

ENCLOSURE 1

UNITED STATES
NUCLEAR REGULATORY COMMISSION
OFFICE OF INSPECTION AND ENFORCEMENT
WASHINGTON, D. C. 20555

IE Circular No. 79-09
Date: June 22, 1979
Page 1 of 1

OCCURRENCES OF SPLIT OR PUNCTURED REGULATOR DIAPHRAGMS IN CERTAIN SELF-CONTAINED
BREATHING APPARATUS

Description of Circumstances:

The Nuclear Regulatory Commission (NRC) has been informed by mailgram (copy enclosed) from the National Institute of Occupational Safety and Health (NIOSH) of the high rate of regulator diaphragm failures in the Scott Air Pak II/IIA and Presur-Pak II/IIA self-contained breathing apparatus. The failures, ranging from pin holes in the diaphragm to complete diaphragm rupture, have been identified in about 10 percent of the units by the NIOSH field survey. Tests of the Scott apparatus by NIOSH showed reduced respiratory protection in the Demand-Mode and a loss of service time (but no loss of protection) in the Pressure Demand-Mode.

Notice to Licensees:

Many major licensees use the types of Scott apparatus described above. Users of the devices should take the following action:

1. Establish a program for examination of the described respiratory devices in accordance with the attached NIOSH mailgram; or
2. Incorporate the provisions of the NIOSH mailgram into your current program for inspection of the described devices.

No written response to this Circular is required. If you require additional information regarding this subject, please contact the individual specified in the attached mailgram.

Attachment:
MAILGRAM

7 906290287

ENCLOSURE 2

IE Circular No. 79-09

Date: June 22, 1979

Page 1 of 3

LISTING OF IE CIRCULARS ISSUED IN
LAST TWELVE MONTHS

Circular No.	Subject	First Date of Issue	Issued To
78-12	HPCI Turbine Control Valve Lift Rod Bending	6/30/78	All Power Reactor Facilities with an Operating License (OL) or Construction Permit (CP) having a HPCI Terry Turbine
78-13	Inoperability of Multiple Service Water Pumps	7/10/78	All Power Reactor Facilities with an OL or CP, except those located in: AL, AK, CA, FL, GA, LA, MS, SC
78-14	HPCI Turbine Reversing Chamber Hold Down Bolting	7/17/78	All Power Reactor Facilities with an OL or CP having a HPCI Terry Turbine excepting Duane Arnold and Monticello
78-15	Tilting Disk Check Valves Fail to Close with Gravity in Vertical Position	7/24/78	All Power Reactor Facilities with an OL or CP
78-16	Limiter Valve Actuators	7/26/78	All Power Reactor Facilities with an OL or CP
78-17	Inadequate Guard Training/Qualification and Falsified Training Records	10/13/78	All Power Reactor Facilities with an OL; Susquehanna 1 & 2, Shoreham, and Salem 2

IE Circular No. 79-09
Date: June 22, 1979
Page 2 of 3

LISTING OF IE CIRCULARS ISSUED IN
LAST TWELVE MONTHS

Circular No.	Subject	First Date of Issue	Issued To
78-18	UL Fire Test	11/6/78	All Power Reactor Facilities with an OL or CP
78-19	Manual Override (Bypass) of Safety Systems Actuation Signals	12/29/78	All Power Reactor Facilities with a CP
79-01	Administration of Unauthorized Byproduct Material to Humans	1/12/79	All Medical Licensees, except Teletherapy Medical Licensees, and all Licensed Radio-pharmaceutical Distributors
79-02	Failure of 120 Volt Vital AC Power Supplies	1/16/79	All Power Reactor Facilities with an OL or CP
79-03	Inadequate Guard Training/Qualification and Falsified Training Records	2/23/79	All Holders of and Applicants for Special Nuclear Material Licenses in Safeguards Group I
79-04	Loose Locking Nut on Limitorque Valve Operators	3/16/79	All Power Reactor Facilities with an OL or CP
79-05	Moisture Leakage in Stranded Wire Conductors	3/20/79	All Power Reactor Facilities with an OL or CP

IE Circular No. 79-09
Date: June 22, 1979
Page 3 of 3

LISTING OF IE CIRCULARS ISSUED IN
LAST TWELVE MONTHS

Circular No.	Subject	First Date of Issue	Issued To
79-06	Failure to Use Syringe and Bottle Shields in Nuclear Medicine	4/19/79	All Holders of Medical Licenses Except Teletherapy Licenses
79-07	Unexpected Speed Increase of Reactor Recirculation MG Set Resulted in Reactor Power Increase	5/2/79	All BWR Power Reactor Facilities with an OL or CP
79-08	Attempted Extortion- Low Enriched Uranium	5/18/79	All Fuel Facilities and Licensed Reactors

GSA SWITCHING CTR
P O BOX 430
ROMNEY, WV 26757



1-056186U122014 05/02/79 ICS WA12139
00592 MLTN VA 05/02/79

WSHA

MR. JERRY CAPLIN
USNRC
WASHINGTON, DC 20555

RESPIRATOR USERS WARNING

THE NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY AND HEALTH (NIOSH) WANTS TO ADVISE USERS OF SCOTT AIR PAK II/IIA AND PRESUR-PAK II/IIA SELF-CONTAINED BREATHING APPARATUS OF THE OCCURRENCES OF SPLIT OR PUNCTURED REGULATOR DIAPHRAGMS. NIOSH TESTS INVESTIGATING THE EFFECT OF SUCH DEFECTS SHOWED REDUCED RESPIRATORY PROTECTION ON DEMAND-MODE APPARATUS. THESE SAME TESTS ALSO SHOWED NO LOSS IN PROTECTION, BUT A LOSS IN SERVICE TIME WHEN IN THE PRESSURE DEMAND-MODE. NOTE: THE PRESSURE DEMAND UNIT IS NOT APPROVED WHILE IN THE DEMAND MODE; THE DEMAND MODE IS TO BE USED FOR DONNING PURPOSES ONLY.

NIOSH BEGAN THIS INVESTIGATION FOLLOWING THE RECENT DEATH OF THREE FIREFIGHTERS WHO WERE WEARING THIS TYPE OF RESPIRATOR, ALTHOUGH IT HAS NOT BEEN ESTABLISHED THAT THE DEATHS WERE DUE TO DAMAGED REGULATOR DIAPHRAGMS. A SAMPLING OF THE APPARATUS IN THE FIELD HAS SHOWN AT LEAST 10% OF THE UNITS EXAMINED HAVE RUPTURED OR PUNCTURED DIAPHRAGMS.

USERS SHOULD EXAMINE THEIR SCOTT APPARATUS FOR POSSIBLE DAMAGED DIAPHRAGMS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. THE USER SHOULD CHECK THE DIAPHRAGM BEFORE EACH USE BY CLOSING BOTH THE MAIN LINE AND BYPASS VALVES AND BLOWING THROUGH THE REGULATOR OUTLET PORT. IT SHOULD BE POSSIBLE TO MAINTAIN A SLIGHT POSITIVE PRESSURE IN THE REGULATOR. THE USER SHOULD CHECK THE REGULATOR DIAPHRAGM AFTER EACH USE AND DURING MONTHLY INSPECTIONS OF THE COMPLETE APPARATUS. IT IS NOT KNOWN IF FAILURE OCCURS DURING ASSEMBLY, STORAGE, OR USE OF THE RESPIRATOR REGULATOR. THEREFORE, EXTREME CAUTION MUST BE EMPLOYED WHEN USING THE RESPIRATOR. IN CHECKING THE OPERATION OF THE RESPIRATOR, USERS ARE CAUTIONED NOT TO BLOCK THE FLOW OF AIR FROM THE REGULATOR WHEN THE BYPASS VALVE IS OPEN, BECAUSE SUBSTANTIAL OBSTRUCTION MAY RUPTURE OR DISLUDGE THE DIAPHRAGM. IF THE USER OBSERVES A LOOSE OR DISLODGED REGULATOR COVER, THE COVER MUST BE REMOVED AND THE DIAPHRAGM INSPECTED BEFORE REASSEMBLY.

TO REPLY BY MAILGRAM, SEE REVERSE SIDE FOR WESTERN UNION'S TOLL-FREE PHONE NUMBERS



OF THE REGULATOR.

NIOSH HAS REQUESTED THE MANUFACTURER STOP ALL SALES OF THE RESPIRATOR PENDING DETERMINATION OF THE REASON FOR AND NECESSARY CORRECTIVE ACTION TO PREVENT DIAPHRAGM FAILURE. FOR FURTHER TECHNICAL INFORMATION CONTACT: MR. RICHARD RONK, NIOSH, 944 CHESTNUT RIDGE ROAD, MORGANTOWN, WV 26505. PHONE: (304) 599-7337.

304

ANTHONY ROBBINS, M.D.
DIRECTOR, NIOSH
ROCKVILLE MD

(ARS RUEVFCZ 0-26-01-036883)
21:19 EST

MGMCOMP MGM