typically less than 25% of the total dose in exposed veterans.

- The value of the current DTRA contract with SAIC is approximately $5M per year.

- There is still some information in the DTRA dose reconstruction efforts that is classified.

- Claire Weinberg wanted to know if the method of uncertainty estimation documented. Also, is there a paper trail associated with each dose reconstruction such that it would be possible to determine which version of a procedure / method was used?

- To the best of Mike Schaefer's recollection, only 5 claimants have challenged their case evaluations.

- John Till made a strong argument for getting the claimant's involved early in the process.