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PRIORITY ROUTING

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FILE

August 19, 1987

Docket 70-36
License SNM-33

Combustion Engineering, Inc.
ATTN: Mr. H. E. Eskridge
Supervisor, Nuclear Licensing
Safety and Accountability
P.O. Box 107
Hematite, MO 63047

R

Gentlemen:

SUBJECT: ORDER MODIFYING LICENSE, EFFECTIVE IMMEDIATELY

Enclosed is an Order, effective immediately, which:

a. Prohibits filling, heating, emptying, or delivering to a carrier for transport 48-inch and 30-inch diameter uranium hexafluoride cylinders fitted with Superior Valve Company 1-inch alloy valves manufactured in Superior Valve Company lots numbered 16 through 22 inclusive.

b. Requires that all 1-inch Superior valves for use in UF_6 cylinders in your warehouse stock be carefully inspected. All valves shall be reinspected before fitting into cylinders. All defective valves found in stock regardless of lot number or manufacturer shall be reported to the Administrator of the appropriate NRC office.

Sincerely,

Original Signed By
Robert M. Bernero

Robert M. Bernero, Acting Director
Office of Nuclear Material Safety
and Safeguards

AUG 24 1987

Enclosure: As stated

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UNITED STATES
NUCLEAR REGULATORY COMMISSION

In the matter of	)	
	)	
COMBUSTION ENGINEERING, INC.	)	Docket 70-36
P. O. Box 107	)	License SNM-33
Hematite, MO 63047	)	

ORDER MODIFYING LICENSE
EFFECTIVE IMMEDIATELY

I

Combustion Engineering, Inc. is the holder of Nuclear Regulatory Commission (NRC) License No. SNM-33 that authorizes it to possess and use special nuclear material for, among other things, the heating, emptying, filling, or shipping of uranium hexafluoride (UF_6) in 48- and 30-inch diameter cylinders. The license was most recently renewed on December 30, 1983 and is due for renewal on December 31, 1988.

II

On July 24, 1987, the U.S. Department of Energy, Oak Ridge Operations Office Safety Division (DOE), notified the Nuclear Regulatory Commission (NRC) of parallel cracks that were observed in and around the threads of 1-inch valves used in 30- and 48-inch diameter uranium hexafluoride cylinders. The cracks were observed in the valve threads of valves in lots 17 and 20 manufactured by Superior Valve Company. NRC licensees were notified by phone to look for defects in valves in these lots. On July 29, 1987, after further investigation, DOE again notified and reported to NRC that Superior valves in lots 16 through 22 inclusive should be suspect for thread cracking. The affected lots were later confirmed to be lots of 16 through 22 inclusive. DOE is in the process of

determining the reasons for the cracking and recommend that cylinders fitted with 1-inch valves in lots 16 through 22 not be filled, emptied, heated, or shipped until a determination of their safety is made. NRC does not have objections to the use of 30- and 48-inch cylinders refitted with valves not in the affected lots but cautions that valves be thoroughly inspected before refitting and that valve changes be made using approved procedures.

Superior Valve Company fabricated about 4,500 valves in lots 16 through 22. Of these, about 60 percent designated for DOE use, and about 40 percent of the valves were procured by the private sector. The valves, fabricated from aluminum-silicon-bronze alloy, have been in use for many years by industry for this application without incident. The defect observed by DOE is a parallel cracking of the 1-inch valve thread used to fit the valve to the cylinder. Valves in the affected lots, lots 16 through 22, can be identified by a lot number stamped in the body of the valve. Further identification of the valve and its applications may be found in ORO 651 Rev. 4, "URANIUM HEXAFLUORIDE: Handling Procedures and Container Criteria."

Failure of a valve with a defect as noted above could potentially cause a UF_6 release if sheared from a cylinder during installation, removal, handling of the valve during operation, or accidental impact on the valve. Such a release could cause injury from the toxic fumes of the reaction products uranyl fluoride and hydrofluoric acid.

For the reasons given above, to avoid unnecessary health and safety risks, I have determined that valves identified as potentially defective should be

removed from service and other valves manufactured by Superior Valve Company should be inspected before further use. Furthermors, I have determined in the interest of public health and safety, these measures should be made immediately effective.

III

Accordingly, pursuant to Sections 161b, 161i, and 161o of the Atomic Energy Act of 1954, as amended, and the Commission's regulations in 10 CFR Parts 2, 40, and 70, IT IS HEREBY ORDERED, EFFECTIVE IMMEDIATELY, THAT LICENSE NUMBER SNM-33 IS MODIFIED AS FOLLOWS:

1. Combustion Engineering, Inc. shall not fill, heat, empty, or deliver to a carrier for transport 48-inch and 30-inch uranium hexafluoride cylinders fitted with Superior Valve Company 1-inch valves manufactured in Superior Valve Company lots numbered 16 through 22.

2. All 1-inch valves procured in your warehouse stock manufactured by Superior Valve Company shall be visually inspected. The valves shall be visually reinspected prior to fitting to a cylinder. Defects noted during these inspections shall be reported to the Administrator of the appropriate NRC Regional office.

The Director, Office of Nuclear Material Safety and Safeguards, may relax or rescind any of the above conditions upon a showing by the licensee of good cause.

The licensee, or any other person who has an interest adversely affected by this Order, may request a hearing within 20 days of the date of its issuance. If a person other than the licensee requests a hearing, that person shall set forth with particularity the manner in which the petitioner's interest is adversely affected by this Order and should address the criteria set forth in 10 CFR 2.714(d). Any request for a hearing shall be filed with Mr. Richard E. Cunningham, Director, Division of Industrial and Medical Nuclear Safety, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, with a copy to the Assistant General Counsel for Enforcement, Office of the General Counsel, at the same address. Any request for a hearing shall not stay the immediate effectiveness of this Order. If a hearing is requested, the Commission will issue an Order designating the time and place for the hearing.

In the event a hearing is requested, the issue to be considered at such a hearing shall be whether this Order should be sustained.

FOR THE U.S. NUCLEAR REGULATORY COMMISSION

Robert M. Bernero, Acting Director
Office of Nuclear Material Safety
and Safeguards

Dated at Silver Spring, MD
this 19th day of August 1987.