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AEOD/N210

MEMORANDUM FOR: C. J. Heltemes, Jr., Deputy Director
Office for Analysis and Evaluation
of Operational Data

FROM: Kathleen M. Black, Chief
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Office for Analysis and Evaluation
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SUBJECT: ENGINEERING EVALUATION - LEAKING HOSES ON
SELF CONTAINED BREATHING APPARATUS (SCBA)
MANUFACTURED BY MSA

At the recent Agreement States meeting, Marshall Parrott of Oregon mentioned that the Oregon Fire Department found three leaking high pressure hoses on SCBA manufactured by MSA.

On November 5, I spoke to Joe Bigler (412-273-5149), Product Manager at MSA. He provided the following information.

- . The leaking hoses were part of MSA's Model 401 SCBA. This model is used at nuclear facilities. The hoses have a kevlar lining with a neoprene exterior.
- . MSA does not believe it has a generic problem with high pressure hoses for the following reasons.
 - . The three failures experienced by the Portland fire department occurred at their training center, where units see much more use than they would ordinarily experience. When Portland had the failures, they began a testing program on some 200+ other masks they owned and found no failures.
 - . When MSA was informed of the failures, they began an internal testing program. They found no failures.

The conclusion by MSA was that conditions at the Portland training center were responsible for the failures.

MSA is working on a new model SCBA that will operate with higher pressure air than the Model 401. (The use of higher pressure air will extend the time period of SCBA use). This new model will have hoses with a stainless steel inner liner, a braided cover and a nylon outer shell. Once NIOSH has approved the new model, the new hoses will be used on it, as well as the older, lower pressure Model 401 (i.e., only one design of high pressure here will be used by MSA.). The new hoses can also be used to replace hoses on existing Model 401's.

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The Portland fire department will replace hoses on all of their model 401 masks with the new high pressure hoses because they are concerned that the firemen have lost confidence in the existing units.

Because MSA does not believe they have a generic problem with high pressure hoses, they did not inform NRC of the failures. They did alert NIOSH. Based on the facts conveyed by Joe Bigler, I agree that the failures appear to be caused by the conditions of use at the Portland training center. Unless there are other incidents of hose failure, no further action by AEOD appears warranted.

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