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UNITED STATES GENERAL ACCOUNTING OFFICE

WASHINGTON, D.C. 20548

OCT 1 1980

ENERGY AND MINERALS
DIVISION

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(Insert proper classification)

The Honorable Timothy E. Wirth
House of Representatives

Dear Mr. Wirth:

Subject: Alleged missing nuclear material from
DOE's Rocky Flats weapons production
plant (EMD-80-124)

This is in response to your request of August 27, 1980, for (1) an investigation into an allegation that weapons grade nuclear material was missing from the Department of Energy's (DOE) Rocky Flats nuclear weapons plant and (2) answers to nine specific questions you had regarding the nuclear material accounting system at the Rocky Flats facility. Much of the information you requested on the facility's accounting system is classified, and therefore is included as a separate enclosure to this letter, (See Enclosures I and II).

Regarding the allegation of missing material at the plant, we found that an unusually large amount of weapons grade nuclear material--plutonium--was unaccounted for at the end of Rocky Flats' June 1980 inventory period. However, a subsequent investigation by DOE and contractor personnel found no evidence to indicate that any material was taken from the facility. Similarly, based on the information we obtained at DOE headquarters and at the Rocky Flats plant, we found no evidence to indicate that any material was taken from the plant.

Our inquiry into this matter was limited in scope since you wanted an answer by September 4, 1980. Consequently, we had about 5 days to interview DOE headquarters personnel, DOE field personnel and contractor officials responsible for operating the Rocky Flats plant as well as to review the pertinent material accounting documents and related reports for the plant. Because of the time constraint we did not do as detailed a review as we would otherwise have done. For instance, we did not track the materials accounting information through to the source documents. We relied primarily on discussions with site officials and summary documents to obtain this information.

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As part of the June 1980 inventory at the Rocky Flats plant a larger than normal plutonium inventory discrepancy was identified by facility personnel. The discrepancy was above accepted accounting tolerance levels. As a result, contractor and DOE officials are now completing a detailed investigation of the matter. Most of the work had already been done and has included a complete inventory of the plant, among other things, to determine the cause of the discrepancy. Except for the results of some waste drum measurements, the investigation is complete.

They have found that no discrete items containing plutonium are missing and that the inventory discrepancy was for the most part due to state-of-the-art measurement instrumentation limitations, poor measuring instrument calibration and procedural errors that were made during the original June inventory process. The result of these problems was that the June inventory figure reflected improperly measured material and did not include amounts of plutonium that was later found in waste drums and processing molds. However, as part of the investigation the inventory figures have been adjusted to reflect the correct inventory data. Consequently, the plutonium discrepancy for the June inventory has been materially reduced. Moreover, the inventory for July 1980 resulted in a significant "gain" of material that offset much of June's shortage. The "gain" of material, which was within established tolerance limits, resulted from an ending inventory being greater than the measured amount of material that went into the process at the beginning of the period. It is a common occurrence at virtually all nuclear material processing facilities and is indicative of the overall material measurement limitations that plague them.

The net result of the investigation of the June inventory shortage and the July inventory gain is that the large amount of unaccounted for plutonium from the June 1980 inventory has been reduced to a level that falls within the acceptable tolerance limits. In essence, it means that DOE attributes the remaining discrepancy to state-of-the-art measurement uncertainties and material that might be held up in the facility's processing system (e.g., pipes, tubes, or duct work in the plant)--again a problem common to all nuclear material processing facilities.

The original amount of the June inventory discrepancy was large compared to prior inventory discrepancies at the Rocky Flats plant. However, DOE is now satisfied that none of the material was stolen or diverted.

If you have any other questions or if we can be of any further assistance, please let us know.

Sincerely yours,

J. Dexter Peach
J. Dexter Peach
Director

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