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MEMORANDUM FOR: Frank J. Congel, Chief
Radiological Assessment Branch, DSI

THRU: Oliver D. T. Lynch, Jr., Leader
Radiation Protection Section
Radiological Assessment Branch, DSI

FROM: Richard J. Serbu, Health Physicist
Radiation Protection Section
Radiological Assessment Branch, DSI

SUBJECT: TRIP REPORT - MEETING WITH NATIONAL INSTITUTE OF SAFETY AND HEALTH (NIOSH) AND MINE SAFETY APPLIANCES COMPANY (MSA) REGARDING USE OF PROTECTION FACTORS WITH RADIOIODINE CANISTERS

On October 1, 1985, I traveled to the NIOSH facility in Morgantown, West Virginia with L. Hendricks, NRC respiratory protection specialist from IE/ORPB, and met with NIOSH and MSA representatives from 1:00PM to 5:00PM. The purposes of the trip were as follows:

(1) ascertain the status and schedule of the NIOSH testing and certification program for radioiodine canisters and cartridges;

(2) discuss revised MSA testing criteria for their GMR-I canisters, and preview a test study matrix for temperature and relative humidity effects for these canisters;

(3) discuss the feasibility of and potential schedule for a generic treatment of the radioiodine canister certification program or a generic exemption program for power reactors (per conversation H. Thompson, F. Congel, R. Serbu).

Personnel in attendance at the meeting were:

NRC

Richard J. Serbu, Health Physicist
Radiological Assessment Branch, DSI/NRR

Lynette Hendricks
Operating Reactor Programs Branch,
DQASIP/IE

MSA

Tom McConnel (Regulatory Affairs)

Bill King (Product Testing Group)

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NIOSH

Nancy Bellinger, Chief
Testing and Certification Branch, NIOSH

Chris Coffey, Chief
Air Purifying Section, TCB/NIOSH

Significant delays in establishing a NIOSH testing and certification program can be expected due to equipment problems, testing requirements, and administrative requirements (e.g., public comment, approval chains, NRC interaction). In addition, NRC needs to revise and finalize currently proposed administrative controls and testing criteria for power reactor use for NIOSH. Thus, for the near future, submittal of individual exemption requests by licensees for review by NRC appears to be the only viable and timely means to consider the use of protection factors with radioiodine canisters for power reactors. IE/ORPB and NRR/RAB will coordinate on finalizing actions essential for CRGR review and development of guidance on generic and individual exemptions for using protection factors with radioiodine canisters.

Original Signed By

Richard J. Serbu, Health Physicist
Radiation Protection Section
Radiological Assessment Branch, DSI

Enclosure:
Summary

cc: R. Bernero
D. Muller
H. Thompson
J. Cunningham
N. Bellinger, NIOSH
J. Wigginton
R. Pedersen

OFC	:DSI/RAB	:DSI:RAB	:	:	:	:	:
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ENCLOSURE 1

SUMMARY OF NRC/NIOSH/MSA MEETING OF 10/01/85

The major points of interest were as follows:

(a) NIOSH is experiencing problems in testing equipment performance, notably in generation of consistent levels of methyl radioiodide, in radioiodine counting, and cyclic flow representation. MSA recommended some potential fixes based on their experience.

(b) Equipment faults, administrative requirements and testing needs may delay implementation of the NIOSH testing and certification program for radioiodine canisters for several months or longer. NIOSH representatives indicated that public comment may also be desirable.

(c) An NRC administrative control program for radioiodine canisters must be in place to support a NIOSH certification program. The most important aspects are NRC administrative controls and definitions of testing criteria.

(d) A draft NRC Standard Review Plan (dated 5/22/85) has been prepared by RAB, but needs additional technical resolutions and administrative review to prepare an adequate CRGR package.

(e) Industry needs for higher temperature use and longer use periods for radioiodine canisters may be compatible with canister performance, but would probably affect testing and rating performed by NIOSH.

(f) A concentration of 3ppm for methyl radioiodide has been selected as a challenge concentration, since the level can be readily generated by a number of means, and is below recommended levels for lab/testing safety.

(g) The industry probably feels that Class A storage of canisters is "overkill", however NRR, the Regions, and NIOSH feel that a definable, consistent, controlled storage is essential.

(h) Care must be taken in specifying testing criteria so as to avoid unnecessarily including testing requirements beyond the capability of small manufacturers.

(i) Condensation can occur in canisters and adversly affect performance.

(j) Dual use certification of radioiodine canisters for organics and radioiodines has inherent difficulties and does not appear feasible.

(k) The NRC respiratory protection specialist has left NRC, effective October 4, 1985. Responsibilities will be shared among IE radiation protection personnel. Exemption request review will be coordinated throrough R. Serbu, RAB/NRR for the near future, pending NRR reorganization.