



DEPARTMENT OF THE ARMY  
ASSISTANT SECRETARY OF THE ARMY  
INSTALLATIONS, ENERGY AND ENVIRONMENT  
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WASHINGTON DC 20310-0110

OCT 18 2012

The Honorable Roy Blunt  
200 Russell Senate Office Building  
United States Senate  
Washington, DC 20510

Dear Senator Blunt:

I have been asked to respond on behalf of Secretary of the Army, John M. McHugh, to your September 27, 2012 letter concerning the Exposure of Missourians to Zinc Cadmium Sulfide (ZnCdS) during the Cold War. I share your concern regarding the anxiety being felt by communities in Missouri. I understand the need to be transparent in this matter and it is my top priority to ensure health information and details of the past testing efforts are provided to the citizens of Missouri.

The U.S. Army Center for Health Promotion and Preventive Medicine conducted health risk assessments of these Cold War Era tests in 1994 following the declassification of the test reports. These health risk assessments used guidance from the US Environmental Protection Agency and focused on determining the health effects from inhalation exposure to the ZnCdS, which was used to simulate potential Soviet deployed biological agents from that era. These health risk assessments determined that exposure to ZnCdS from the testing would not cause a health risk to those exposed.

The National Research Council Committee on Toxicology, a private, nonprofit institution, conducted an independent review of the health risk assessments. In their report, completed in 1997, the National Research Council agreed with the Army's conclusion that the ZnCdS exposures would not cause a health risk. In addition, they recommended that the Army conduct a subsequent toxicological study to determine the effects of ZnCdS when it broke down in the body.

The U.S. Army followed the National Research Council's recommendations and completed a toxicological study in 1998. The toxicological study found that more than 40% of the ZnCdS was cleared from the test subjects within the first day, only a very small amount was found after one week, and the remaining amount was negligible after 14 weeks following exposure. Additionally, it found evidence that ZnCdS does not likely break down into Cadmium in the body. While a single very high concentration could elicit an inflammatory response in the lungs that diminished with time, this dosage was 8,409 times the amount that was used in the Army ZnCdS dispersion testing. This study was peer reviewed and published in *Inhalation Toxicology, Volume 12* in 2000.

The National Academy of Sciences, Institute of Medicine conducted an independent review of the toxicity study in 2004 and corroborated the conclusions

presented in the National Research Council assessment and the U.S. Army Center for Health Promotion and Preventive Medicine toxicological study.

The U.S. Army Public Health Command has reviewed the health risk assessments as well as available source documents from the NRC's Committee on Toxicology and the Institute of Medicine. The U.S. Army Public Health Command reconfirms that exposure to ZnCdS, under the test conditions reported, would not cause a health risk in humans. Further, these reports contain no evidence of a radioactive component to the ZnCdS dispersion testing as has been alleged in the media.

Based on historical documents reviewed by the Army, ZnCdS dispersion tests were conducted at four sites in St. Louis, Missouri. The specific sites included:

- Forest Park (in the vicinity of the junction of Clayton Road and Faulkner Road).
- The roof of the Knights of Columbus Building (in the vicinity of the junction of South Grand Boulevard and Gravois Avenue).
- Approximately two miles west of the Mississippi River and approximately one mile from the center of downtown St. Louis (bounded generally by Grand Boulevard on the west, Montgomery Street on the north, 22nd Street on the east, and Pine Boulevard on the south).
- Downtown St. Louis (bounded by the Mississippi River on the east, Biddle Street on the north, 18th Street on the west, and Spruce Street on the south).

We remain dedicated to sharing the information available about these Cold War-era tests. Thank you for your inquiry and your continued support of the Army.

Sincerely,



Katherine Hammack