

memorandum

DATE: MAY 5 1993

REPLY TO

ATTN OF: EH-31. 3

SUBJECT: Managed Phase Out of Halon Fixed Fire Suppression Systems

TO: Distribution

The purpose of this memorandum is to provide additional interim departmental criteria on the management of the reduction and potential elimination of Halon fire extinguishing systems within the Department of Energy (DOE). This memorandum supplements the joint Office of Safety and Quality Assurance/Office of Projects and Facilities Management memorandum of September 27, 1990, in which guidance was provided on the installation of new Halon 1301 fixed fire suppression systems and halon 1211 portable fire extinguishers.

Concerns over environmental deterioration caused by the proliferation of chlorofluorocarbons (CFCs) and halon compounds in the atmosphere have prompted an international effort to reduce or eliminate the use of these substances. A degree of consensus has been reached as evidenced by the adoption of the Montreal Protocol and subsequent amendments. Further, these Parties agreed to adjust the protocol to fully phase out use of CFCs and halons. Reflecting the Department's responsibilities to protect workers and maintain facility safety while protecting the environment, the following policy was established for dealing with the continued use of halon 1211 and 1301 for fire suppression.

The underlying position for this policy is that DOE should be aggressively pursuing alternate fire protection configurations in lieu of halon fire protection systems where currently installed.

Accordingly, all DOE Field Elements should:

- o Within 1 year after the date of issuance of this memorandum, analyze and decide which existing halon system can safely be deactivated. This decision should be based on an analysis which realistically reflects the risks of fire in relation to existing levels of fire protection, excluding the halon system. (A sprinkler system will provide an equivalent level of safety. A fire detection/alarm and signaling system, coupled with a capable emergency response force may provide an acceptable level of fire safety.) When such a decision is reached, the system should be deactivated as soon as practical to minimize the risk of inadvertent discharge.
- o Within 1 year after the date of issuance of this memorandum, analyze and decide which existing halon system can be converted from automatic to manual activation. This course of action

is suggested for those situations where the Halon system has already been defined as "Essential" and where timely human intervention-to activate the system in the event of a fire will be assured. A preliminary step has been taken in this direction in conjunction with efforts to respond to the July 13, 1992, "Essential Use" survey that was requested by the Office of Environment, Safety and Health. As above, when this decision is reached, an expeditious schedule for conversion should be implemented.

- o Where timely response to fire emergencies cannot be assured and where conversion to manual activation cannot be justified for safety reasons, appropriate measures should be implemented to minimize the potential for false discharge of the Halon systems. This should include expeditious remedial action on maintenance work orders for these systems. This could also include the modification of the existing system to feature "cross-zone" detector discharge, delayed discharge, abort switches, and other technical means. Facility specific training of operating personnel on Halon system operating characteristics would also be prudent.
- o Prioritize existing halon systems in order of importance to safety so that if one discharges and there is no more Halon available to replenish it, the capability exists to deactivate other system(s) that are of lesser priority.
- o Store excess quantities of Halon on site in their original containers. Provisions for a central DOE repository and transfer facility for banked Halon are being developed. (DOE is considering participation in an external halon banking program.)
- o Maintain portable extinguishers in place where there is no site policy for their removal. Inspect and maintain the extinguishers periodically as required by industry standards and return them to service. (The Department is exploring the possibility of extending the hydrostatic test interval.)
- Have a contingency plan in place for interim compensatory measures (such as fire watches) to be implemented if a Halon system is rendered inoperable and cannot be restored within a reasonable period of time.
- o Expedite planning for projects to replace Halon systems with alternate means of protection.
- o Be conscious of the fact that situations beyond DOE control may require that some or all of the existing halon systems in our inventory be deactivated and portable extinguishers removed sooner than anticipated.

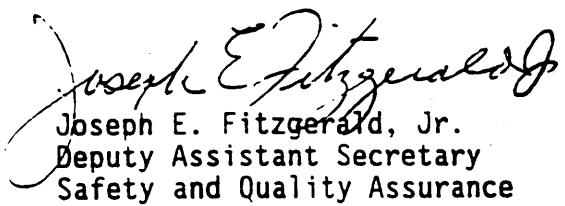
We request that, in light of the planned termination of production of Halons, the widest possible distribution of this position should be made.

The Office of Safety and Quality Assurance (EH-30) will be the clearinghouse on Halon-related fire protection information.

Questions pertaining to the above position should be directed to Mr. Dennis Kubiak on 301-903-4794.



Neal Goldenberg
Director
Office of Nuclear Safety
Policy and Standards



Joseph E. Fitzgerald, Jr.
Deputy Assistant Secretary
Safety and Quality Assurance

CC:

P. Brush, EH-1
E. C. Brolin, NE-1
L. Sye, AD-1