



UNITED STATES  
**NUCLEAR REGULATORY COMMISSION**  
REGION I  
475 ALLENDALE ROAD  
KING OF PRUSSIA, PENNSYLVANIA 19406-1415

June 25, 2002

The Honorable Raymond Bunt, Jr.  
Pennsylvania House of Representatives  
Commonwealth of Pennsylvania  
House Post Office Box 202020  
146 Main Capitol Building  
Harrisburg, PA 17120-2020

SUBJECT: ENVIRONMENTAL CONCERNS IN GILBERTSVILLE, PENNSYLVANIA

Dear Mr. Bunt:

This is in response to your letter of May 16, 2002 about environmental concerns in Gilbertsville, Pennsylvania.

You inquired about concerns expressed by your constituents about metals measured in samples of their hair. The laboratory reports enclosed with your letter provided the results of hair analysis for a variety of metals. Of the specific items included in the lists of metals analyzed, only thorium and uranium are regulated by the NRC. While a specific facility is not mentioned in your letter, we have responded to similar concerns regarding Cabot Performance Materials (Cabot) on County Line Road in Boyertown, Pennsylvania, which is near Gilbertsville. NRC License No. SMB-920, issued to Cabot, authorizes the possession of natural uranium and thorium as a result of processing natural ores to extract tantalum, niobium and other elements. Cabot also conducts other activities at the Boyertown plant which are regulated by the U.S. Environmental Protection Agency and the Pennsylvania Department of Environmental Protection.

In order to comply with NRC requirements, licensees, including Cabot, must establish a comprehensive radiation protection program, including controlling and sampling for environmental releases of radioactive material. All releases to the environment must comply with specific limits in NRC regulations. Cabot's program incorporates a number of engineering controls to limit releases, including filtration of releases to the air, and treatment of waste water in an onsite water treatment plant. Environmental air sampling stations are located in and around the facility. Weekly samples are taken and analyzed for radioactivity. Environmental samples are taken at the waste water discharge point and two locations in a nearby stream. In our inspections, Cabot has been found to be well within regulatory limits. We plan to continue an active inspection program at Cabot to assure continued compliance with NRC requirements, including those limiting releases of radioactive materials to the environment.

Your letter included the results of a "Hair Toxic Element Exposure Profile" for several individuals. Our licensees are required to have radiation protection programs for their workers which may include measurements to assess the quantities of radioactive materials taken into the body, i.e. bioassays. There are three recognized bioassay techniques for uranium in the radiation protection community: urine sampling, fecal sampling, and in-vivo (lung or whole body) counting. Each of these bioassay techniques provides different information concerning the intake of radioactive material. Depending on the actual circumstances of the exposure, more than one technique may be necessary to provide a complete picture of an individual's internal exposure. The results of such measurements are analyzed and interpreted to establish the internal deposition of radioactive material. Hair Toxic Exposure Profiles are not used to estimate internal exposures to uranium or thorium to demonstrate compliance with NRC requirements.

With regard to the Hair Toxic Element Exposure Profile and any medical effects that its results may represent, the NRC cannot offer medical diagnoses, nor make recommendations for medical treatment. Individuals concerned about potential health effects from uranium found in the profile should address those concerns to their personal physician. The Radiation Emergency Assistance Center/Training Site (REAC/TS) at the Oak Ridge Institute for Science and Education is internationally recognized for its expertise in the management of the effects of radiation exposure and will consult with physicians on that subject. They may be contacted at (865) 576-3131.

We hope the above information is helpful to you and your constituent.

Sincerely,

***Original signed by George Pangburn***

George Pangburn, Director  
Division of Nuclear Materials Safety

cc:  
Mr. and Mrs. Thomas Wynne  
Commonwealth of Pennsylvania  
Pennsylvania Dept. of Health  
U.S. Environmental Protection Agency, RIII  
Douglass Township Board of Supervisors

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