

Region 111

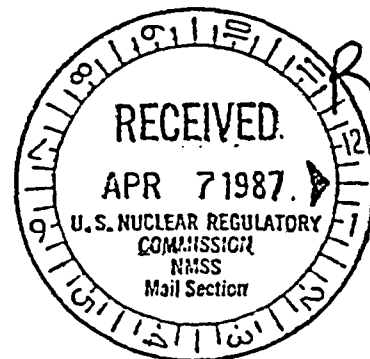
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COMBUSTION ENGINEERING

NIS/87/5011
March 30, 1987

Mr. George Bidinger
Uranium Fuel Licensing Branch
Division of Fuel Cycle and Material Safety, NMSS
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555



Dear Mr. Bidinger:

As requested by your letter dated March 2, 1987, enclosed are proposed controls and assessment of controls to prevent or detect the introduction of hydrocarbons into UF₆ cylinders and UF₆ process systems.

Please advise if you have questions, or if further information is required.

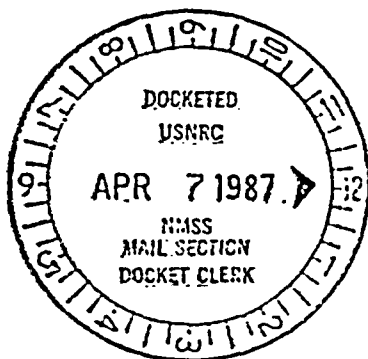
Very truly yours,

COMBUSTION ENGINEERING, INC.

James A. Rode for H. E. Eskridge

H. E. Eskridge
Supervisor, Nuclear Licensing,
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I. Proposed controls to prevent the introduction of hydrocarbons into UF₆ cylinders and UF₆ process systems.

1. Fabrication, maintenance, cleaning and certification of UF₆ cylinders shall be in accordance with ANSI-14.1-1982 and ANSI-14.1-1982, Appendix A or approved equivalent.
2. The UF₆ conversion and cold trap system shall be designed to prevent the introduction of hydrocarbons that could contact the UF₆. Evaluation of changes in equipment or operations shall include consideration of this hazard.
3. Full UF₆ cylinders shall be sealed during transport and storage.

II. Assessment of controls to prevent or detect the introduction of hydrocarbons into UF₆ cylinders and UF₆ process systems.

1. New UF₆ cylinders are procured to ANSI-14.1-1982 specifications and are cleaned in accordance with Appendix A, or approved equivalent.

Subsequent to hydrostatic testing for recertification, cylinders are dried by evacuation with an oil-free vacuum pump and pressurization with oil-free air.

The only UF₆ cylinder maintenance repair permitted is the replacement of valves in accordance with ANSI specifications.

2. The UF₆ conversion and cold trap system is designed to prevent the introduction of hydrocarbons into the cold trap or UF₆ supply cylinders.

Nitrogen purge of the UF₆ lines is automatic when the UF₆ flow falls below a present minimum (normally 20 CFH) to prevent the diffusion of steam back into the UF₆ supply line. This N₂ purge also prevents incursion of other materials into the supply lines to the cylinders.

The cold trap is evacuated by an oil-free vacuum pump which is isolated from the cold trap and the UF₆ cylinder by intervening alumina traps.

3. Full cylinders of UF₆ are received in the sealed condition. They remain sealed until readied for use.

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