



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555

JAN 31 1991

Docket No. 40-3392  
License No. SUB-526

Allied-Signal, Inc.  
ATTN: Mr. M. D. Kosmider  
Plant Manager  
P. O. Box 430  
Metropolis, Illinois 62960

Gentlemen:

This refers to your letter dated December 19, 1990, submitted in response to our request dated August 21, 1990, for additional information on the proposed revision to the Radiological Contingency Plan (RCP). In the request, we state that Section 3.3 of the revised RCP should not only address the "maximum credible UF<sub>6</sub> release" but also less probable releases of radioactive material which could have large consequences, i.e., a liquid UF<sub>6</sub> cylinder. In the response, you state that "... there has never been a UF<sub>6</sub> cylinder failure which produced a significant offsite impact. We do not feel a discussion of such hypothetical events would strengthen or enhance our Radiological Contingency Plan."

Although we agree that no UF<sub>6</sub> cylinder failures have resulted in a significant offsite impact, the potential for releases and subsequent offsite impacts remains when large quantities of UF<sub>6</sub> are handled in the liquid or vapor phase. In NUREG-1189, Volumes 1 and 2, "Assessment of the Public Health Impact From the Accidental Release of UF<sub>6</sub> at the Sequoyah Fuels Corporation Facility at Gore, Oklahoma," actual and calculated offsite uranium intakes resulting from the rupture of a liquid UF<sub>6</sub> cylinder are discussed. The measured intakes of soluble uranium by offsite individuals ranged from 0.1 to 0.9 milligrams, and an uranium intake of 4.2 milligrams was calculated for a maximally exposed offsite individual who could have been present about 1.5 kilometers downwind and in the plume for 1 hour. These actual intakes by offsite individuals as well as the calculated intake demonstrate that large releases of UF<sub>6</sub> have resulted in offsite intakes and could have a significant offsite impact. Therefore, we disagree with your conclusion that such releases should not be addressed in the Plan.

Furthermore, the technical basis for the emergency preparedness requirements in 10 CFR 40.31(j) supports the need for the Plan to address large releases of UF<sub>6</sub>. A UF<sub>6</sub> cylinder rupture is the accident scenario described in NUREG-1140, "Regulatory Analysis of Emergency Preparedness for Fuel Cycle and Other Radioactive Material Licensees," which forms this basis.

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Therefore, based on the discussion above, you are requested to submit page changes to Section 3.3 of the revised Plan addressing large releases of UF<sub>6</sub>, such as a liquid UF<sub>6</sub> cylinder rupture, and its hydrolysis products, UO<sub>2</sub>F<sub>2</sub> and HF. The page changes should be submitted within 90 days of the date of this letter which should allow for the 60-day comment period by offsite response organizations. In addition, a revised amendment application should be submitted to correctly reference the dates of the revised RCP.

If you have any question regarding this request, please contact Mr. Scott Pennington of my staff at (301) 492-0693.

Sincerely,

Original Signed By:

Charles J. Haughney, Chief  
Fuel Cycle Safety Branch  
Division of Industrial and  
Medical Nuclear Safety, NMSS

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Docket 40-3392

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