

R.A.S. 14503

**Army Anagnostopoulos Exh. # 1-A**

[Originally Attached As EXHIBIT HWA #2 to Witness  
Anagnostopoulos' pre-filed testimony]

U.S. HOUSE OF REPRESENTATIVES COMMISSION  
 In the Matter of US ARMY (JEFFERSON PROVING GROUND)  
 Docket No. 40-8838-MLA Case No. ARMY EXH. # 1-A  
 OFFERED by: (Anagnostopoulos) Identification \_\_\_\_\_  
 RMC Staff \_\_\_\_\_ Officer \_\_\_\_\_  
 IDENTIFIED on \_\_\_\_\_ Witness/Panel \_\_\_\_\_  
 Action Taken: ADMITTED REJECTED WITHDRAWN  
 Reporter/Clerk \_\_\_\_\_

E-mail dated 01/17/07 from Jeff Whicker,  
Author of "From Dust to Dose",  
to Paul Cloud concerning findings of that study.

DOCKETED  
USNRC

October 25, 2007 (2:00pm)

OFFICE OF SECRETARY  
RULEMAKINGS AND  
ADJUDICATIONS STAFF

Docket No. 40-8838-ML

TEMPLATE = SELV-028

SELV-02

EXHIBIT HWA #2

-----Original Message-----

From: Jeff Whicker [mailto:whicker\_jeffrey\_j@lanl.gov]

Sent: Wednesday, January 17, 2007 11:50 AM

To: Cloud, Paul D RDECOM

Subject: Re: Dust to Dose

Paul,

Thank you for your interest in our work. I cannot comment on the specifics of situation at the Jefferson Proving Ground, but I can discuss the specifics of our study at Los Alamos. To summarize, we found an increase in DU air concentrations following the Cerro Grande fire and, though not causally tested, this corresponded to increased dust flux measured in forested areas that were either burned in the fire or thinned following the fire. Though increases in dust flux and DU concentrations were found, the measured and projected concentrations of DU in air were far below regulated safety limits. Regarding your question about aerosolization, I believe that the DU in the environment at LANL was introduced through high explosives testing using DU. This testing resulted in DU aerosol and shrapnel with the highest DU soil concentrations nearest the location of the explosion.

Best regards,

Jeff Whicker

At 09:44 AM 1/11/2007, you wrote:

Jeff: Here is what the environmental group (Save the Valley) said regarding your study and their justification for asking the Army to conduct air monitoring at Jefferson Proving Ground.

"m. Basis [SUPPLEMENTED]. Air remains a potential exposure pathway as evidenced by the air sampling requirements to be implemented for the field workers (Health and Safety Plan, Section 4.2.2.1). If short-term air exposure is a concern for the workers, long-term air exposure is a concern for residents in surrounding communities, as well as for the animals living in the JPG ecosystem. Given the frequent burns that are used to clear brush at JPG, including in the DU Impact Area, conditions are prime for enhancing migration of soil-bound DU into the air. A recently published study provided solid evidence that fire does indeed increase the air migration pathway of soil uranium. Whicker et al studied air concentrations of uranium at the perimeter of the Los Alamos National Laboratory that were measured seasonally over a 10 year time period, including before and after fires, both wildfire and fires that were intentionally set (the equivalent of the JPG controlled burns). They found that the estimated dose due to U

attached to particulate in the air at the perimeter of Los Alamos National Laboratory property increased by approximately 15% after even a "moderate" controlled burn, and this increase was greater (38%) after a more intensive wildfire. Further, the contaminated particulate matter increased seasonally, being highest during the spring months when the snow has melted, the ground is bare, winds tend to be gusty (as is true in southern Indiana), and there is little vegetation covering the ground. See JJ Whicker, et al., from Dust to Dose: Effects of Forest Disturbance on Increased Inhalation Exposure, Science of the Total Environment (2006)."

Would appreciate it if you could provide a response to the above specific to your study regarding the potential for receiving an increased dose from DU as a result of a fire either during or after the fire. Also whether or not there was aeroization at LANL.

Thanks, Paul

Paul D. Cloud  
JPG BEC  
RSO for JPG  
OSD BTC for JPG

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Work schedule B