

Automatic Sprinkler
CORPORATION OF AMERICA
A FIGGIE INTERNATIONAL COMPANY
P. O. Box 180 Cleveland, Ohio 44141-0180

RETURN RECEIVED
REQUESTED

JAN 27 1986
2 11

RECEIVED BY 2

Mr. W.H. Miller
101 Marietta St. NW, RM 2900
Atlanta, GA 30303

CERTIFIED MAIL
NO. 356703



1-30-86

ATTN: MR GARY ZELM, VENDOR BRANCH
EW/W Room - 332A
MAIL STOP EW/W 359

This information was received by
me at Region II ON 1-30-86.

This valve failed at Grand Gulf
ON Sept 4 1983. IE INFORMATION
NOTICE 84-16 covers this item. NRC
MEMO OF JAN 25, 1985 from M. Wegner
to R. Baer has additional on this subject.

If you need any addition information
please let me know -
Bill Meier

8605270386 860519
PDR FOIA
MURPHY86-262 PDR

FTS 242-5581

IMPORTANT

PLEASE FORWARD THIS LETTER TO THE PERSON RESPONSIBLE FOR
THE FIRE PROTECTION SYSTEMS IN YOUR FACILITIES.





December 12, 1985

SUBJECT: DELUGE, PRE-ACTION AND FOAM-WATER DELUGE SPRINKLER
SYSTEMS: MODEL C DELUGE VALVES

Gentlemen:

We have become aware of a potential problem which may affect the fire protection sprinkler system in your building or property. If the problem exists, IT MAY PREVENT THE SPRINKLER SYSTEM FROM OPERATING IN THE EVENT OF A FIRE. The following outlines:

- A. The nature of the problem,
- B. How to identify whether your system is affected,
- C. Required course of action.

A. THE NATURE OF THE PROBLEM

We have discovered several 6" valves that failed to trip properly even after being serviced within the last six to twelve months. The valves stuck inside where the latch touches the valve clapper. We believe that the following factors contributed to the problem.

1. Relatively high water pressure, (over 100 psi),
2. Corrosive atmosphere,
3. Inadequate trip test procedures.

Please note that we may have previously notified you late last year or early this year about this valve. At that time we recommended a maintenance procedure which has since proven inadequate. If your system is of the serial numbers referenced below, follow this new procedure.

The corrective action provided by this letter is regarded as a TEMPORARY SOLUTION, but one which should be implemented IMMEDIATELY. We are preparing a final solution and will notify you when it is available. It is our current intent to have this final solution available by April 1986.

Although the problem encountered has only been found in 6" Model C valves, we are applying this corrective action to both the 2-1/2" and 6" sizes.

The valves involved in the immediate corrective action recommended by this letter are those manufactured since 1973.

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B. HOW TO IDENTIFY WHETHER YOUR MODEL C SYSTEM MAY BE AFFECTED

Model C deluge valves are installed in Rate-of-Rise Sprinkler Systems and in Pilot Head Sprinkler Systems. The systems are further subdivided into Deluge Sprinkler Systems, Pre-Action Sprinkler Systems or Foam-Water Deluge Sprinkler Systems.

The valves are also identified as "Deluge", "Suprotex", "Pre-Action", "Suprotex-Deluge", and "Suprotex/Pre-Action". In Foam-Water deluge systems, both the water deluge valve and the foam deluge valve may be Model C deluge valves.

The Model C deluge valve has also been installed by Grinnell under the name "Multitrol".

Serial numbers affected are:

2-1/2" Model C Deluge Valve: S/N S4,026 through S10,250
(Excluding SN S10244, S10245,
and S10246)

6" Model C Deluge Valve: S/N S6,024 through S12,350

Each Model C valve is identified by a serial number stamped into the front edge of the upper flange and by the lettering "Model C" cast in raised letters on the back of the valve.

C. REQUIRED COURSE OF ACTION

Your present inspection procedure may not detect a potential malfunction; therefore, we strongly recommend that you have a competent technician follow the procedure given below.

At the earliest possible opportunity, the following procedure should be performed on the 2-1/2" and 6" valves in the serial number ranges given above.

A molybdenum disulfide lubricant, 813MS, is required by this procedure. It can be obtained at no charge by calling the Quality Assurance Manager, "Automatic" Sprinkler Corporation at (216) 526-9900 or 1-800-ASCOA US or your local "Automatic" Sprinkler Office (see attached phone list). You may also obtain this lubricant by sending a telex request (telex no. 822054) giving the name and address of the location and the name of the person to whom the lubricant is to be sent.

Please provide the serial numbers of the valves at your facilities affected by this letter.

When each valve is serviced in accordance with the procedures given below, please observe appropriate precautions with respect to any electrical devices connected to the system. Make sure that the valve under test will not trip other valves.

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1. Use a competent technician. These systems require specialized knowledge and should not be tampered with by inexperienced personnel.
2. Shut off the OS & Y control valve and open the main drain valve to remove any pressure from the underside of the clapper. Release the weight by pulling the manual release mechanism. Remove the hand hole cover. Remove the clapper.
3. Inspect the clapper and latch mating surfaces. These surfaces must be smooth. Refinish the surfaces using 220 grit sandpaper followed by crocus cloth to obtain a smooth finish on both surfaces.
4. Clean the two surfaces with lacquer thinner and allow the surfaces to dry.
5. Apply a thin coating of 813MS lubricant to both the clapper and latch surfaces.
6. Inspect the clapper facing, seat ring and valve interior in accordance with applicable Care and Maintenance Instructions.
7. Reassemble the valve, reset the weight, then replace the hand hole cover. Slowly open the OS & Y control valve until water begins to flow from the main drain. Slowly close the drain.
8. **Open the OS & Y control valve completely.**

If the protected facility can safely conduct a partial flow test, it is recommended that a partial flow test be performed as follows:

9. Adjust the OS & Y control valve to the nearly closed position (open about 1 turn from fully closed). Release the weight by pulling on the manual release handle. The clapper, under full water pressure, should open. Immediately close the OS & Y control valve. Open the drain valve to drain the system piping.

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10. If the system fails to trip, please notify Manager Quality Assurance at "Automatic" Sprinkler Corp. of America at (216) 526-9900 or 1-800 ASCOA US.
11. If the valve tripped, reset the valve in accordance with steps 2 through 8 above.
12. Fully open the OS & Y control valve so that the system is in the ready condition.

We believe it is our obligation to notify you of this potential problem. Conducting this maintenance procedure is your choice. We strongly recommend that you do so.

Very truly yours,
"Automatic" Sprinkler Corporation of America
a division of Figgie International Inc.



John J. Gullo
Quality Assurance Manager

JJG/js

- Attachments:
1. Replacement Parts for all Model C Valves
Data Page G-14
 2. List of our District offices and Phone Numbers

**PROCEDURE FOR LOW AIR PRESSURE
TEST OF SUPROTEX-DELUGE VALVE***

1. Select a convenient H.A.D., remove the Test Plug, and note the time in seconds for the Trouble Alarm to sound.
2. Replace the Test Plug. The Trouble Alarm Signal should be silenced in a short period of time.

*CAUTION: On SUPROTEX-Deluge Valves equipped with a double acting Release, Valve will trip from loss of supervisory air pressure in H.A.D.'s. Valves equipped with double acting diaphragm have a warning sign installed on front of Release Enclosing Box.

**PROCEDURE FOR TESTING
QUICK OPENING VALVE**

1. Close Controlling Gate Valve.
(This will sound Trouble Horn.)
2. Open the Main Drain Valve.
3. Open the Quick Opening Valve. Opening the Quick Opening Valve exhausts the supervisory air pressure in the Release Enclosing Box which causes the Release to operate resulting in the dropping of the Weight and unlatching of the Clapper.

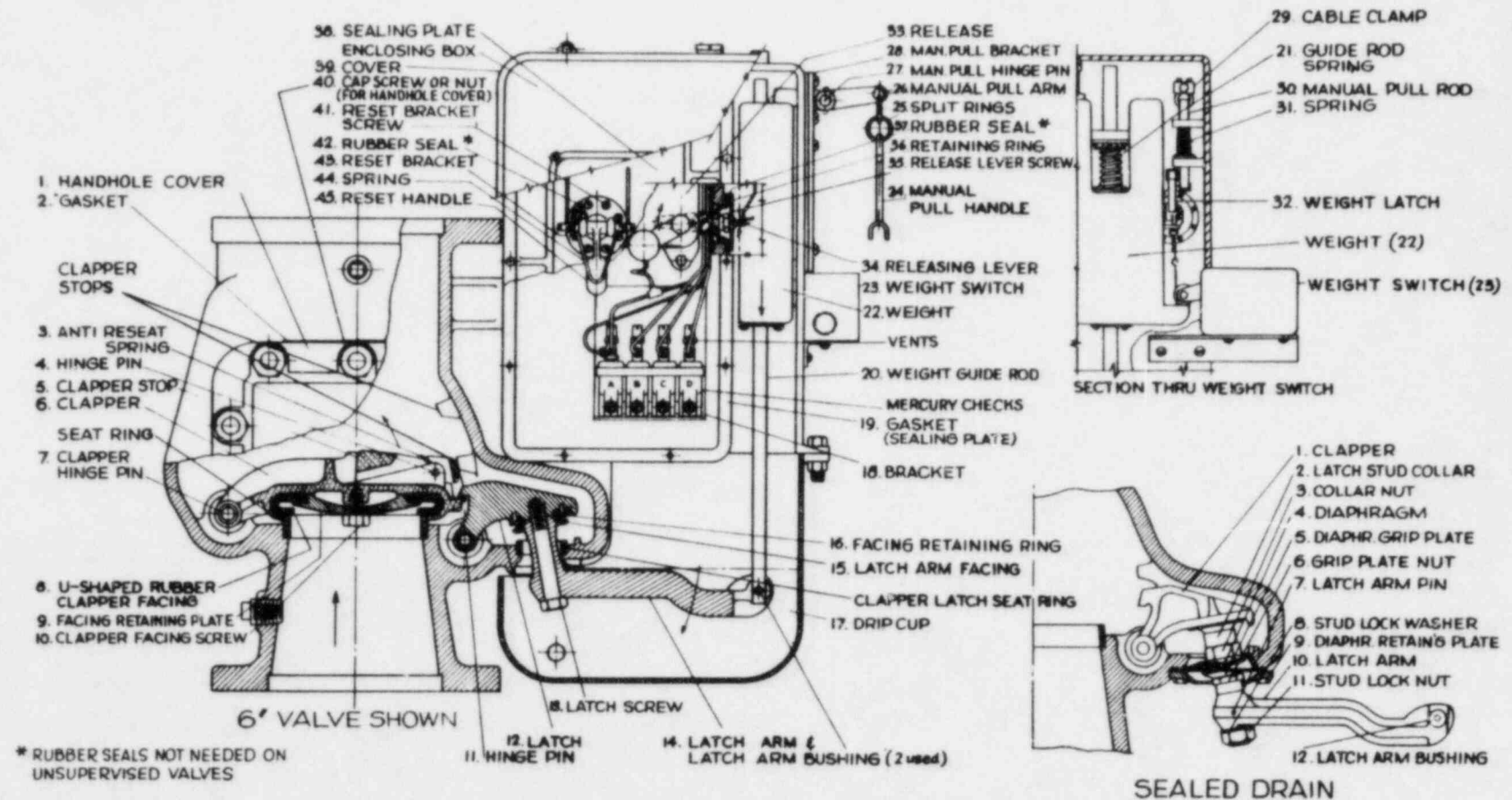
4. Close the Quick Opening Valve.
5. Allow sufficient time for the supervisory air pressure to build up in the Thermo-Pneumatic system and the Release Enclosing Box.
6. Reset the Release by pulling out on the Reset Handle and raise the Weight into the "set" position.
7. Close the Main Drain Valve.
8. Open the Controlling Gate Valve.
(This will silence the Trouble Horn.)

INSTALLATION CAUTION

One Deluge Valve should not supply open sprinklers or nozzles in different buildings or in different stories of one building except under considered conditions. The operation of such a system would deluge areas other than those affected by fire.

WATER PROOFING

Proper waterproofing and drainage is required to carry off the discharge from the Deluge System. See latest N.F.P.A. pamphlet No. 13 "Installation of Sprinkler Systems" for detailed information.



MODEL C - DELUGE VALVE

"AUTOMATIC" SPRINKLER DIVISION

20 EASTERN REGION		Baltimore	A.D. (Art)	O'Neill	301/391-3292
2	Portland		A.C. (Al)	Sands	207/767-2166
3	Boston		W.E. (Bill)	Newell	617/337-7574
5	Kenilworth		E.G. (Ed)	Fee	201/245-3725
6	Philadelphia		J.S. (Joe)	Kiczek	215/277-1190
9	Baltimore		J.J. (John)	O'Malley	301/391-7010
40	Richmond		G.L. (Gary)	Johnson	804/264-2548
42	Greensboro		J. (Joe)	Ratcliff	919/852-4110
75	San Juan		E. (Ellett)	Barreras	809/781-0740

25 CENTRAL REGION		Youngstown	W.E. (Bill)	Blockinger	216/758-9767
11	Buffalo		D. (Dave)	Kurdziel	716/675-9100
16	Pittsburgh		J.P. (John)	Sylvester	412/828-4196
17	Cleveland		L.J. (Leon)	Chill	216/238-9330
19	Youngstown		H.R. (Ray)	Wilkinson	216/758-2391
21	Cincinnati		P.M. (Phil)	Skufis	513/793-4994
24	Detroit		A.A. (Tony)	Berger	313/477-9100
28	Indianapolis		R.B. (Bruce)	Agan	317/547-3555

35 MIDWEST REGION		Chicago	W.E. (Bill)	McCardell-ONLY	312/459-1080
				Regional Office	312/459-0700
26	Chicago		F. (Frank)	Robertson	312/956-6120
27	Milwaukee		F. (Frank)	Robertson	414/252-3633
30	Minneapolis		C.B. (Chuck)	Raab	612/935-0327
32	St. Louis		R.A. (Rick)	Lennerth	314/432-1828
33	Quad Cities		R.A. (Rick)	Lennerth	319/386-2710
34	Kansas City		F.R. (Rich)	Butts	816/221-4191
37	Denver				303/371-4363
63	Omaha		M.E. (Mike)	Rice	402/331-8340

AUTOMATIC SPRINKLER DIVISION

55 WESTERN REGION		San Francisco	C.M. (Mike)	Dempsey	415/487-3980
59	Phoenix		W.L. (Bill)	Klein	602/437-0381
61	San Diego		C.E. (Charles)	Riley	619/579-8934
62	Los Angeles		L.D. (Larry)	Anderson	213/921-8545
65	San Francisco		J. (John)	D'Abruzzi	415/471-8400
68	Seattle		R.K. (Kent)	Ficks	206/872-9570
98	Hawaii		G.W. (Greg)	Jewell	808/677-9121

85 GULF REGION		Houston	J.W. (Joe)	Posey	713/946-5350
29	Houston		E.D. (Dow)	Carder, Jr.	713/941-7033
38	New Orleans		M.M. (Manuel)	De Alarcon	504/362-5277
39	Birmingham		D. (Dan)	Dotson	205/592-9631
44	Atlanta		W.R. (Bill)	McRae	404/452-1415
46	Nashville		G.F. (Glenn)	Cherry	615/254-3421
51	Tampa		D.P. (Dennis)	Marra	813/247-5454
69	Fort Lauderdale		D.P. (Dennis)	Marra	305/484-2267
82	Dallas		R.V. (Rich)	Emkey	817/640-9866
89	San Antonio		E.B. (Ed)	Kirk	512/824-0251

"AUTOMATIC" SPRINKLER DIVISIONREGIONS-

20	Eastern	Baltimore	A.D.	(Art)	O'Neill	301/391-3292
25	Central	Youngstown	W.E.	(Bill)	Blockinger	216/758-9767
35	Midwest	Chicago	W.E.	(Bill)	McCardell	312/459-1080
55	Western	San Francisco	C.M.	(Mike)	Dempsey	415/487-3980
85	Gulf	Houston	J.W.	(Joe)	Posey	713/946-5350

DISTRICTS -

2	Portland		A.C.	(Al)	Sands	207/767-2166
3	Boston		W.M.	(Bill)	Newell	617/337-7574
						617/337-7575
5	Kenilworth		E.G.	(Ed)	Fee	201/245-3725
6	Philadelphia		J.S.	(Joe)	Kiczek	215/277-1190
9	Baltimore		J.J.	(John)	O'Malley	301/391-7010
11	Buffalo		D.	(Dave)	Kurdziel	716/675-9100
16	Pittsburgh		J.P.	(John)	Sylvester	412/828-4196
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28	Indianapolis		R.B.	(Bruce)	Agan	317/547-3555
29	Houston		E.D.	(Dow)	Carder, Jr.	713/941-7033
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32	St. Louis		R.A.	(Rick)	Lennerth	314/432-1828
33	Quad Cities		R.A.	(Rick)	Lennerth	319/386-2710
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62	Los Angeles		L.D.	(Larry)	Anderson	213/921-8545
63	Omaha		M.E.	(Mike)	Rice	402/331-8340
65	San Francisco		J.	(John)	D'Abruzzi	415/471-8400
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69	Ft. Lauderdale		D.P.	(Dennis)	Marra	305/484-2267
75	San Juan		E.	(Eliett)	Barreras	809/781-0740
82	Dallas		R.V.	(Rich)	Emkey	817/640-9866
89	San Antonio		E.B.	(Ed)	Kirk	512/824-0251
98	Hawaii		G.W.	(Greg)	Jewell	808/677-9121

"AUTOMATIC" SPRINKLER CORPORATION OF AMERICA
 P.O. BOX 18
 1000 EAST EDGERTON ROAD
 BROADVIEW HEIGHTS, OHIO 44147
 (216) 526-9900

WEST COAST PURCHASING
 13100 East Firestone Boulevard
 Santa Fe Springs, California 90670
 (213) 921-8358; 59; 50

VINSON NEWMAN
 MANAGER

PLANTS

<u>PLANT</u>	<u>MANAGER</u>	<u>TELEPHONE</u>	<u>ADDRESS</u>
Los Angeles	C.H. Bennett	(213) 921-7496 10357*	13100 East Firestone Blvd. Santa Fe Springs, California 90670
Monroe	L.A. Kolter	(219) 692-6141 10353*	P.O. Box 217 South Van Buren Street Monroe, Indiana 46772
Swainsboro	J. Hoke	(912) 237-6651 10354*	P.O. Box 939 202 East Meadowlake Parkway Swainsboro, Georgia 30401

* SPEED CODES FOR BROADVIEW HEIGHTS USERS ONLY

PRE-ENGINEERED SYSTEMS

<u>LOCATION</u>	<u>REGIONAL MANAGER</u>	<u>TELEPHONE</u>	<u>ADDRESS</u>
Kenilworth, New Jersey	W.S. (Warren) Driscoll Northeast	(201) 245-3725	
		(609) 235-2197	805 Charleston Road Mount Laurel, New Jersey 08054
Naperville, Illinois	L. (Larry) Janata Midwest	(312) 369-6344	2158 Countryside Circle Naperville, Illinois 60565
Columbia, South Carolina	D.D. (Duncan) West Southeast	(803) 736-0700	404-C 18th Avenue S
		(803) 272-4231	N. Myrtle Beach, South Carolina 29582
Tyler, Texas	J. (Jim) Kline Gulf	(214) 566-1498	P.O. Box 130866 Tyler, Texas 75713
			3709 Lake Vista Circle Tyler, Texas 75707

FOREIGN OPERATIONS

EUROPE

ASCOA "Automatic" Sprinkler - Holland B.V.

H. J. (Jan) Kusters, Manager - Holland

Mailing Address:

P.O. Box 211

3800 AE Amersfoort, Holland

Street Address:

Natriumweg 10 - 12

3812 PV Amersfoort, Holland

City Code - 33

Country Code - 31

Telephone-033-15541 or 033-34914

Telex-844-79024

CANADA

"Automatic" Sprinkler Corporation of America

"Automatic" Sprinkler of Canada, Ltd.

A Figgle International Company

R.G. (Gib) Morris, Vice President and General Manager

Mailing Address:

504 Iniquols Shore Road

Oakville, Ontario, Canada L6H - 3K4

Telephone-416/842-1307

Telex-06-982278

FIRE PROTECTION SERVICES

<u>REGION</u>	<u>MANAGER</u>	<u>PHONE</u>	<u>ADDRESS</u>
Eastern Region	Harry Hoffman	804/794-4438 10358*	11506 Allecingle Parkway Suite C Richmond, Virginia 23235
Western Region	John Turano	303/986-8570	2109 Wadsworth Boulevard Basement Suite Lakewood, Colorado 80227

* SPEED CODES FOR BROADVIEW HEIGHTS USERS ONLY

EASTERN REGION

<u>REGION OFFICE</u>	<u>REGION V.P.</u>	<u>TELEPHONE</u>	<u>ADDRESS</u>
20- Baltimore	A.D. O'Neill	(301) 391-3292	8907 Kelso Drive Baltimore, Maryland 21221
		(215) 277-1190	201 King Manor Drive
		(215) 277-3002	Suite F King of Prussia, Pennsylvania 19406
		(401) 738-2308	2699 Post Road Warwick, Rhode Island 02886
		(201) 850-1155	P.O. Box 469 106 Mountain Avenue Hackettstown, New Jersey 07840
<u>DISTRICT OFFICE</u>	<u>MANAGER</u>	<u>TELEPHONE</u>	<u>ADDRESS</u>
02 - Portland	Al Sands	(207) 767-2166	P.O. Box 2416 78 Pleasant Avenue South Portland, Maine 04106
		(207) 942-3444	Bangor, Maine Answering Service
		(603) 622-0965	New Hampshire Answering Service
		(207) 774-2601	Portland, Maine Answering Service
03 - Boston	Bill Newell	(617) 337-7574 (617) 337-7575	20 Mathewson Drive E. Weymouth, Massachusetts 02189
05 - Kenilworth	Ed Fee	(201) 245-3725	P.O. Box 98 340 Carnegie Avenue Kenilworth, New Jersey 07033
06 - Philadelphia	Joe Kiczek	(215) 277-1190	201 King Manor Drive
		(717) 829-1996	Suite F King of Prussia, Pennsylvania 19406
		(717) 757-1502	3755 East Market Street York, Pennsylvania 17402
		(215) 277-5357	Norristown, Pennsylvania Answering Service

EASTERN REGION (Continued)

<u>DISTRICT OFFICE</u>	<u>MANAGER</u>	<u>TELEPHONE</u>	<u>ADDRESS</u>
09 - Baltimore	John O'Malley	(301) 391-7010	8909 Kelso Drive Baltimore, Maryland 21221
		(703) 548-3104	5419 A Vine Street Alexandria, Virginia 22310
40 - Richmond	Gary Johnson	(804) 264-2548	6719 Janway Road 1st Floor Richmond, Virginia 23228
42 - Greensboro	Joe Ratcliff	(919) 852-4110	311 - D Potomac Drive Greensboro, North Carolina 27407
		(704) 568-7175	4921 Albermarle Road Suite 124 Charlotte, North Carolina 28205
75 - San Juan	Ellett Barreras	(809) 781-0740	G.P.O. Box 71313
		(809) 781-0872	San Juan Puerto Rico 00936
			Urb. Industrial Monterrey Acacia Street #6 Bordas Building Floor 2 Office 4 Pueblo Viejo, Puerto Rico

CENTRAL REGION

<u>REGION OFFICE</u>	<u>REGION V.P.</u>	<u>TELEPHONE</u>	<u>ADDRESS</u>
25 - Youngstown	Bill Blockinger	(216) 758-9767	P.O. Box 3389 7221 Market Street Youngstown, Ohio 44512
<u>DISTRICT OFFICE</u>	<u>MANAGER</u>	<u>TELEPHONE</u>	<u>ADDRESS</u>
11 - Buffalo	Dave Kurdziel	(716) 675-9100	60 Ransler Drive West Seneca, New York 14224-2294
		(315) 463-4568	P.O. Box 400 6295 E. Molloy Road E. Syracuse, New York 13057
		(716) 235-5090	Rochester, New York Answering Service
16 - Pittsburgh	John Sylvester	(412) 828-4196	P.O. Box 71 930 Third Street Oakmont, Pennsylvania 15139
17 - Cleveland	Leon Chilli	(216) 238-9330	19668 Progress Drive Strongsville, Ohio 44136
		(419) 385-0818	4758A Angola Toledo, Ohio 43615
19 - Youngstown	Ray Wilkinson	(216) 758-2391	P.O. Box 3389 7221 Market Street Youngstown, Ohio 44512
		(614) 231-2005	2016 Zettler Road Columbus, Ohio 43232
21 - Cincinnati	Phil Skufis	(513) 793-4994	10827 Millington Court Cincinnati, Ohio 45242
		(513) 298-6188	Dayton, Ohio
		(304) 522-3957	Huntington, West Virginia
24 - Detroit	Tony Berger	(313) 477-9100	23921 Freeway Park Drive Farmington Hills, Michigan 48024
28 - Indianapolis	Bruce Agan	(317) 547-3555	2900 N. Catherwood Avenue Indianapolis, Indiana 46219
		(502) 491-1912	300 Production Drive Louisville, Kentucky 40299

MIDWEST REGION

<u>REGION OFFICE</u>	<u>REGION V.P.</u>	<u>TELEPHONE</u>	<u>ADDRESS</u>
35 - Chicago	Bill McCardell-Only Regional Office	(312) 459-1030 (312) 459-0700	851 Seton Court Wheeling, Illinois 60090
<u>DISTRICT OFFICE</u>	<u>MANAGER</u>	<u>TELEPHONE</u>	<u>ADDRESS</u>
26 - Chicago	Frank Robertson	(312) 956-6120	2480 Estes Avenue Elk Grove Village, Illinois 60007
27 - Milwaukee	Frank Robertson	(414) 252-3633	W140 N5898 Lilly Drive Menomonee Falls, Wisconsin 53051
30 - Minneapolis	Chuck Raab	(612) 935-0327	3798 Williston Road Minnetonka, Minnesota 55345
32 - St. Louis	Rick Lennerth	(314) 432-1828	2445 Rock Island Boulevard Maryland Heights, Missouri 63043
33 - Quad Cities	Rick Lennerth	(319) 386-2710	R.R. 3 North Brady Box 466 Davenport, Iowa 52806
34 - Kansas City	Rich Butts	(816) 221-4191 (816) 421-3120	24 West 15th Avenue North Kansas City, Missouri 64116 North Kansas City, Missouri Answering Service
37 - Denver		(303) 371-4363 (303) 321-3388	4897 Oakland Denver, Colorado 80239 Denver, Colorado Answering Service
63 - Omaha	Mike Rice	(402) 331-8340 (515) 244-4232 (515) 243-0597	11055 I Street Omaha, Nebraska 68137 820 Keo Way Room 201 Des Moines, Iowa 50308 Des Moines, Iowa Answering Service

GULF REGION

<u>REGION OFFICE</u>	<u>REGION V.P.</u>	<u>TELEPHONE</u>	<u>ADDRESS</u>
85 - Houston	Joe Posey	(713) 946-5350	4811 Cripple Creek Drive Houston, Texas 77017
		(404) 452-1415	3731 Northcrest Road, Suite 5 Atlanta, Georgia 30340
		(504) 368-3969	P.O. Box 489 (ZIP) 70054 1800 Monroe Street Gretna, Louisiana (ZIP) 70053
<u>DISTRICT OFFICE</u>	<u>MANAGER</u>	<u>TELEPHONE</u>	<u>ADDRESS</u>
29 - Houston	Dow Carder, Jr.	(713) 941-7033	4811 Cripple Creek Drive Houston, Texas 77017
38 - New Orleans	Manuel De Alarcon	(504) 362-5277	P.O. Box 489 (ZIP) 70054 1800 Monroe Street Gretna, Louisiana (ZIP) 70053
		(205) 479-5441	P.O. Box 6316 3151 A Midtown Park South Mobile, Alabama 36606
39 - Birmingham	Den Dotson	(205) 592-9631	P.O. Drawer 31048 4329 Morris Avenue Birmingham, Alabama 35222
		(601) 922-9131	P.O. Box 20044 4658 Van Winkle Park Drive Jackson, Mississippi 39209
		(601) 841-1441	P.O. Box 2094 (ZIP) 38802-2094 1255-1/2 Nell Street Tupelo, Mississippi 38801
44 - Atlanta	Bill McRae	(404) 452-1415	3731 Northcrest Road Suite 5 Atlanta, Georgia 30340
		(803) 736-0700;11	3037 B McNaughton Columbia, South Carolina 29206
46 - Nashville	Glenn Cherry	(615) 254-3421	2131 Utopia Avenue Nashville, Tennessee 37211
51 - Tampa	Dennis Marra	(813) 247-5454	2625 East Fourth Avenue Tampa, Florida 33605
69 - Fort Lauderdale	Dennis Marra	(305) 484-2267	2957 N.W. 27th Street Fort Lauderdale, Florida 33311

GULF REGION (Continued)

<u>DISTRICT OFFICE</u>	<u>MANAGER</u>	<u>TELEPHONE</u>	<u>ADDRESS</u>
82 - Dallas	Richard Emkey	(817) 640-9866	803 Avenue H East, Suite 305 Arlington, Texas 76011
89 - San Antonio	Ed Kirk	(512) 824-0251	P.O. Box 17447 2438 Brodtkon San Antonio, Texas 78217

WESTERN REGION

<u>REGION OFFICE</u>	<u>REGION V.P.</u>	<u>TELEPHONE</u>	<u>ADDRESS</u>
55 - San Francisco	Mike Dempsey	(415) 487-3980	33480 Western Ave. Union City, California 94587
<u>DISTRICT OFFICE</u>	<u>MANAGER</u>	<u>TELEPHONE</u>	<u>ADDRESS</u>
59 - Phoenix	William Kleinz	(602) 437-0381	5002 S. 40th Street Suite E Phoenix, Arizona 85040
61 - San Diego	Charles Riley	(619) 579-8934	1466 Pioneer Way, Suite 6 El Cajon, California 92020
62 - Los Angeles	Larry Anderson	(213) 921-8545	13100 East Firestone Boulevard Santa Fe Springs, California 90670
65 - San Francisco	John D'Abruzzi	(415) 471-8400	33470 Western Avenue Union City, California 94587
68 - Seattle	Kent Fricks	(206) 872-9570	7018 S. 220th Street P.O. Box 1163 Kent, Washington, 98032
98 - Hawaii	Greg Jewell	(808) 677-9121	94-515C Ukee Street Waipahu, Hawaii 96797

EASTERN REGION

<u>REGION OFFICE</u>	<u>REGION V.P.</u>	<u>TELEPHONE</u>	<u>ADDRESS</u>
20- Baltimore	A.D. O'Neill	(301) 391-3292	8907 Kelso Drive Essex, Maryland 21221
		(215) 277-3002	201 King Manor Drive Suite F King of Prussia, Pennsylvania 19406
		(401) 738-2308	2699 Post Road Warwick, Rhode Island 02886
		(201) 850-1155	P.O. Box 469 108 High Street 2nd Floor Hackettstown, New Jersey 07840
<u>DISTRICT OFFICE</u>	<u>MANAGER</u>	<u>TELEPHONE</u>	<u>ADDRESS</u>
02 - Portland	Al Sands	(207) 767-2166	P.O. Box 2311 78 Pleasant Avenue South Portland, Maine 04106
		(207) 942-3444	Answering Service Bangor, Maine
		(603) 622-0965	Answering Service New Hampshire
03 - Boston	Bill Newell	(617) 332-7504	53 Winchester Street Newton, Massachusetts 02161
		(203) 646-4400	Answering Service Connecticut
05 - Kenilworth	Ed Fee	(201) 245-3725	P.O. Box 98 340 Carnegie Avenue Kenilworth, New Jersey 07033
06 - Philadelphia	Joe Kiczek	(215) 277-1190	201 King Manor Drive Suite F King of Prussia, Pennsylvania 19406
		(717) 829-1996	Answering Service Pennsylvania
		(717) 757-1502	3755 East Market Street York, Pennsylvania 17402
09 - Baltimore	John O'Malley	(301) 391-7010	8909 Kelso Drive Baltimore, Maryland 21221
		(703) 971-2432;33	5419A Vine Street Alexandria, Virginia 22310

EASTERN REGION (Continued)

<u>DISTRICT OFFICE</u>	<u>MANAGER</u>	<u>TELEPHONE</u>	<u>ADDRESS</u>
40 - Richmond	Gary Johnson	(804) 264-2548	6719 Janway Road 1st Floor Richmond, Virginia 23228
42 - Greensboro	Joe Ratcliff *	(919) 852-4110	311 - D Pomona Drive Greensboro, North Carolina 27405
		(704) 568-7175	4921 Albermarle Road Suite 124 Charlotte, North Carolina 28205
75 - San Juan	Ellett Barreras	(809) 781-0740 781-0872	G.P.O. Box 71313 San Juan Puerto Rico 00936

*ACTING DISTRICT MANAGER

CENTRAL REGION

<u>REGION OFFICE</u>	<u>REGION V.P.</u>	<u>TELEPHONE</u>	<u>ADDRESS</u>
25 - Youngstown	Bill Blockinger	(216) 758-9767	P.O. Box 3389 7221 Market Street Youngstown, Ohio 44512
<u>DISTRICT OFFICE</u>	<u>MANAGER</u>	<u>TELEPHONE</u>	<u>ADDRESS</u>
11 - Buffalo	Pat Kelly	(716) 675-9100	60 Ransler Drive West Seneca, New York 14224
		(315) 463-4568	P.O. Box 400 6295 E. Molloy Road E. Syracuse, New York 13057
16 - Pittsburgh	John Sylvester	(412) 828-4196	P.O. Box 71 930 Third Street Oakmont, Pennsylvania 15139
17 - Cleveland	Leon Chill	(216) 238-9330	19668 Progress Drive Strongsville, Ohio 44136
		(419) 385-0818	4758A Angola Toledo, Ohio 43615
19 - Youngstown	Ray Wilkinson	(216) 758-2391	P.O. Box 3389 7221 Market Street Youngstown, Ohio 44512
		(614) 231-2005	2016 Zettler Road Columbus, Ohio 43227
		(304) 697-4770	P.O. Box 7757 845 Jackson Ave. Huntington, West Virginia 25778
21 - Cincinnati	Phil Skufis	(513) 793-4994	10800 Millington Court Cincinnati, Ohio 45242
24 - Detroit	Tony Berger	(313) 477-9100	23921 Freeway Park Drive Farmington Hills, Michigan 48024
28 - Indianapolis	Bruce Agan	(317) 547-3555	2900 N. Catherwood Avenue Indianapolis, Indiana 46219
		(502) 491-1912	300 Production Drive Louisville, Kentucky 40299

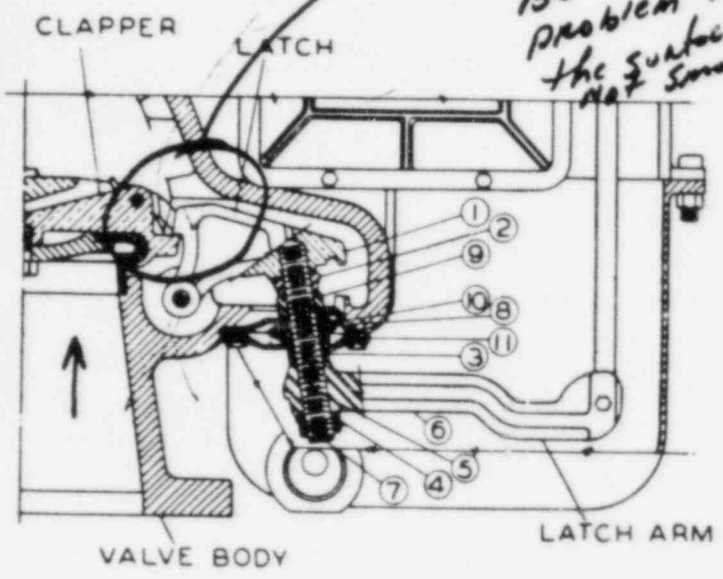
GULF REGION

<u>REGION OFFICE</u>	<u>REGION V.P.</u>	<u>TELEPHONE</u>	<u>ADDRESS</u>
85 - Houston	Joe Posey	(713) 781-6870	5824 Parkersburg Houston, Texas 77036
		(404) 452-1415	3731 Northcrest Road Doraville, Georgia 30340
<u>DISTRICT OFFICE</u>	<u>MANAGER</u>	<u>TELEPHONE</u>	<u>ADDRESS</u>
29 - Houston	Dow Carder, Jr.	(713) 781-4393	5824 Parkersburg Houston, Texas 77036
38 - New Orleans	Manuel De Alarcon	(504) 362-5277	P.O. Box 489 1800 Monroe Street Gretna, Louisiana 70053
		(205) 479-5441	P.O. Box 6316 3151 A Midtown Park South Mobile, Alabama 36606
39 - Birmingham	(Under Atlanta District Manager)	(205) 592-9631	P.O. Drawer 31048 4329 Morris Avenue Birmingham, Alabama 35222
		(601) 922-9131	P.O. Box 20044 4658 Van Winkle Park Drive Jackson, Mississippi 39209
44 - Atlanta	Mike Brown	(404) 452-1415	3731 Northcrest Road Doraville, Georgia 30340
		(803) 736-0700 -0711	3037 B McNaughton Columbia, South Carolina 29206
46 - Nashville	Glenn Cherry	(615) 254-3421	2131 Utopia Avenue Nashville, Tennessee 37211
		(615) 690-5931	8705 Unicorn Drive Suite B 310 Knoxville, Tennessee 37919
51 - Tampa	Dennis Marra	(813) 247-5454	2625 East Fourth Avenue Tampa, Florida 33605
		(305) 484-2267	2957 N.W. 27th Street Fort Lauderdale, Florida 33334
82 - Tulsa	Bill McRae	(918) 836-6493	1863 North 105th East Avenue Tulsa, Oklahoma 74116
88 - Dallas	Richard Emkey	(817) 640-9866	803 Avenue H East, Suite 305 Arlington, Texas 76011
		(318) 688-7420	P.O. Box 9050 7505 Pines Road, Suite 1105 Shreveport, Louisiana 71109
89 - San Antonio	Ed Kirk	(512) 824-0251	P.O. Box 17447 2438 Brockton San Antonio, Texas 78217

ENCLOSURE 4

PARTS LIST FOR SUPERVISORY AIR SYSTEMS

Press
THIS MATING SURFACE APPEARS TO BE A POTENTIAL PROBLEM IF THE SURFACE IS NOT SMOOTH



Parts for sealed latch only
 (See page 13 for other Valve parts)

Dwg. No. SB-173-3

REPLACEMENT PART LIST FOR SUPROTEX-DELUGE HIGH SPEED VALVE WITH SEALED LATCH

Item No.	Symbol No. 6" Valve	Symbol No. 2 1/2" Valve	Name
1	76-6060	76-2060	Clapper Latch
2	76-6070	76-2070	Latch Stud Collar
3	76-6100	76-2100	Grip Plate Nut
4	76-6102	76-2102	Stud Lock Nut
5	76-6103	76-2103	Latch Arm Pin
6	76-6120	76-2120	Latch Arm
7	76-6490	76-2490	Latch Stud
8	76-6980	76-2980	Diaphragm Grip Plate
9	76-6990	76-2990	Latch Stud Collar Nut
10	76-6330	76-6330	Diaphragm
11	76-6970	76-6970	Diaphragm Ret. Plates

Symbol No.	Description
79-340A	Air Dryer (Plastic)
79-840B	Air Line Mercury Check (Plastic)
148-150	Air Line Restriction (Specify Rating)
79-861	0 to 36 Ounce Pressure Gage
79-868	High Pressure Regulator (For Nitrogen Supervision)
79-869	Low Pressure Regulator (For Nitrogen Supervision)
79-904B	Pump Control Switch (For Thermo-Pneumatic System Pump). Specify Setting (16-24 oz.).
148-200C	Thermal System Air Pump Unit (Complete)
79-943B	Air Reservoir (Owner's Air Supply Only) (150 PSI maximum working pressure)
---	1/2" Pressure Relief Valve, set at 150 PSI, (must be used when Owner's Air Supply Reservoir 79-943B is used)
---	3 1/2" Dia. 250# Air Gage (Must be used when Owner's Air Supply Reservoir 79-943B is used)
---	1/2" Check Valve
79-943A	Air Reservoir for Hydraulic Air Pump 120-150 (30 PSI maximum working pressure)
79-936	Air Reservoir for Electric Air Pump (Wall Mount)
79-935	Air Reservoir for Electric Air Pump (Floor Mount)

32 Electric Trouble Horn
 (Specify—Electrical characteristics)

TROUBLE ALARM SWITCH ASSEMBLY 594-125

*594-125 Switch (double open—single throw—1 common wire). Specify setting
 Adapter
 3/4"—Hex Steel Check Nut
 3/4"—Washer

Available on special order in place of 79-904B Switch
 94-101 Switch (one open—one closed contacts under Press.)
 94-102 Switch (two closed contacts under Press.)

RED TROUBLE LIGHT (594-150)

*594-150 Receptacle
 One 3/4" Octagon Junction Box
 One Red Light, 110 Volts, 25 Watt
 One Lamp Guard and Key
 One 1/2" x Close Nipple
 Three 1/2" Conduit Locknuts

*Note: Bracketed Parts will only be furnished as a unit.

AT GRAND GULF THE HAD SYSTEM WAS ELECTRIC

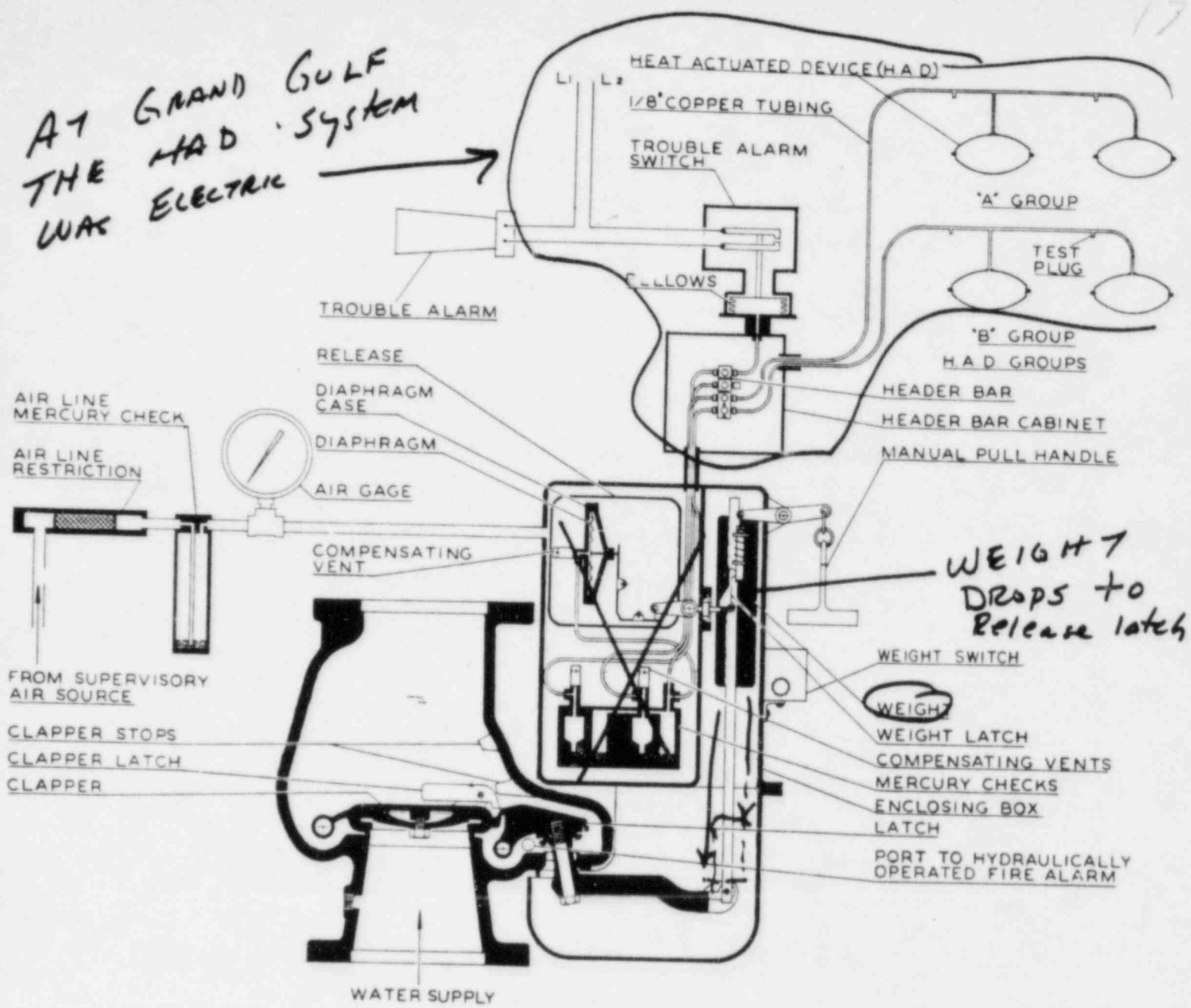
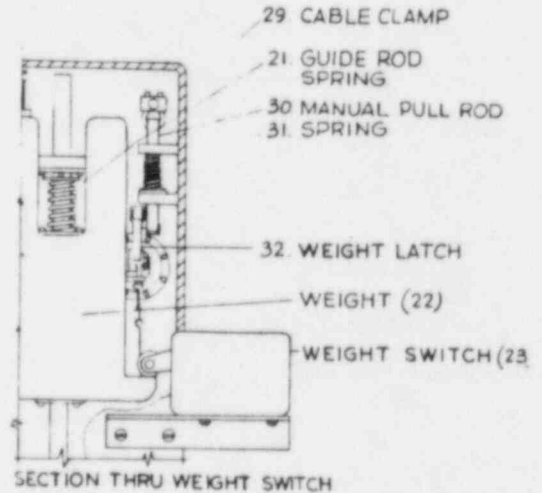
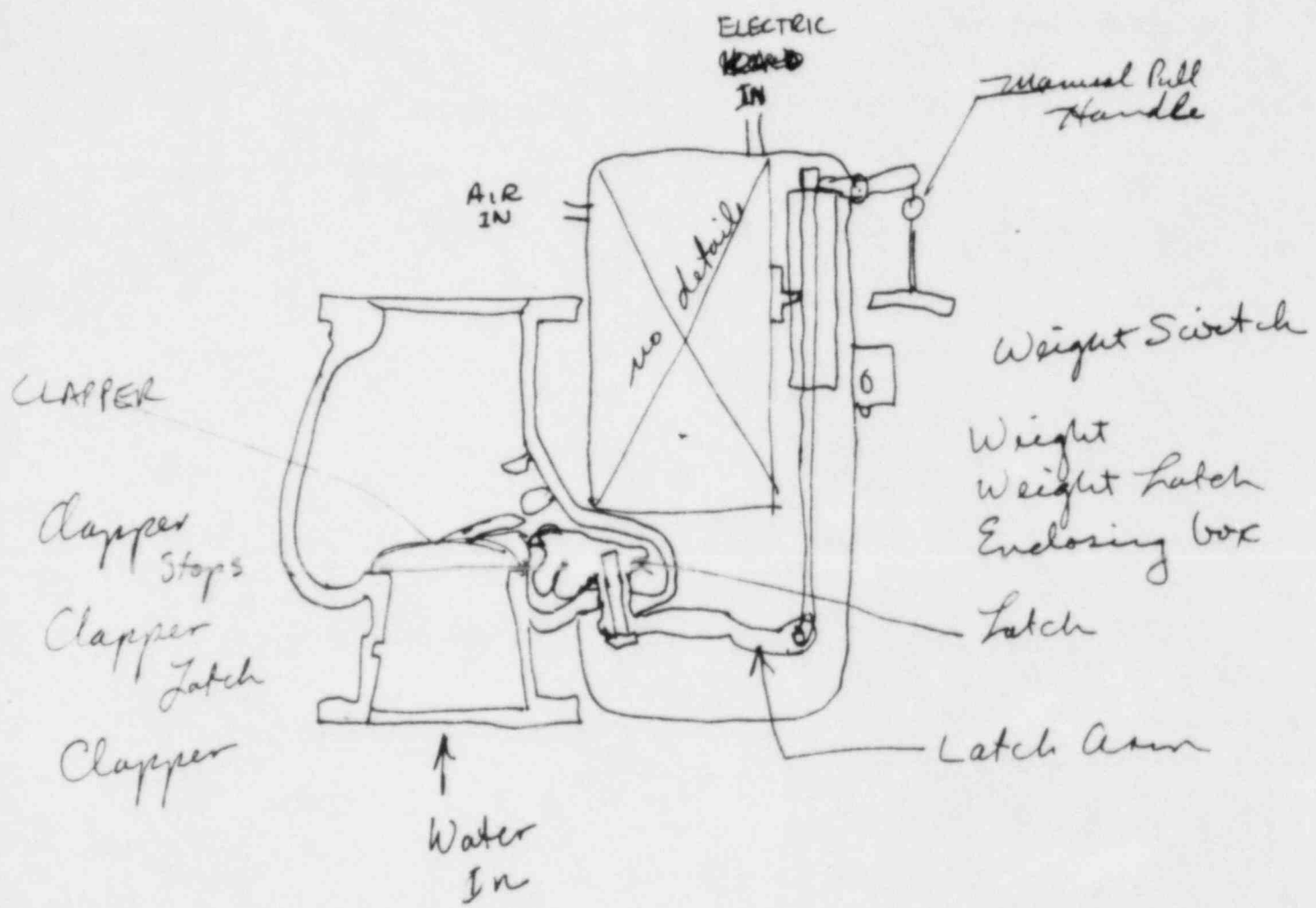


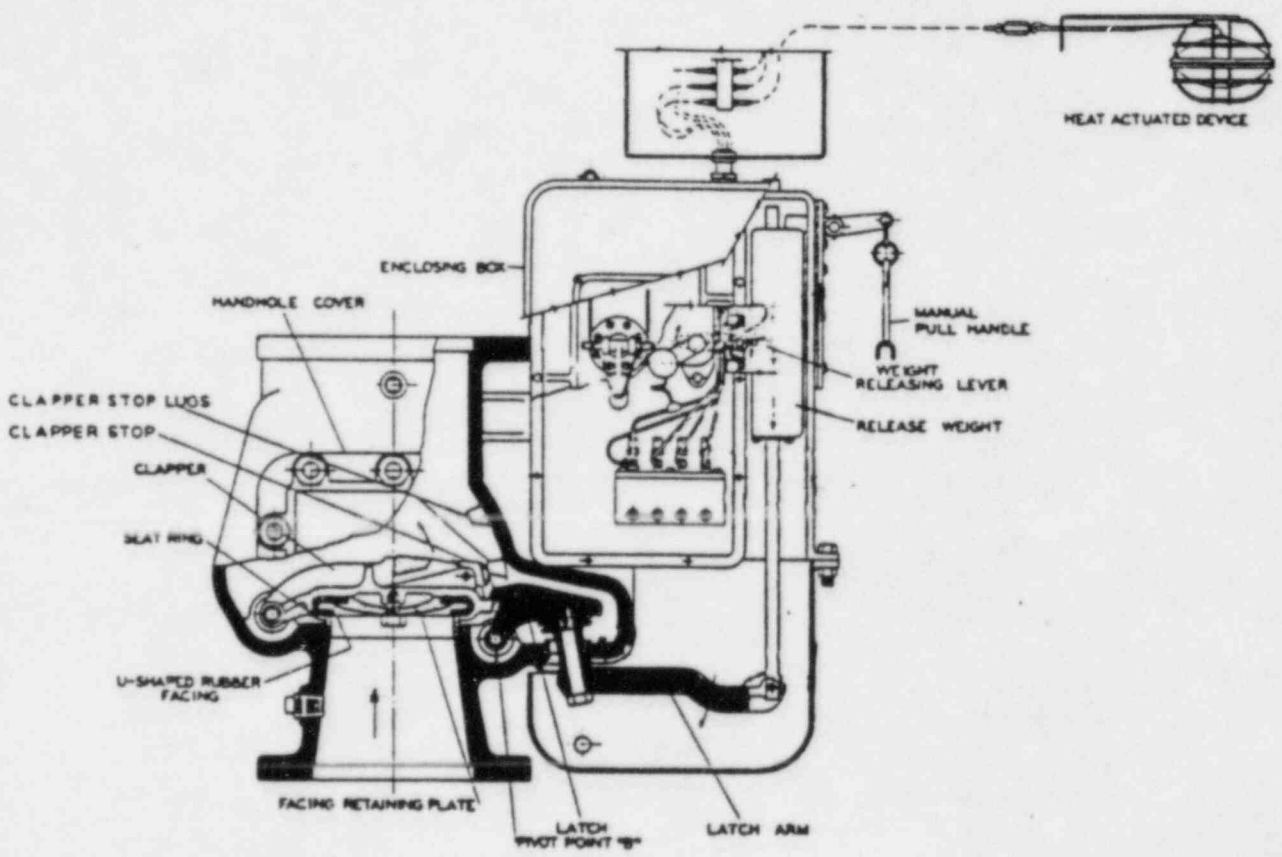
Figure 2
Schematic Operating Diagram
of Standard Suprotex-Deluge
Valve

Dwg. No. SB-268



C/4





MODEL C VALVE

~~Submarine~~



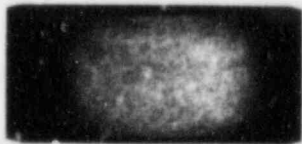
March 8, 1984

← Automatic Sprinkler
↓

* making surface friction
aggravated by pressure

tests - did not require pressure on bottom of valve

UL listed 175*



not
part 21
new info -

Jack Gallo / manager Automatic Sprinkler

re: Model C deluge valve

pot. problem may prevent system from det

7 incidents - failed to trip
time / pressure / water
over 100 psi

test procedure
refurbish

INPO - All Rivers

original finish is	63 RMS
9/73	125 RMS
11/83	16 RMS

Letter coming

AUIS 24858 / 138

Moone → File

SINS No.: 6835
IN 16

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

March 2, 1984

IE INFORMATION NOTICE NO. 84-16: FAILURE OF AUTOMATIC SPRINKLER SYSTEM VALVES
TO OPERATE

Addressees:

All nuclear power reactor facilities holding an operating license (OL) or a construction permit (CP).

Purpose:

This information notice provides notification of a problem involving the operational failure of deluge and pre-action fire protection water control valves, identified as Model C, manufactured by Automatic Sprinkler Corporation of America of Cleveland, Ohio. It is expected that recipients will review this information notice for applicability to their facilities. No specific action or response is required.

Description of Circumstances:

On September 4, 1983, Mississippi Power and Light (MP&L) Company's Grand Gulf Unit 1 was performing an operational test of an emergency diesel-generator when a fire involving the diesel engine occurred. The fire brigade arrived to find that the automatic deluge valve had not opened. The manual release failed to open the valve. A mechanic opened the actuator box cover and struck the actuation weight, forcing the clapper latch to release, permitting water spray from the sprinkler system to extinguish the fire. (See Attachment 1.) The valve was a 6-inch Model C, manufactured by Automatic Sprinkler Corporation of America of Cleveland, Ohio. (Reference LER 50-416/83-126.)

During subsequent testing and examination, excessive friction was noted between the weight and the weight guide rod; bowing (0.005-inch) was observed in the weight guide rod; evidence of scoring was found in two locations on the rod's surface; the weight's upper guide collar had an inside diameter (ID) of 0.637 inch rather than the manufacturer's recommended minimum of 0.647 inch; and scoring was noted on the enclosing box along the path that the weight guide bushing traces during actuation.

On December 5, 1983, a Model C valve for a pre-action sprinkler system protecting a diesel generator room failed to operate during a test at Grand Gulf. Similar roughness was found in its internals. A search of records uncovered

8402090008 4 pp.

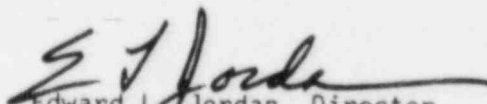
another event at Grand Gulf in which a Model C valve installed to protect a main transformer failed to open during a test in September 1979.

The valve manufacturer has been notified of these failures and is evaluating this problem to determine the action required.

The licensee's preliminary investigation indicates that these failures may be related to the surface condition of the latch which holds the water clapper in the normally closed position. If the mating surfaces of the latch and clapper are not smooth, the latch may fail to disengage when the actuation weight hits the latch arm. If the normal water system pressure applied to the clapper valve exceeds 140 psig, the problem becomes more acute. The water pressure at Grand Gulf is maintained at 140 psig.

MP&L has sanded and trued the guide rod; reworked the ID of the weight's upper guide collar; lubricated the rod, latch pin, clapper hinge pin, and the enclosed box along the path of the weight guide bushings; temporarily increased the testing frequency of the valves; and revised the surveillance procedures to visually verify that the clapper has lifted and locked open following the test under normal system pressure.

If you have any questions regarding this matter, contact the Regional Administrator of the appropriate NRC Regional Office, or this office.

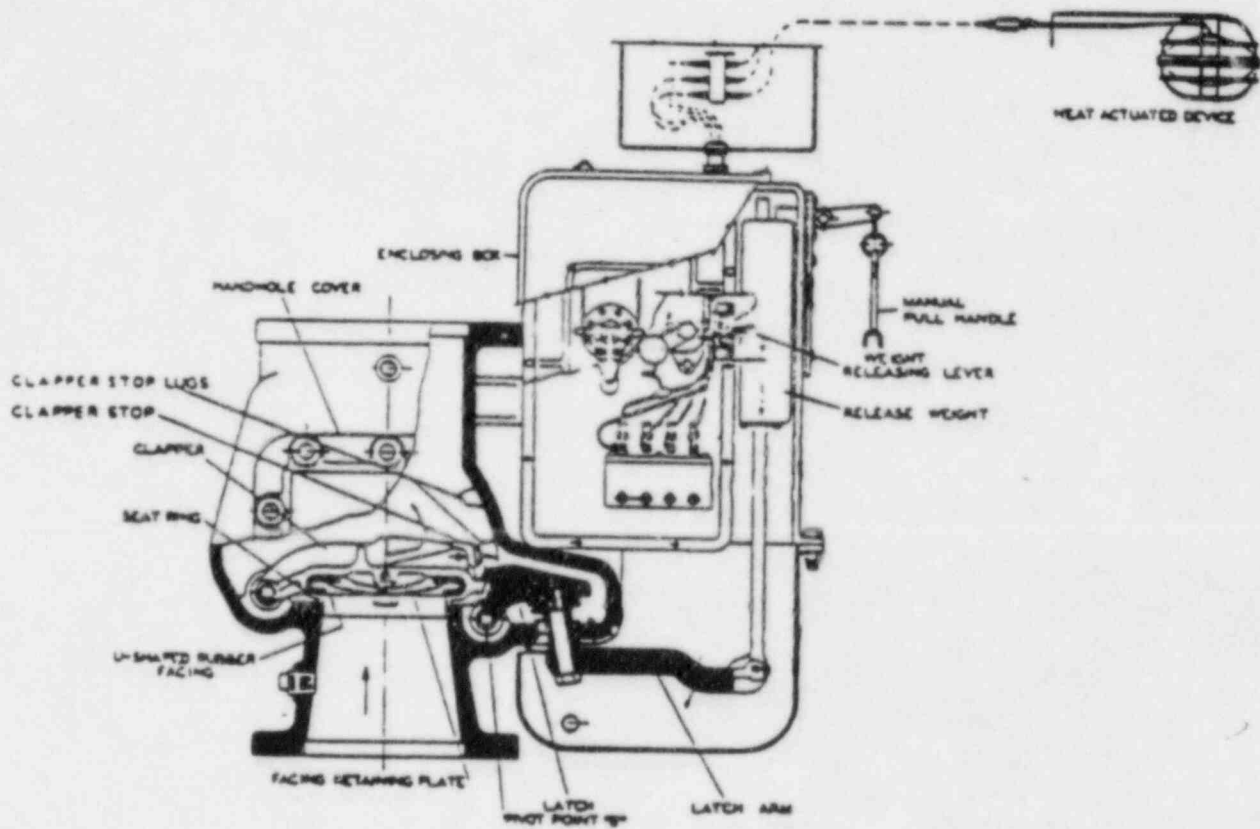


Edward L. Jordan, Director
Division of Emergency Preparedness
and Engineering Response
Office of Inspection and Enforcement

Technical Contact: M. S. Wegner, IE
(301) 492-4511

Attachments:

1. Drawing of Automatic Model C Valve
2. List of Recently Issued IE Information Notices

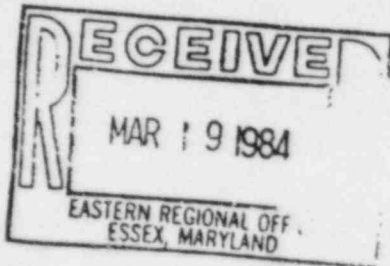


MODEL C VALVE

LIST OF RECENTLY ISSUED
IE INFORMATION NOTICES

Information Notice No.	Subject	Date of Issue	Issued to
84-15	Reporting of Radiological Releases	3/2/84	All power reactor facilities holding an OL or CP
84-14	Highlights of Recent Transport Regulatory Revisions by DOT and NRC	3/2/84	All NRC licensees
84-13	Potential Deficiency in Motor-Operated Valve Control Circuits and Annunciation	2/28/84	All power reactor facilities holding an OL or CP
84-12	Failure of Soft Seat Valve Seals	2/27/84	All power reactor facilities holding an OL or CP
84-11	Training Program Deficiencies	2/24/84	All power reactor facilities holding an OL or CP
84-10	Motor-Operated Valve Torque Switches Set Below the manufacturer's Recommended Value	2/21/84	All power reactor facilities holding an OL or CP
84-09	Lessons Learned from NRC Inspections of Fire Protection Safe Shutdown Systems (10 CFR 50, Appendix R)	02/13/84	All power reactor facilities holding an OL or CP
83-63 Supp 1	Pontential Failures of Westinghouse Electric Corporation Type SA-1	2/15/84	All power reactor facilities holding an OL Or CP
84-08	10 CFR 50.7, "Employee Protection"	2/14/84	All power reactor facilities holding an OL or CP; and NSSS & AE

OL = Operating License
CP = Construction Permit



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

March 2, 1984

IE INFORMATION NOTICE NO. 84-16: FAILURE OF AUTOMATIC SPRINKLER SYSTEM VALVES
TO OPERATE

Addressees:

All nuclear power reactor facilities holding an operating license (OL) or a construction permit (CP).

Purpose:

This information notice provides notification of a problem involving the operational failure of deluge and pre-action fire protection water control valves, identified as Model C, manufactured by Automatic Sprinkler Corporation of America of Cleveland, Ohio. It is expected that recipients will review this information notice for applicability to their facilities. No specific action or response is required.

Description of Circumstances:

On September 4, 1983, Mississippi Power and Light (MP&L) Company's Grand Gulf Unit 1 was performing an operational test of an emergency diesel-generator when a fire involving the diesel engine occurred. The fire brigade arrived to find that the automatic deluge valve had not opened. The manual release failed to open the valve. A mechanic opened the actuator box cover and struck the actuation weight, forcing the clapper latch to release, permitting water spray from the sprinkler system to extinguish the fire. (See Attachment 1.) The valve was a 6-inch Model C, manufactured by Automatic Sprinkler Corporation of America of Cleveland, Ohio. (Reference LER 50-416/83-126.)

During subsequent testing and examination, excessive friction was noted between the weight and the weight guide rod; bowing (0.005-inch) was observed in the weight guide rod; evidence of scoring was found in two locations on the rod's surface; the weight's upper guide collar had an inside diameter (ID) of 0.637 inch rather than the manufacturer's recommended minimum of 0.647 inch; and scoring was noted on the enclosing box along the path that the weight guide bushing traces during actuation.

On December 5, 1983, a Model C valve for a pre-action sprinkler system protecting a diesel generator room failed to operate during a test at Grand Gulf. Similar roughness was found in its internals. A search of records uncovered

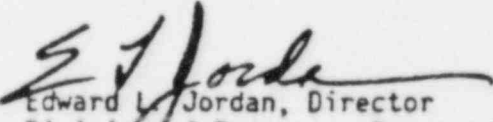
another event at Grand Gulf in which a Model C valve installed to protect a main transformer failed to open during a test in September 1979.

The valve manufacturer has been notified of these failures and is evaluating this problem to determine the action required.

The licensee's preliminary investigation indicates that these failures may be related to the surface condition of the latch which holds the water clapper in the normally closed position. If the mating surfaces of the latch and clapper are not smooth, the latch may fail to disengage when the actuation weight hits the latch arm. If the normal water system pressure applied to the clapper valve exceeds 140 psig, the problem becomes more acute. The water pressure at Grand Gulf is maintained at 140 psig.

MP&L has sanded and trued the guide rod; reworked the ID of the weight's upper guide collar; lubricated the rod, latch pin, clapper hinge pin, and the enclosed box along the path of the weight guide bushings; temporarily increased the testing frequency of the valves; and revised the surveillance procedures to visually verify that the clapper has lifted and locked open following the test under normal system pressure.

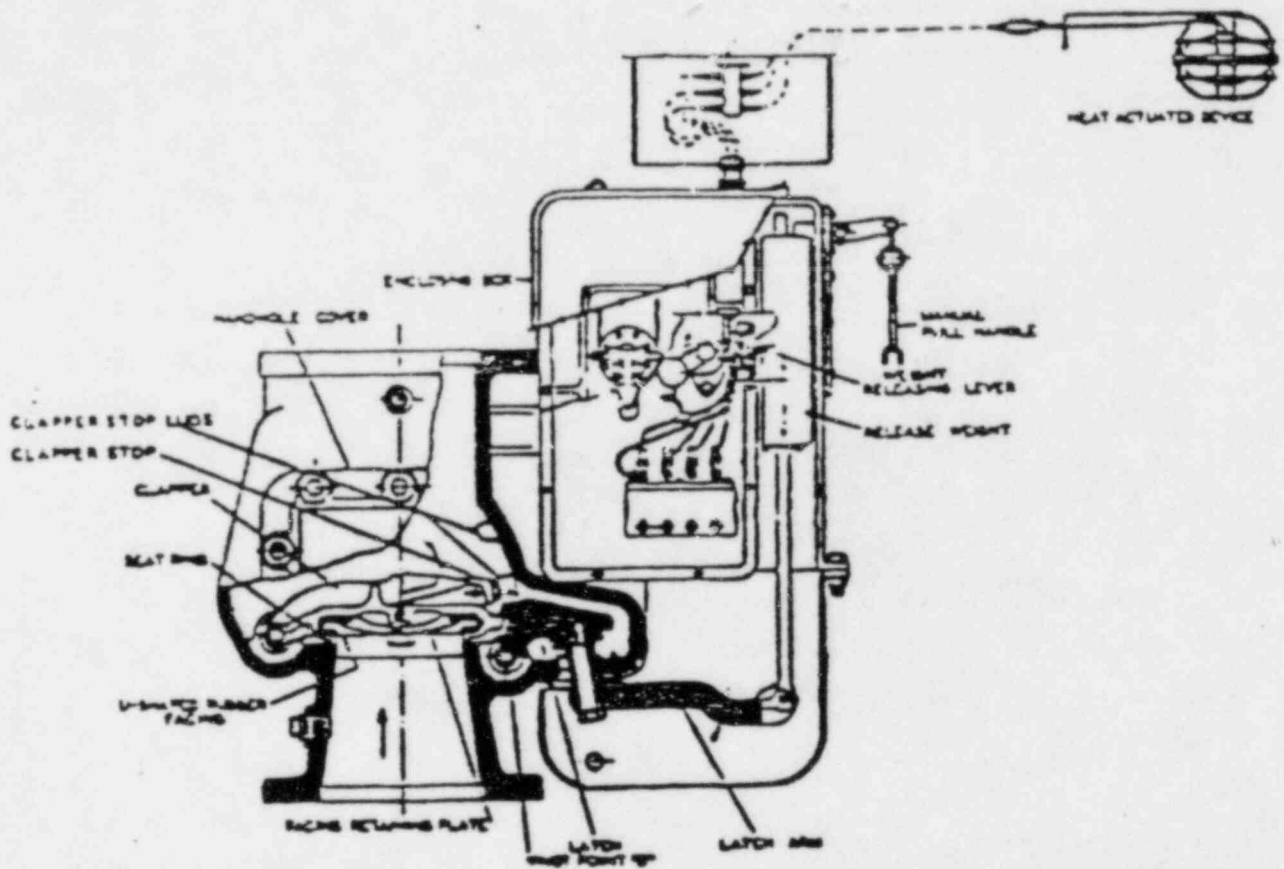
If you have any questions regarding this matter, contact the Regional Administrator of the appropriate NRC Regional Office, or this office.


Edward L. Jordan, Director
Division of Emergency Preparedness
and Engineering Response
Office of Inspection and Enforcement

Technical Contact: M. S. Wegner, IE
(301) 492-4511

Attachments:

1. Drawing of Automatic Model C Valve
2. List of Recently Issued IE Information Notices



MODEL C VALVE

LIST OF RECENTLY ISSUED
 IE INFORMATION NOTICES

Information Notice No.	Subject	Date of Issue	Issued to
84-15	Reporting of Radiological Releases	3/2/84	All power reactor facilities holding an OL or CP
84-14	Highlights of Recent Transport Regulatory Revisions by DOT and NRC	3/2/84	All NRC licensees
84-13	Potential Deficiency in Motor-Operated Valve Control Circuits and Annunciation	2/28/84	All power reactor facilities holding an OL or CP
84-12	Failure of Soft Seat Valve Seals	2/27/84	All power reactor facilities holding an OL or CP
84-11	Training Program Deficiencies	2/24/84	All power reactor facilities holding an OL or CP
84-10	Motor-Operated Valve Torque Switches Set Below the manufacturer's Recommended Value	2/21/84	All power reactor facilities holding an OL or CP
84-09	Lessons Learned from NRC Inspections of Fire Protection Safe Shutdown Systems (10 CFR 50, Appendix R)	02/13/84	All power reactor facilities holding an OL or CP
83-63 Supp 1	Pontential Failures of Westinghouse Electric Corporation Type SA-1	2/15/84	All power reactor facilities holding an OL Or CP
84-08	10 CFR 50.7, "Employee Protection"	2/14/84	All power reactor facilities holding an OL or CP; and NSSS & AE

OL = Operating License
 CP = Construction Permit

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

Month 2
February, 1984

IE INFORMATION NOTICE NO. 84-*16*: FAILURE OF AUTOMATIC SPRINKLER SYSTEM VALVES
TO OPERATE

Addressees:

All nuclear power reactor facilities holding an operating license (OL) or a construction permit (CP).

Purpose:

This information notice provides notification of a problem involving the operational failure of deluge and pre-action fire protection water control valves, identified as Model C, manufactured by Automatic Sprinkler Corporation of America of Cleveland, Ohio. It is expected that recipients will review this information notice for applicability to their facilities. No specific action or response is required.

Description of Circumstances:

On September 4, 1983, Mississippi Power and Light (MP&L) Company's Grand Gulf Unit 1 was performing an operational test of an emergency diesel-generator when a fire involving the diesel engine occurred. The fire brigade arrived to find that the automatic deluge valve had not opened. The manual release failed to open the valve. A mechanic opened the actuator box cover and struck the actuation weight, forcing the clapper latch to release, permitting water spray from the sprinkler system to extinguish the fire. (See Attachment 1.) The valve was a 6-inch Model C, manufactured by Automatic Sprinkler Corporation of America of Cleveland, Ohio. (Reference LER 50-416/83-126.)

During subsequent testing and examination, excessive friction was noted between the weight and the weight guide rod; bowing (0.005-inch) was observed in the weight guide rod; evidence of scoring was found in two locations on the rod's surface; the weight's upper guide collar had an inside diameter (ID) of 0.637 inch rather than the manufacturer's recommended minimum of 0.640 inch; and scoring was noted on the enclosing box along the path that the weight guide bushing traces during actuation.

*7sb0
-0
+005*

On December 5, 1983, a Model C valve for a pre-action sprinkler system protecting a diesel generator room failed to operate during a test at Grand Gulf. Similar roughness was found in its internals. A search of records uncovered

~~8460090008~~ 349.
*Hugh Castles
Risk Control Dept
Middle South
NOLA
1504) 569-4926*

another event at Grand Gulf in which a Model C valve installed to protect a main transformer failed to open during a test in September 1979.

The valve manufacturer has been notified of these failures and is evaluating this problem to determine the action required.

The licensee's preliminary investigation indicates that these failures may be related to the surface condition of the latch which holds the water clapper in the normally closed position. If the mating surfaces of the latch and clapper are not smooth, the latch may fail to disengage when the actuation weight hits the latch arm. If the normal water system pressure applied to the clapper valve exceeds 140 psig, the problem becomes more acute. The water pressure at Grand Gulf is maintained at 140 psig. *Charlie Barnett (R&D) (Zib) 526-4900 ext 307*

MP&L has sanded and trued the guide rod; reworked the ID of the weight's upper guide collar; lubricated the rod, latch pin, clapper hinge pin, and the enclosed box along the path of the weight guide bushings; temporarily increased the testing frequency of the valves; and revised the surveillance procedures to visually verify that the clapper has lifted and locked open following the test under normal system pressure.

Automatic Sprinkler Says lubrication Causes failure to activate

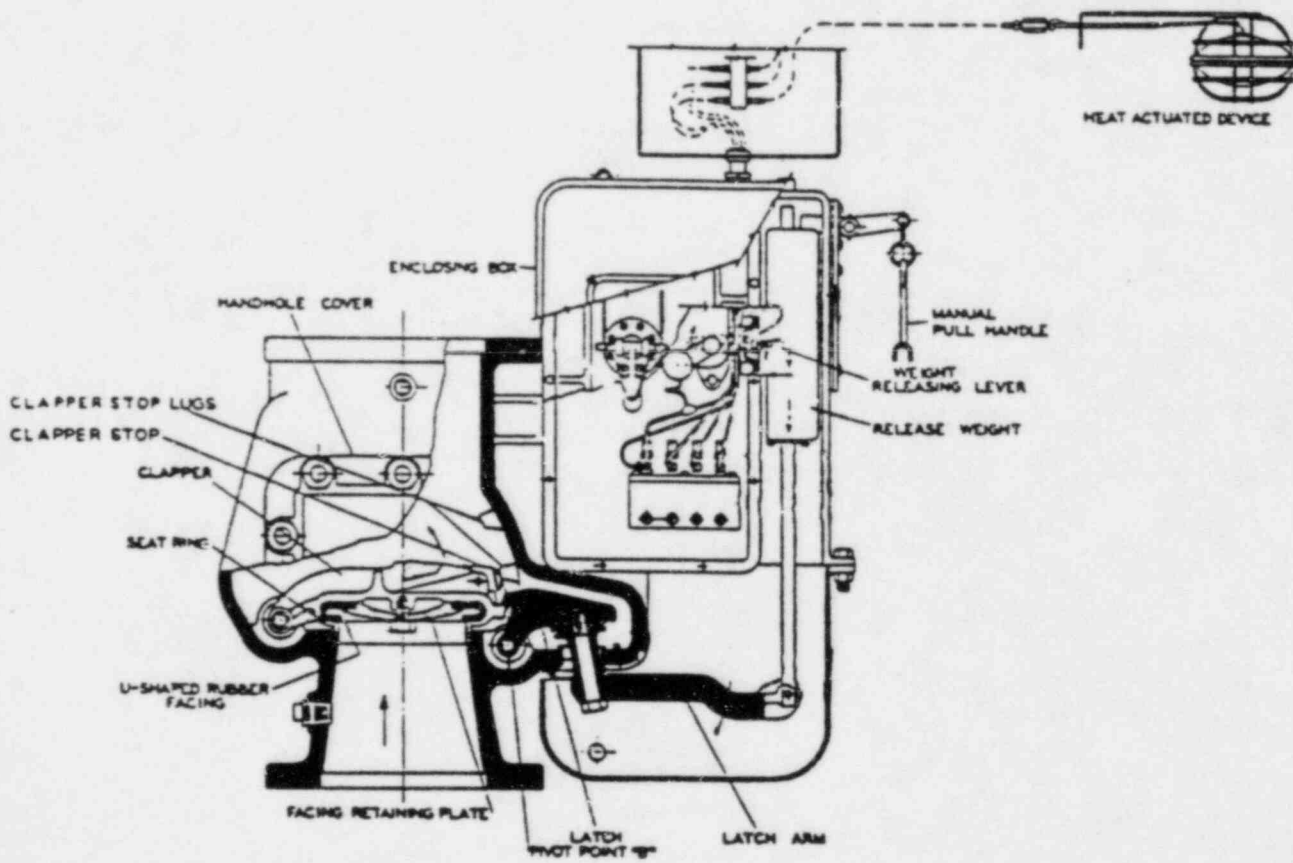
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Edward L. Jordan, Director
Division of Emergency Preparedness
and Engineering Response
Office of Inspection and Enforcement

Technical Contact: M. S. Wegner, IE
(301) 492-4511

Attachments:

1. Drawing of Automatic Model C Valve
2. List of Recently Issued IE Information Notices



MODEL C VALVE

UTILITIES WITH PERMITS TO BUILD NUCLEAR POWER PLANTS

Arizona Public Service Company
P. O. Box 21666
Phoenix, Arizona 85036
602/271-7900

Carolina Power & Light Company
411 Fayetteville Street
Raleigh, North Carolina 27602
919/836-6111

Cincinnati Gas & Electric Company
P. O. Box 960
Cincinnati, Ohio 45201
513/381-2000

Cleveland Electric Illuminating Company
P.O. Box 5000
Cleveland, Ohio 44101
216/861-9000

Commonwealth Edison Company
P. O. Box 767
Chicago, Illinois 60690
312/294-4321

Consumers Power Company
212 West Michigan Avenue
Jackson, Michigan 49201
517/788-0550

Detroit Edison Company
2000 Second Avenue
Detroit, Michigan 48226
313/237-8000

Duke Power Company
P. O. Box 33189
Charlotte, North Carolina 28242
704/373-4011

Duquesne Light Company
One Oxford Center
301 Grant Street
Pittsburgh, Pennsylvania 15279
412/456-6000

Florida Power & Light Company
P. O. Box 529100
Miami, Florida 33152
305/552-3552

Georgia Power Company
P. O. Box 4545
Atlanta, Georgia 30302
404/526-6526

Gulf States Utility Company
P. O. Box 2951
Beaumont, Texas 77704
713/838-6631

Houston Lighting & Power Company
P. O. Box 1700
Houston, Texas 77001
713/228-9211

Illinois Power Company
P. O. Box 1505
Decatur, Illinois 62525
217/424-7000

Kansas Gas & Electric Company
P. O. Box 208
Wichita, Kansas 67201
316/261-6611

Long Island Lighting Company
250 Old Country Road
Mineola, New York 11801
516/228-2890

Louisiana Power & Light Company
142 Delaronde St.
New Orleans, Louisiana 70174
504/366-2345

Mississippi Power & Light Company
P. O. Box 1640
Jackson, Mississippi 39205
601/969-2311

Niagara Mohawk Power Corporation
300 Erie Boulevard West
Syracuse, New York 13202
315/474-1511

Northeast Nuclear Energy Company
P. O. Box 270
Hartford, Connecticut 06101
203/666-6911

Pacific Gas & Electric Company
77 Beale Street
San Francisco, California 94106
415/781-4211

Pennsylvania Power & Light Company
2 North Ninth Street
Allentown, Pennsylvania 18101
215/770-5151

Philadelphia Electric Company
2301 Market Street
Philadelphia, Pennsylvania 19101
215/841-4122

Public Service Company of New Hampshire
1000 Elm Street
Manchester, New Hampshire 03105
603/669-4000

Public Service Electric & Gas Company
80 Park Plaza
Newark, New Jersey 07101
201/420-7000

Public Service of Indiana
1000 East Main Street
Plainfield, Indiana 46168
317/839-9611

Tennessee Valley Authority
400 W. Summit Hill Drive
Knoxville, Tennessee 37902
615/632-6000

Texas Utilities Generating Company
2001 Bryan Tower
Dallas, Texas 75201
214/653-4600

Union Electric Company
P.O. Box 149
St. Louis, Missouri 63166
314/621-3222

Washington Public Power Supply System
P.O. Box 968
Richland, Washington 99352
509/372-5000

UTILITIES LICENSED TO OPERATE NUCLEAR POWER REACTORS

Alabama Power Company
600 North 18th Street
Birmingham, Alabama 35291
205/250-1000

Arkansas Power & Light Company
P. O. Box 551
Little Rock, Arkansas 72203
501/371-4000

Baltimore Gas & Electric Company
P. O. Box 1475
Baltimore, Maryland 21203
301/234-5000

Boston Edison Company
800 Boylston Street
Boston, Massachusetts 02199
617/424-2000

Carolina Power & Light Company
411 Fayetteville Street
Raleigh, North Carolina 27602
919/836-6111

Commonwealth Edison Company
P. O. Box 767
Chicago, Illinois 60690
312/294-4321

Connecticut Yankee Atomic Power Company
P. O. Box 270
Hartford, Connecticut 06101
203/666-6911

Consolidated Edison Company of New York
4 Irving Place
New York, New York 10003
212/460-4600

Consumers Power Company
212 West Michigan Avenue
Jackson, Michigan 49201
517/788-0550

Dairyland Power Cooperative
2615 East Avenue, South
LaCrosse, Wisconsin 54601
608/689-2331

Duke Power Company
P. O. Box 33189
Charlotte, North Carolina 28242
704/373-4011

Duquesne Light Company
One Oxford Center
301 Grant Street
Pittsburgh, Pennsylvania 15279
412/456-6000

Florida Power Corporation
P. O. Box 14042
St. Petersburg, Florida 33733
813/866-5151

Florida Power & Light Company
P. O. Box 529100
Miami, Florida 33152
305/552-3552

Georgia Power Company
P. O. Box 4545
Atlanta, Georgia 30302
404/526-6526

GPU Nuclear Corp.
Three Mile Island Station
P. O. Box 480
Middletown, Pennsylvania 17057
717/948-8197

GPU Nuclear Corporation
Oyster Creek Nuclear Station
P. O. Box 388
Forked River, New Jersey 08731
609/971-4020

Indiana & Michigan Electric Co.
2101 Spy Run Avenue
Fort Wayne, Indiana 46801
219/422-3456

Iowa Electric Light & Power Company
P. O. Box 351
Cedar Rapids, Iowa 52406
319/398-4411

Maine Yankee Atomic Power Company
Edison Drive
Augusta, Maine 04336
207/623-3521

15

UTILITIES WITH PERMITS TO BUILD NUCLEAR POWER PLANTS

Arizona Public Service Company
P. O. Box 21666
Phoenix, Arizona 85036
602/271-7900

Carolina Power & Light Company
411 Fayetteville Street
Raleigh, North Carolina 27602
919/836-6111

Cincinnati Gas & Electric Company
P. O. Box 960
Cincinnati, Ohio 45201
513/381-2000

Cleveland Electric Illuminating Company
P.O. Box 5000
Cleveland, Ohio 44101
216/861-9000

Commonwealth Edison Company
P. O. Box 767
Chicago, Illinois 60690
312/294-4321

Consumers Power Company
212 West Michigan Avenue
Jackson, Michigan 49201
517/788-0550

Detroit Edison Company
2000 Second Avenue
Detroit, Michigan 48226
313/237-8000

Duke Power Company
P. O. Box 33189
Charlotte, North Carolina 28242
704/373-4011

Duquesne Light Company
One Oxford Center
301 Grant Street
Pittsburgh, Pennsylvania 15279
412/456-6000

Florida Power & Light Company
P. O. Box 529100
Miami, Florida 33152
305/552-3552

Georgia Power Company
P. O. Box 4545
Atlanta, Georgia 30302
404/526-6526

Gulf States Utility Company
P. O. Box 2951
Beaumont, Texas 77704
713/838-6631

Houston Lighting & Power Company
P. O. Box 1700
Houston, Texas 77001
713/228-9211

Illinois Power Company
P. O. Box 1505
Decatur, Illinois 62525
217/424-7000

Kansas Gas & Electric Company
P. O. Box 208
Wichita, Kansas 67201
316/261-6611

Long Island Lighting Company
250 Old Country Road
Mineola, New York 11801
516/228-2890

Louisiana Power & Light Company
142 Delaronde St.
New Orleans, Louisiana 70174
504/366-2345

Mississippi Power & Light Company
P. O. Box 1640
Jackson, Mississippi 39205
601/969-2311

Niagara Mohawk Power Corporation
300 Erie Boulevard West
Syracuse, New York 13202
315/474-1511

Northeast Nuclear Energy Company
P. O. Box 270
Hartford, Connecticut 06101
203/666-6911

Pacific Gas & Electric Company
77 Beale Street
San Francisco, California 94106
415/781-4211

Pennsylvania Power & Light Company
2 North Ninth Street
Allentown, Pennsylvania 18101
215/770-5151

Philadelphia Electric Company
2301 Market Street
Philadelphia, Pennsylvania 19101
215/841-4122

Public Service Company of New Hampshire
1000 Elm Street
Manchester, New Hampshire 03105
603/669-4000

Public Service Electric & Gas Company
80 Park Plaza
Newark, New Jersey 07101
201/420-7000

Public Service of Indiana
1000 East Main Street
Plainfield, Indiana 46168
317/839-9611

Tennessee Valley Authority
400 W. Summit Hill Drive
Knoxville, Tennessee 37902
615/632-6000

Texas Utilities Generating Company
2001 Bryan Tower
Dallas, Texas 75201
214/653-4600

Union Electric Company
P.O. Box 149
St. Louis, Missouri 63166
314/621-3222

Washington Public Power Supply System
P.O. Box 968
Richland, Washington 99352
509/372-5000

UTILITIES LICENSED TO OPERATE NUCLEAR POWER REACTORS

Alabama Power Company
600 North 18th Street
Birmingham, Alabama 35291
205/250-1000

Arkansas Power & Light Company
P. O. Box 551
Little Rock, Arkansas 72203
501/371-4000

Baltimore Gas & Electric Company
P. O. Box 1475
Baltimore, Maryland 21203
301/234-5000

Boston Edison Company
800 Boylston Street
Boston, Massachusetts 02199
617/424-2000

Carolina Power & Light Company
411 Fayetteville Street
Raleigh, North Carolina 27602
919/836-6111

Commonwealth Edison Company
P. O. Box 767
Chicago, Illinois 60690
312/294-4321

Connecticut Yankee Atomic Power Company
P. O. Box 270
Hartford, Connecticut 06101
203/666-6911

Consolidated Edison Company of New York
4 Irving Place
New York, New York 10003
212/460-4600

Consumers Power Company
212 West Michigan Avenue
Jackson, Michigan 49201
517/788-0550

Dairyland Power Cooperative
2615 East Avenue, South
LaCrosse, Wisconsin 54601
608/689-2331

Duke Power Company
P. O. Box 33189
Charlotte, North Carolina 28242
704/373-4011

Duquesne Light Company
One Oxford Center
301 Grant Street
Pittsburgh, Pennsylvania 15279
412/456-6000

Florida Power Corporation
P. O. Box 14042
St. Petersburg, Florida 33733
813/866-5151

Florida Power & Light Company
P. O. Box 529100
Miami, Florida 33152
305/552-3552

Georgia Power Company
P. O. Box 4545
Atlanta, Georgia 30302
404/526-6526

GPU Nuclear Corp.
Three Mile Island Station
P. O. Box 480
Middletown, Pennsylvania 17057
717/948-8197

GPU Nuclear Corporation
Oyster Creek Nuclear Station
P. O. Box 388
Forked River, New Jersey 08731
609/971-4020

Indiana & Michigan Electric Co.
2101 Spy Run Avenue
Fort Wayne, Indiana 46801
219/422-3456

Iowa Electric Light & Power Company
P. O. Box 351
Cedar Rapids, Iowa 52406
319/398-4411

Maine Yankee Atomic Power Company
Edison Drive
Augusta, Maine 04336
207/623-3521

Nebraska Public Power District
P.O. Box 499
Columbus, Nebraska 68601
402/564-8561

Niagara Mohawk Power Corporation
300 Erie Boulevard West
Syracuse, New York 13202
315/474-1511

Northeast Nuclear Energy Company
P. O. Box 270
Hartford, Connecticut 06101
203/666-6911

Northern States Power Company
414 Nicollet Mall
Minneapolis, Minnesota 55401
612/330-6007

Omaha Public Power District
1623 Harney Street
Omaha, Nebraska 68102
402/536-4000

Pacific Gas & Electric Company
77 Beale Street
San Francisco, California 94106
415/781-4211

Pennsylvania Power & Light Company
2 North Ninth Street
Allentown, Pennsylvania 18101
215/770-5151

Philadelphia Electric Company
2301 Market Street
Philadelphia, Pennsylvania 19101
215/841-4122

Portland General Electric Company
121 Southwest Salmon Street
Portland, Oregon 97204
503/226-8333

Power Authority of the State of New York
10 Columbus Circle
New York, New York 10019
212/397-6200

Public Service Company of Colorado
550 15th Street
Denver, Colorado 80202
303/571-7511

Public Service Electric & Gas Company
80 Park Plaza
Newark, New Jersey 07101
201/430-7000

Rochester Gas & Electric Corporation
89 East Avenue
Rochester, New York 14649
716/546-2700

Sacramento Municipal Utility District
P. O. Box 15830
Sacramento, California 95813
916/452-3211

South Carolina Electric & Gas Company
P. O. Box 764
Columbia, South Carolina 29218
803/748-3000

Southern California Edison Company
2244 Walnut Grove Avenue
Rosemead, California 91770
213/572-1212

Tennessee Valley Authority
400 W. Summit Hill Drive
Knoxville, Tennessee 37902
615/632-6000

Toledo Edison Company
300 Madison Avenue
Toledo, Ohio 43652
419/259-5000

Vermont Yankee Nuclear Power Corp.
P. O. Box 157
Vernon, Vermont 05354
802/257-7711

Virginia Electric & Power Company
P. O. Box 26666
Richmond, Virginia 23261
804/771-3000

Wisconsin Electric Power Company
231 West Michigan Street
Milwaukee, Wisconsin 53201
414/277-2345

Wisconsin Public Service Corporation
P. O. Box 1200
Green Bay, Wisconsin 54305
414/433-1598

Yankee Atomic Electric Company
1671 Worchester Road
Framingham, Massachusetts 01701
617/366-4475

Sent to DMB 2/28

SSINS No.: 6835
IN 84-16

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

March 2, 1984

IE INFORMATION NOTICE NO. 84-16: FAILURE OF AUTOMATIC SPRINKLER SYSTEM VALVES
TO OPERATE

Addressees:

All nuclear power reactor facilities holding an operating license (OL) or a construction permit (CP).

Purpose:

This information notice provides notification of a problem involving the operational failure of deluge and pre-action fire protection water control valves, identified as Model C, manufactured by Automatic Sprinkler Corporation of America of Cleveland, Ohio. It is expected that recipients will review this information notice for applicability to their facilities. No specific action or response is required.

Description of Circumstances:

On September 4, 1983, Mississippi Power and Light (MP&L) Company's Grand Gulf Unit 1 was performing an operational test of an emergency diesel-generator when a fire involving the diesel engine occurred. The fire brigade arrived to find that the automatic deluge valve had not opened. The manual release failed to open the valve. A mechanic opened the actuator box cover and struck the actuation weight, forcing the clapper latch to release, permitting water spray from the sprinkler system to extinguish the fire. (See Attachment 1.) The valve was a 6-inch Model C, manufactured by Automatic Sprinkler Corporation of America of Cleveland, Ohio. (Reference LER 50-416/83-126.)

During subsequent testing and examination, excessive friction was noted between the weight and the weight guide rod; bowing (0.005-inch) was observed in the weight guide rod; evidence of scoring was found in two locations on the rod's surface; the weight's upper guide collar had an inside diameter (ID) of 0.637 inch rather than the manufacturer's recommended minimum of 0.647 inch; and scoring was noted on the enclosing box along the path that the weight guide bushing traces during actuation.

On December 5, 1983, a Model C valve for a pre-action sprinkler system protecting a diesel generator room failed to operate during a test at Grand Gulf. Similar roughness was found in its internals. A search of records uncovered

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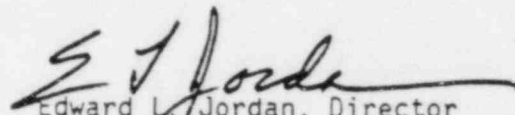
another event at Grand Gulf in which a Model C valve installed to protect a main transformer failed to open during a test in September 1979.

The valve manufacturer has been notified of these failures and is evaluating this problem to determine the action required.

The licensee's preliminary investigation indicates that these failures may be related to the surface condition of the latch which holds the water clapper in the normally closed position. If the mating surfaces of the latch and clapper are not smooth, the latch may fail to disengage when the actuation weight hits the latch arm. If the normal water system pressure applied to the clapper valve exceeds 140 psig, the problem becomes more acute. The water pressure at Grand Gulf is maintained at 140 psig.

MP&L has sanded and trued the guide rod; reworked the ID of the weight's upper guide collar; lubricated the rod, latch pin, clapper hinge pin, and the enclosed box along the path of the weight guide bushings; temporarily increased the testing frequency of the valves; and revised the surveillance procedures to visually verify that the clapper has lifted and locked open following the test under normal system pressure.

If you have any questions regarding this matter, contact the Regional Administrator of the appropriate NRC Regional Office, or this office.

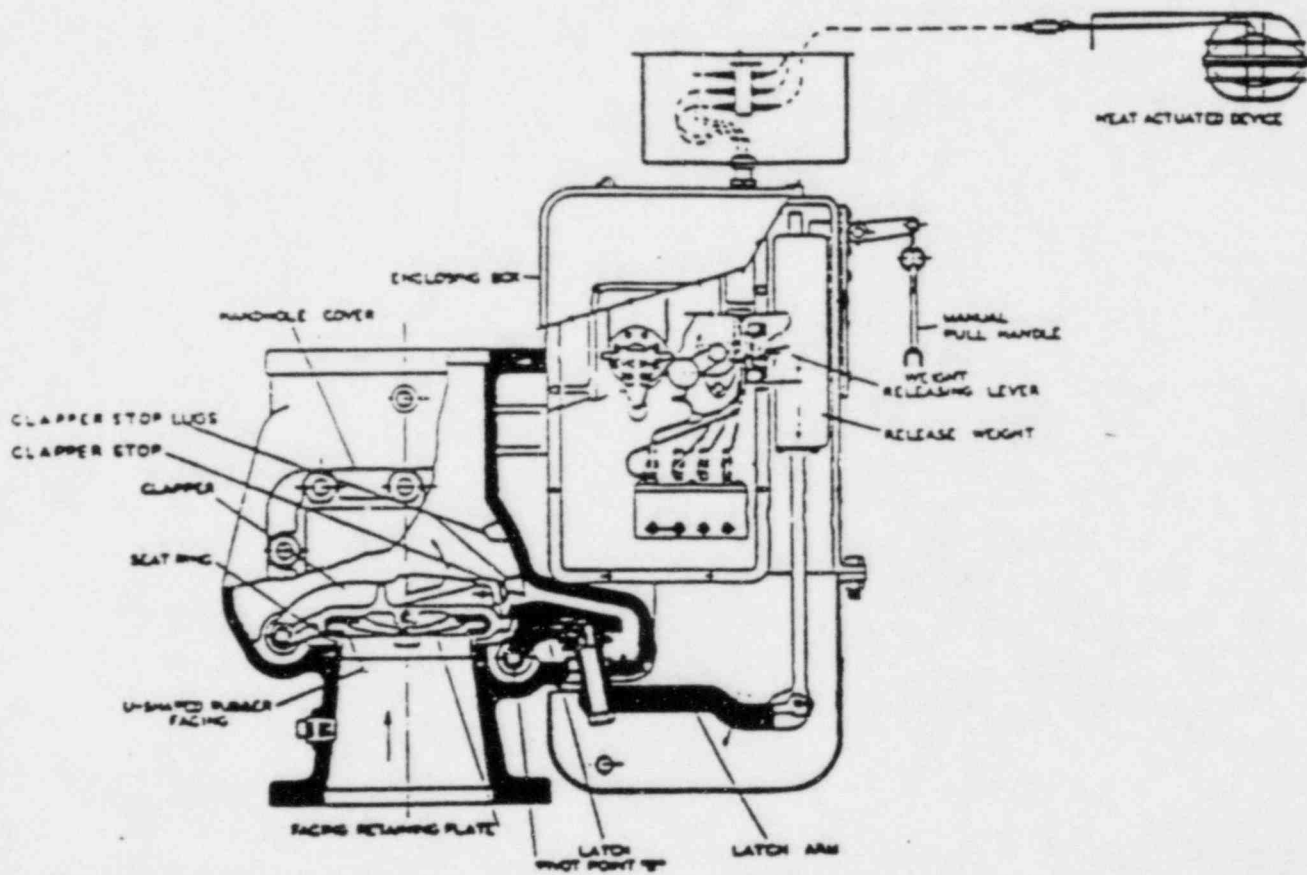


Edward L. Jordan, Director
Division of Emergency Preparedness
and Engineering Response
Office of Inspection and Enforcement

Technical Contact: M. S. Wegner, IE
(301) 492-4511

Attachments:

1. Drawing of Automatic Model C Valve
2. List of Recently Issued IE Information Notices



MODEL C VALVE

Sent to DMB 2/28

SSINS No.: 6835
IN 84-16

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

March 2, 1984

IE INFORMATION NOTICE NO. 84-16: FAILURE OF AUTOMATIC SPRINKLER SYSTEM VALVES
TO OPERATE

Addressees:

All nuclear power reactor facilities holding an operating license (OL) or a construction permit (CP).

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During subsequent testing and examination, excessive friction was noted between the weight and the weight guide rod; bowing (0.005-inch) was observed in the weight guide rod; evidence of scoring was found in two locations on the rod's surface; the weight's upper guide collar had an inside diameter (ID) of 0.637 inch rather than the manufacturer's recommended minimum of 0.647 inch; and scoring was noted on the enclosing box along the path that the weight guide bushing traces during actuation.

On December 5, 1983, a Model C valve for a pre-action sprinkler system protecting a diesel generator room failed to operate during a test at Grand Gulf. Similar roughness was found in its internals. A search of records uncovered

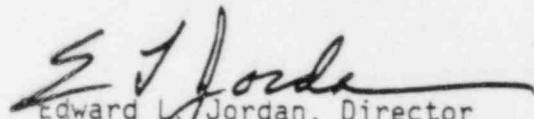
another event at Grand Gulf in which a Model C valve installed to protect a main transformer failed to open during a test in September 1979.

The valve manufacturer has been notified of these failures and is evaluating this problem to determine the action required.

The licensee's preliminary investigation indicates that these failures may be related to the surface condition of the latch which holds the water clapper in the normally closed position. If the mating surfaces of the latch and clapper are not smooth, the latch may fail to disengage when the actuation weight hits the latch arm. If the normal water system pressure applied to the clapper valve exceeds 140 psig, the problem becomes more acute. The water pressure at Grand Gulf is maintained at 140 psig.

MP&L has sanded and trued the guide rod; reworked the ID of the weight's upper guide collar; lubricated the rod, latch pin, clapper hinge pin, and the enclosed box along the path of the weight guide bushings; temporarily increased the testing frequency of the valves; and revised the surveillance procedures to visually verify that the clapper has lifted and locked open following the test under normal system pressure.

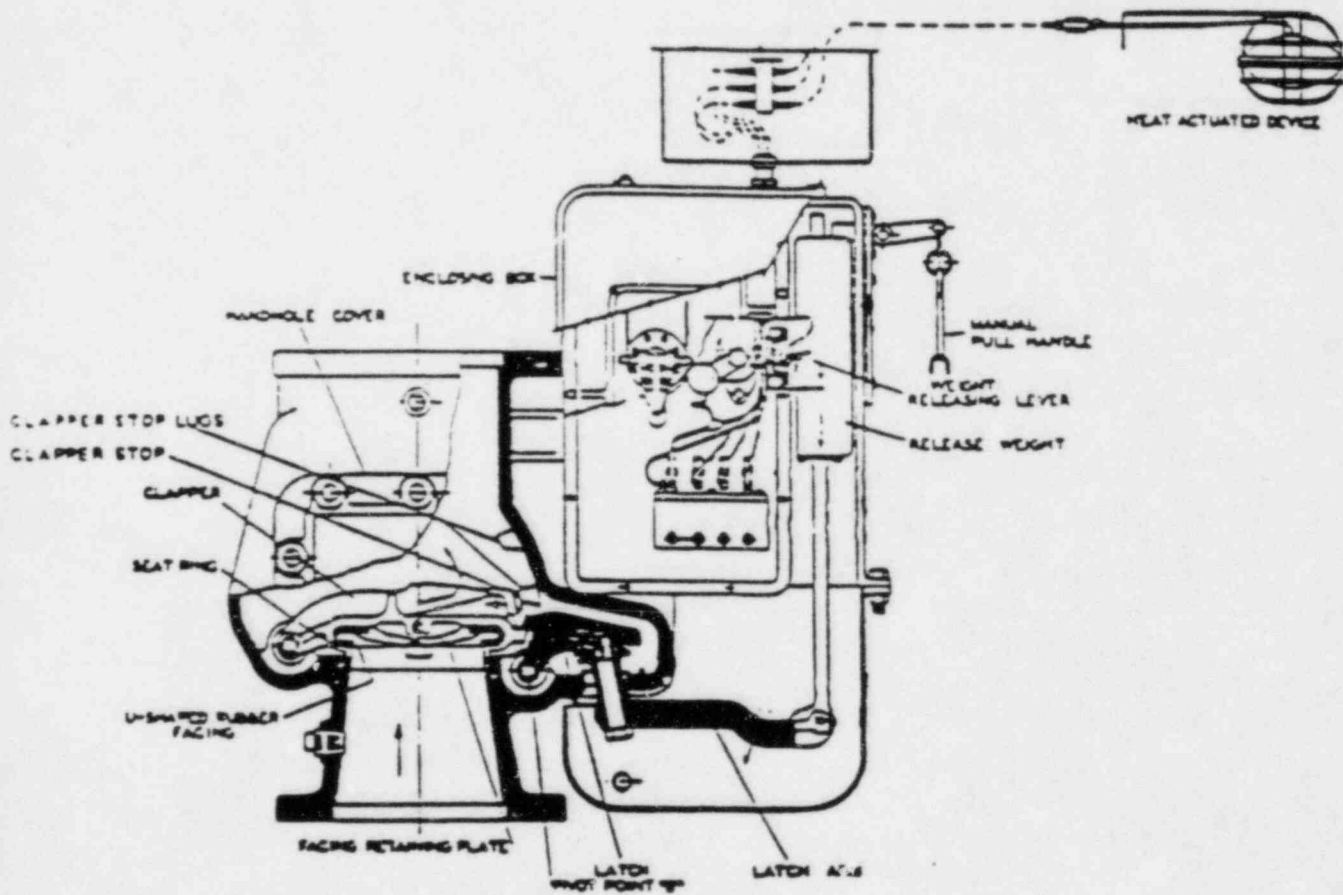
If you have any questions regarding this matter, contact the Regional Administrator of the appropriate NRC Regional Office, or this office.


Edward L. Jordan, Director
Division of Emergency Preparedness
and Engineering Response
Office of Inspection and Enforcement

Technical Contact: M. S. Wegner, IE
(301) 492-4511

Attachments:

1. Drawing of Automatic Model C Valve
2. List of Recently Issued IE Information Notices



MODEL C VALVE

LIST OF RECENTLY ISSUED
 IE INFORMATION NOTICES

Information Notice No.	Subject	Date of Issue	Issued to
84-15	Reporting of Radiological Releases	3/2/84	All power reactor facilities holding an OL or CP
84-14	Highlights of Recent Transport Regulatory Revisions by DOT and NRC	3/2/84	All NRC licensees
84-13	Potential Deficiency in Motor-Operated Valve Control Circuits and Annunciation	2/28/84	All power reactor facilities holding an OL or CP
84-12	Failure of Soft Seat Valve Seals	2/27/84	All power reactor facilities holding an OL or CP
84-11	Training Program Deficiencies	2/24/84	All power reactor facilities holding an OL or CP
84-10	Motor-Operated Valve Torque Switches Set Below the manufacturer's Recommended Value	2/21/84	All power reactor facilities holding an OL or CP
84-09	Lessons Learned from NRC Inspections of Fire Protection Safe Shutdown Systems (10 CFR 50, Appendix R)	02/13/84	All power reactor facilities holding an OL or CP
83-63 Supp 1	Pontential Failures of Westinghouse Electric Corporation Type SA-1	2/15/84	All power reactor facilities holding an OL Or CP
84-08	10 CFR 50.7, "Employee Protection"	2/14/84	All power reactor facilities holding an OL or CP; and NSSS & AE

OL = Operating License
 CP = Construction Permit

ENCLOSURE 2



E. J. Jordan
Wegman
GENERAL OFFICES

June 4, 1984

POST OFFICE BOX 180
1000 EAST EDGERTON ROAD
CLEVELAND, OHIO 44147
PHONE: 216-526-8800
TELEX: 098-5406

Mr. Richard C. DeYoung
Director, Office of Inspection
& Enforcement
US Nuclear Regulatory Commission
Washington, D.C. 20555

**Subject: Nuclear Regulatory Commission Information Notice 84-16,
"Failure of Automatic Sprinkler System Valves to Operate"**

Dear Mr. DeYoung:

The following information is provided in response to the Nuclear Regulatory Commission Information Notice 84-16 concerning operational failures of our Model C deluge valve at Grand Gulf Unit No. 1 of the Mississippi Power and Light Company.

To obtain an indication of whether this problem existed at other installations, we tested a total of seventeen (17) 2-1/2" Model C deluge valves at eight (8) different locations and eight (8) 6" Model C deluge valves at three (3) different locations, using a special test procedure (130.002SP), and found no operational failures. Two (2) additional six inch (6") Model C deluge valves were tested at a fourth location without failure using the standard test procedure.

The special test procedure required the weight on each valve to be dropped only one-half the normal distance so that only one-half the energy is generated to unlatch the valve under this special test condition. A tabulation of the 2-1/2" and 6" valves tested is given on Table I.

The results of our field tests do not indicate a problem with our valve design or manufacture.

We performed a number of tests in our laboratory on a 6" Model C deluge valve and found we could duplicate the type of operational failure experienced at the Grand Gulf facility if the latch and clapper nose mating surfaces were rough (approximately a 500 microinch finish or rougher).

We reviewed our drawings to determine if any changes were made which could have caused the problem observed at the Grand Gulf facility. A drawing change was made in September of 1973 which changed the finish requirement on the clapper and latch mating surfaces from a 63 microinch to a 125 microinch finish.

Valves with serial numbers higher than 4586 for 2-1/2" valves and 6821 for 6" valves were manufactured after the September 1973 drawing change and, since the Grand Gulf Unit No. 1 valve serial numbers were higher than those identifying the 1973 finish change, we required that the valves tested in the field to our special test procedure have serial numbers which indicate that they were produced after the surface finish change. As previously stated, no operational failures were found on the valves tested which were produced after the surface finish change.

Although we did not find the Grand Gulf mode of failure at any other installation, we made two changes to increase the probability of successful valve operation. The surface

finish drawing requirement of the clapper nose and latch mating surfaces was changed from a 125 microinch finish to a 16 microinch finish on November 1983, and our data pages G8a and G22a (copies enclosed) were changed to require refinishing of the clapper nose and latch mating surfaces at each routine, periodic inspection.

With respect to the conditions noted in Information Notice No. 84-16 regarding bowing of the guide rod and the undersize I.D. of the upper guide rod collar, the following information is offered.

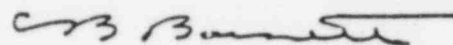
The guide rod we install in our valves is purchased under ASTM B16, material C36000. The ASTM B16 (Table 15) straightness requirement is 1/32" maximum curvature (depth of arc) in any 2 ft long portion. The bowing observed (0.005 inch) in the 20 inch long guide rod used in our 6" Model C deluge valve easily meets the ASTM requirement.

The upper guide collar was stated to have an I.D. of 0.637 inch and our minimum I.D. dimension was stated to be 0.647 inch. Our actual drawing minimum dimension for this I.D. is 0.640 so the collar was measured by the Grand Gulf people to be undersize by 0.003 inches. However, the ASTM B16 requirement for the guide rod is 0.625 ±0.002". The minimum clearance for the guide rod in this undersize hole is 0.637-0.627 or 0.010 inches which is adequate to allow the weight to slide freely on the guide rod even if the guide collar I.D. was undersize as claimed.

It is our conclusion that no design or manufacturing fault exists in our Model C deluge valves; however, we revised the maintenance procedure and require smoother surfaces in manufacturing to increase the probability of successful operation of both new and existing Model C deluge valves.

We further conclude the operational failures at Grand Gulf Unit #1 are peculiar to that facility.

Very truly yours,



Charles B. Barnett, Manager
Research and Development

CBB/mn

Attachment

cc: W. H. Miller, Resident Inspector
E. L. Jordan, Director of Engr. & Q.A.
J. P. O'Reilly, Regional Administrator

ENCLOSURE 2

ENCLOSURE 2



W. Hutchinson

GENERAL OFFICES

June 4, 1984

POST OFFICE BOX 180
1000 EAST EDGERTON ROAD
CLEVELAND, OHIO 44147
PHONE: 216-526-9900
TELEX: 098-5406

Mr. Richard C. DeYoung
Director, Office of Inspection
& Enforcement
US Nuclear Regulatory Commission
Washington, D.C. 20555

Subject: Nuclear Regulatory Commission Information Notice 84-16,
"Failure of Automatic Sprinkler System Valves to Operate"



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The special test procedure required the weight on each valve to be dropped only one-half the normal distance so that only one-half the energy is generated to unlatch the valve under this special test condition. A tabulation of the 2-1/2" and 6" valves tested is given on Table I.

The results of our field tests do not indicate a problem with our valve design or manufacture.

We performed a number of tests in our laboratory on a 6" Model C deluge valve and found we could duplicate the type of operational failure experienced at the Grand Gulf facility if the latch and clapper nose mating surfaces were rough (approximately a 500 microinch finish or rougher).

We reviewed our drawings to determine if any changes were made which could have caused the problem observed at the Grand Gulf facility. A drawing change was made in September of 1973 which changed the finish requirement on the clapper and latch mating surfaces from a 63 microinch to a 125 microinch finish.

Valves with serial numbers higher than 4586 for 2-1/2" valves and 6821 for 6" valves were manufactured after the September 1973 drawing change and, since the Grand Gulf Unit No. 1 valve serial numbers were higher than those identifying the 1973 finish change, we required that the valves tested in the field to our special test procedure have serial numbers which indicate that they were produced after the surface finish change. As previously stated, no operational failures were found on the valves tested which were produced after the surface finish change.

Although we did not find the Grand Gulf mode of failure at any other installation, we made two changes to increase the probability of successful valve operation. The surface

finish drawing requirement of the clapper nose and latch mating surfaces was changed from a 125 microinch finish to a 16 microinch finish on November 1983, and our data pages G8a and G22a (copies enclosed) were changed to require refinishing of the clapper nose and latch mating surfaces at each routine, periodic inspection.

With respect to the conditions noted in Information Notice No. 84-16 regarding bowing of the guide rod and the undersize I.D. of the upper guide rod collar, the following information is offered.

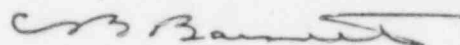
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The upper guide collar was stated to have an I.D. of 0.637 inch and our minimum I.D. dimension was stated to be 0.647 inch. Our actual drawing minimum dimension for this I.D. is 0.640 so the collar was measured by the Grand Gulf people to be undersize by 0.003 inches. However, the ASTM B16 requirement for the guide rod is 0.625 ± 0.002 ". The minimum clearance for the guide rod in this undersize hole is 0.637-0.627 or 0.010 inches which is adequate to allow the weight to slide freely on the guide rod even if the guide collar I.D. was undersize as claimed.

It is our conclusion that no design or manufacturing fault exists in our Model C deluge valves; however, we revised the maintenance procedure and require smoother surfaces in manufacturing to increase the probability of successful operation of both new and existing Model C deluge valves.

We further conclude the operational failures at Grand Gulf Unit #1 are peculiar to that facility.

Very truly yours,



Charles B. Barnett, Manager
Research and Development

CBB/mn
Attachment

cc: W. H. Miller, Resident Inspector
E. L. Jordan, Director of Engr. & Q.A.
J. P. O'Reilly, Regional Administrator

bcc: C. Miner
C. Hura
J. Stout
M. Hutchinson

TABLE I
6" MODEL C DELUGE VALVE

<u>Serial No.</u>	<u>Static Water Pressure (psi)</u>	<u>Trip Test Satisfactory</u>	<u>Location</u>
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8153	110	"	Omaha, NE
8106	93	"	Mankato, MN
8102	90	"	" "
8077	175	"	Atlanta, GA
8082	"	"	" "
8078	"	"	" "
8094	"	"	" "
8095	"	"	" "
8096	"	"	" "

Total 10 valves at four (4) different locations.

2-1/2" MODEL C DELUGE VALVE

8200	130	Yes	Carson City, CA
8183	132	"	" "
8604	130	"	" "
4878	125	"	" "
8148	120	"	Baytown, TX
8149	120	"	" "
8293	150	"	Perth Amboy, NJ
8294	150	"	" "
8291	150	"	" "
8277	150	"	" "
5113	200	"	Nebraska City, NE
S8204	77	"	Oakland, CA
S8199	80	"	" "
8276	115	"	McKeesport, PA
8190	100	"	Greensburg, PA
8188	110	"	" "
S8215	100	"	Des Moines, IA

Total 17 valves at eight (8) different locations.



E. J. Jordan
W. J. ...
GENERAL OFFICES

June 4, 1984

POST OFFICE BOX 180
1000 EAST EDGERTON ROAD
CLEVELAND, OHIO 44147
PHONE: 216-526-9800
TELEX: 098-5406

Mr. Richard C. DeYoung
Director, Office of Inspection
& Enforcement
US Nuclear Regulatory Commission
Washington, D.C. 20555

**Subject: Nuclear Regulatory Commission Information Notice 84-16,
"Failure of Automatic Sprinkler System Valves to Operate"**

Dear Mr. DeYoung:

The following information is provided in response to the Nuclear Regulatory Commission Information Notice 84-16 concerning operational failures of our Model C deluge valve at Grand Gulf Unit No. 1 of the Mississippi Power and Light Company.

To obtain an indication of whether this problem existed at other installations, we tested a total of seventeen (17) 2-1/2" Model C deluge valves at eight (8) different locations and eight (8) 6" Model C deluge valves at three (3) different locations, using a special test procedure (130.002SP), and found no operational failures. Two (2) additional six inch (6") Model C deluge valves were tested at a fourth location without failure using the standard test procedure.

The special test procedure required the weight on each valve to be dropped only one-half the normal distance so that only one-half the energy is generated to unlatch the valve under this special test condition. A tabulation of the 2-1/2" and 6" valves tested is given on Table I.

The results of our field tests do not indicate a problem with our valve design or manufacture.

We performed a number of tests in our laboratory on a 6" Model C deluge valve and found we could duplicate the type of operational failure experienced at the Grand Gulf facility if the latch and clapper nose mating surfaces were rough (approximately a 500 microinch finish or rougher).

We reviewed our drawings to determine if any changes were made which could have caused the problem observed at the Grand Gulf facility. A drawing change was made in September of 1973 which changed the finish requirement on the clapper and latch mating surfaces from a 63 microinch to a 125 microinch finish.

Valves with serial numbers higher than 4586 for 2-1/2" valves and 6821 for 6" valves were manufactured after the September 1973 drawing change and, since the Grand Gulf Unit No. 1 valve serial numbers were higher than those identifying the 1973 finish change, we required that the valves tested in the field to our special test procedure have serial numbers which indicate that they were produced after the surface finish change. As previously stated, no operational failures were found on the valves tested which were produced after the surface finish change.

Although we did not find the Grand Gulf mode of failure at any other installation, we made two changes to increase the probability of successful valve operation. The surface

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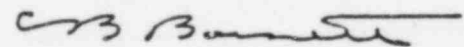
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We further conclude the operational failures at Grand Gulf Unit #1 are peculiar to that facility.

Very truly yours,



Charles B. Barnett, Manager
Research and Development

CBB/mn

Attachment

cc: W. H. Miller, Resident Inspector
E. L. Jordan, Director of Engr. & O.A.
J. P. O'Reilly, Regional Administrator



E. J. Jordan
W. J. ...
GENERAL OFFICES

June 4, 1984

POST OFFICE BOX 180
1000 EAST EDGERTON ROAD
CLEVELAND, OHIO 44147
PHONE: 216-526-9900
TELEX: 098-5406

Mr. Richard C. DeYoung
Director, Office of Inspection
& Enforcement
US Nuclear Regulatory Commission
Washington, D.C. 20555

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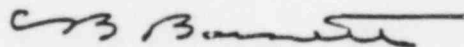
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CBB/mn
Attachment

cc: W. H. Miller, Resident Inspector
E. L. Jordan, Director of Engr. & Q.A.
J. P. O'Reilly, Regional Administrator



E. J. Jordan
Bill
Wagner GENERAL OFFICES

June 4, 1984

POST OFFICE BOX 180
1000 EAST EDGERTON ROAD
CLEVELAND, OHIO 44147
PHONE: 216-526-9500
TELEX: 098-5406

Mr. Richard C. DeYoung
Director, Office of Inspection
& Enforcement
US Nuclear Regulatory Commission
Washington, D.C. 20555

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C/9 3

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Charles B. Barnett, Manager
Research and Development

CBB/mn

Attachment

cc: W. H. Miller, Resident Inspector
E. L. Jordan, Director of Engr. & Q.A.
J. P. O'Reilly, Regional Administrator

TABLE I
6" MODEL C DELUGE VALVE

<u>Serial No.</u>	<u>Static Water Pressure (psi)</u>	<u>Trip Test Satisfactory</u>	<u>Location</u>
3429	150	Yes	Perth Amboy, NJ
.8153	110	"	Omaha, NE
8106	93	"	Mankato, MN
8102	90	"	" "
8077	175	"	Atlanta, GA
8082	"	"	" "
8078	"	"	" "
8094	"	"	" "
8095	"	"	" "
8096	"	"	" "

Total 10 valves at four (4) different locations.

2-1/2" MODEL C DELUGE VALVE

8200	130	Yes	Carson City, CA
8183	132	"	" "
8604	130	"	" "
4878	125	"	" "
8148	120	"	Baytown, TX
8149	120	"	" "
8293	150	"	Perth Amboy, NJ
8294	150	"	" "
8291	150	"	" "
8277	150	"	" "
5113	200	"	Nebraska City, NE
S8204	77	"	Oakland, CA
S8199	80	"	" "
8276	115	"	McKeesport, PA
8190	100	"	Greensburg, PA
8188	110	"	" "
S8215	100	"	Des Moines, IA

Total 17 valves at eight (8) different locations.

TABLE I
6" MODEL C DELUGE VALVE

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8429	150	Yes	Perth Amboy, NJ
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Total 17 valves at eight (8) different locations.

ENCLOSURE 3

November 15, 1984

POST OFFICE BOX 180
1000 EAST EDGERTON ROAD
CLEVELAND, OHIO 44147
PHONE: 216-526-9900
TELEX: 098-5406

SUBJECT: DELUGE, PRE-ACTION AND FOAM-WATER DELUGE SPRINKLER SYSTEMS; MODEL C DELUGE VALVES

Gentlemen:

We have become aware of a potential problem which may affect the fire protection sprinkler system in your building or property. If the problem exists, IT MAY PREVENT THE SPRINKLER SYSTEM FROM OPERATING IN THE EVENT OF A FIRE. The following outlines:

- A. The nature of the problem,
- B. How to identify whether a system may be affected,
- C. Recommended course of action.

A. THE NATURE OF THE PROBLEM

Within the last year we have had three reported instances, involving seven valves, in which 6" Model C deluge valves failed to trip when full water pressure was applied to the valve. It appears that the impact of the release weight (item 22 on the attached drawing G-14) was not sufficient to disengage the latch (item 12) from the clapper (item 6) under certain time, pressure and water conditions.

All three reported failures occurred in the 6" Model C deluge valve size, operating under relatively high pressure, (over 100 psi) and installed for over 6 years. It is felt that the roughness of the two mating surfaces, the clapper nose and latch, may change enough to prevent opening because of increased starting friction. However, we have been unable to ascertain precisely what conditions cause the change in surface roughness in the isolated cases reported to date. We do know that all valves have been factory tested before shipment. This test is at high (200 psi) and medium (50-75 psi) pressure.

We further caution you that this condition may not be evident. Superficial inspections may not satisfactorily duplicate actual fire conditions. You may think your valve would work when in fact it would not. Your system's actual pressure may be greater (over 100 psi) when a fire pump is operating than when in the static condition.

Since your present inspection procedure may not detect a potential malfunction, we strongly recommend that you have a competent mechanic follow the below mentioned procedure. Where we have encountered the problem, this relatively simple procedure has restored the valves to proper working order.

B. HOW TO IDENTIFY WHETHER YOUR SYSTEM MAY BE AFFECTED

Model C deluge valves are installed in Rate-of-Rise Sprinkler Systems and in Pilot Head Sprinkler Systems. The systems are further subdivided into Deluge Sprinkler Systems, Pre-Action Sprinkler Systems or Foam-Water Deluge Sprinkler Systems.

The valves are also identified as "Deluge", "Suprotex", "Pre-Action", "Suprotex-Deluge", and "Suprotex/Pre-Action". In Foam-Water deluge systems, both the water deluge valve and the foam deluge valve may be Model C deluge valves.

The Model C deluge valve has also been installed by Grinnell under the name "Multitrol" and by Rockwood Sprinkler Company under the name "Dualguard".

C. RECOMMENDED COURSE OF ACTION

We recommend that at the earliest possible opportunity, the following procedure be followed and REPEATED ON AN ANNUAL BASIS:

1. Use a competent mechanic. These systems often require specialized knowledge and should not be tampered with by inexperienced personnel.
2. Determine if the protected facility can safely conduct a partial flow test. If it can, conduct the procedure outlined in the next paragraph.
3. Adjust the OS & Y control valve to the nearly closed position (open about 3/4 to 1 turn from fully closed). Remove the enclosing box cover and grasp the weight firmly. Release the weight by pulling on the manual release handle. Lower the weight on a 6" Model C valve to 4" - 4 1/2" below its latched position. On a 2 1/2" Model C valve, lower the weight to 2" - 2 1/2" below its latched position. Allow the weight to freely drop on the latch arm. The clapper, under full water pressure should open. Immediately close the OS & Y control valve. Open the drain valve to drain the system piping. If the valve tripped, reset the valve in accordance with the applicable procedure (see instruction for Care and Maintenance), setting the system back into operation.
4. If the system fails to trip, please notify the Quality Assurance Manager, "Automatic" Sprinkler Corporation of America at (216) 526-9900. We are most interested in identifying and assisting you in resolving any problems which may arise.

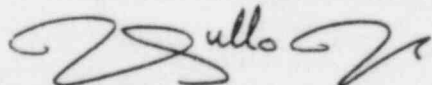
C. RECOMMENDED COURSE OF ACTION (Cont'd)

5. If a partial flow test cannot be conducted, perform the following maintenance procedure.
6. Shut off the OS & Y control valve and open the drain valve to remove any pressure from the underside of the clapper. Remove the enclosing box cover. Release the weight by pulling the manual release mechanism. Remove the hand hole cover. Remove the clapper.
7. Inspect the clapper and latch mating surfaces. These surfaces must be smooth. Refinish the surfaces using 220 grit sandpaper followed by crocus cloth to obtain a smooth finish on both surfaces.
8. Inspect the clapper facing, seat ring and valve interior in accordance with applicable Care and Maintenance Procedure.
9. Reassemble the valve. Reset the weight. Slowly open the OS & Y control valve until water begins to flow from the drain. Slowly close the drain. Fully open the OS & Y control valve, setting the system back into operation.

While we have identified only seven Model C deluge valve malfunctions out of an estimated 75,000 valves installed since 1931, we feel it is our obligation to notify you of this potential problem. Conducting the maintenance procedure is your choice. We strongly recommend you do so.

Very truly yours,

"AUTOMATIC" SPRINKLER CORPORATION OF AMERICA
a division of Figgie International, Inc.

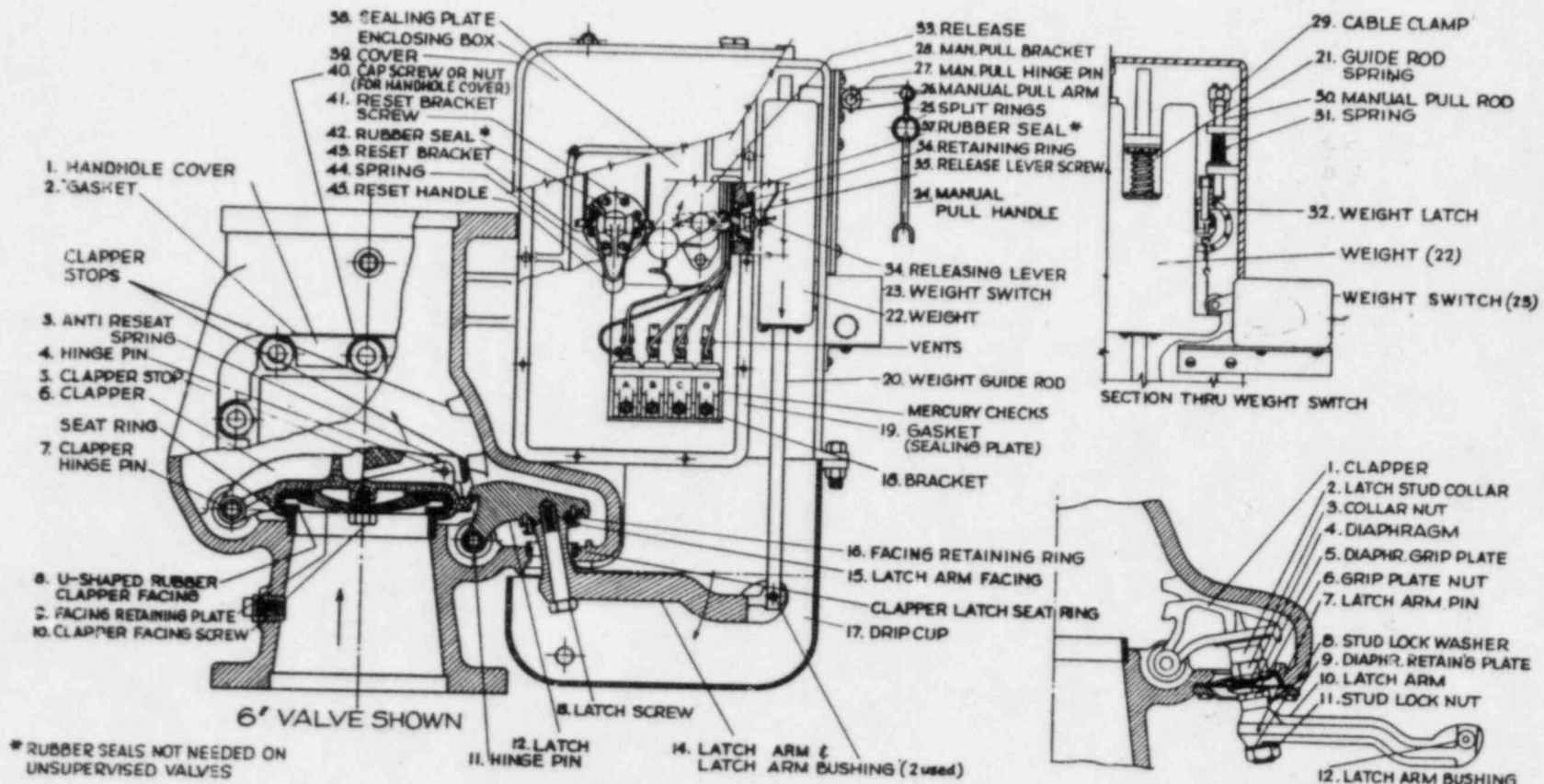


John J. Gullo, Jr.
Quality Assurance Manager

JJG/cmr

- Att:
1. Replacement Parts for All Model C Valves: Data Page G-14
 2. Data Page G-8a
 3. Data Page G-22a
 4. List of our District Offices and Phone Numbers

**REPLACEMENT PARTS
FOR ALL MODEL C VALVES**



* RUBBER SEALS NOT NEEDED ON UNSUPERVISED VALVES

MODEL C - DELUGE VALVE

SEALED DRAIN



"Automatic" Model C Deluge Valves

"Automatic" Model C Suprotex-Deluge Valves

MAINTENANCE

The "Automatic" Model C Deluge and Suprotex-Deluge Valves and their related equipment should be examined periodically to ensure proper operation and trouble-free service. Several areas to be routinely inspected are:

Clapper / Clapper Latch. The mating surfaces of the clapper nose and the clapper latch must be kept clean and smooth. As required, sand each surface with No. 220 grit sandpaper until smooth, then finish the surface with crocus cloth.

Clapper Facing. The rubber clapper facing should be checked for wear or damage, and to determine that it is free of dirt and other foreign substances. If found to be worn or damaged (e.g., foreign matter imbedded in the surface), the facing should be replaced. If it is dirty, it should be cleaned, but compounds which could damage the rubber facing must never be used.

Seat Ring. The seat ring should be cleaned thoroughly and checked for possible damage. If it is found to be severely damaged, the complete deluge valve assembly should be replaced or returned to "Automatic" for possible reconditioning.

Alarm Line Strainer. The strainer in the alarm line should be checked and cleaned thoroughly.

Alarm Test Valve & Main Drain Valve. All controlling valves normally closed when the deluge valve is in the set position should be checked to be sure that they are fully closed and not leaking.

System Control Valve, Alarm Control Valve & Air (or Nitrogen) Supply Control Valve. All controlling valves normally open when the deluge valve is in the set position should be checked to be sure that they are in the fully open position and sealed, where required.

Deluge Valve & Trim. The overall setup should be checked for visible leaks and possible physical damage to the valve and connections (e.g., broken gages).

Valve Enclosure. The temperature in the enclosure around the deluge valve should be maintained at a temperature above 40° F (4° C).

Supervisory Air Supply. Strainers and regulators should be checked and cleaned as required. Air reservoirs and drum drips should be drained as often as required to remove any water that has accumulated.

The air dryer should be checked and replaced when the blue granules become pink or white.

Air Compressor. The air compressor should be lubricated as recommended by the manufacturer. The motor unit should be kept free of dirt. Filters and strainers should be cleaned as required.

Air Pressure. Air or nitrogen pressure must be maintained on the detection system as recommended in the operational instructions. Low-air-pressure alarms should be tested and switches should be checked to see that they are properly set to operate at the required pressure level.

Detection System. The detection system and related components are to be tested and checked as recommended in the operational instructions.



"Automatic" Model C Pre-Action Valves

"Automatic" Model C Suprotex Valves

MAINTENANCE

The "Automatic" Model C Pre-Action and Suprotex (supervised Pre-Action) Valves and their related equipment should be examined periodically to ensure proper operation and trouble-free service. Several areas to be routinely inspected are:

Clapper / Clapper Latch. The mating surfaces of the clapper nose and the clapper latch must be kept clean and smooth. As required, sand each surface with No. 220 grit sandpaper until smooth, then finish the surface with crocus cloth.

Clapper Facing. The rubber clapper facing should be checked for wear or damage, and to determine that it is free of dirt and other foreign substances. If found to be worn or damaged (e.g., foreign matter imbedded in the surface), the facing should be replaced. If it is dirty, it should be cleaned, but compounds which could damage the rubber facing must never be used.

Seat Ring. The seat ring should be cleaned thoroughly and checked for possible damage. If it is found to be severely damaged, the complete pre-action valve assembly should be replaced or returned to "Automatic" for possible reconditioning.

Alarm Line Strainer. The strainer in the alarm line should be checked and cleaned thoroughly.

Alarm Test Valve & Main Drain Valve. All controlling valves normally closed when the pre-action valve is in the set position should be checked to be sure that they are fully closed and not leaking.

System Control Valve, Alarm Control Valve & Air (or Nitrogen) Supply Control Valve. All controlling valves normally open when the pre-action valve is in the set position should be checked to be sure that they are in the fully open position and sealed, where required.

Pre-Action Valve & Trim. The overall setup should be checked for visible leaks and possible physical damage to the valve and connections (e.g., broken gages).

Valve Enclosure. The temperature in the enclosure around the pre-action valve should be maintained at a temperature above 40° F (4° C).

Supervisory Air Supplies. Strainers and regulators should be checked and cleaned as required. Air reservoirs and drum drips should be drained as often as required to remove any water that has accumulated.

The air dryer should be checked and replaced when the blue granules become pink or white.

Air Compressors. The air compressors should be lubricated as recommended by the manufacturer. The motor units should be kept free of dirt. Filters and strainers should be cleaned as required.

Air Pressure. Air or nitrogen pressure must be maintained on the sprinkler and detection system as recommended in the operational instructions. Low-air-pressure alarms should be tested and switches should be checked to see that they are properly set to operate at the required pressure level.

Detection System. The detection system and related components are to be tested and checked as recommended in the operational instructions.

EASTERN REGION

<u>REGION OFFICE</u>	<u>REGION V.P.</u>	<u>TELEPHONE</u>	<u>ADDRESS</u>
20- Baltimore	A.D. O'Neill	(301) 391-3292	8907 Kelso Drive Essex, Maryland 21221
		(215) 277-3002	201 King Manor Drive Suite F King of Prussia, Pennsylvania 19406
		(401) 738-2308	2699 Post Road Warwick, Rhode Island 02886
		(201) 850-1155	P.O. Box 469 108 High Street 2nd Floor Hackettstown, New Jersey 07840
<u>DISTRICT OFFICE</u>	<u>MANAGER</u>	<u>TELEPHONE</u>	<u>ADDRESS</u>
02 - Portland	Al Sands	(207) 767-2166	P.O. Box 2311 78 Pleasant Avenue South Portland, Maine 04106
		(207) 942-3444	Answering Service Bangor, Maine
		(603) 622-0965	Answering Service New Hampshire
03 - Boston	Bill Newell	(617) 332-7504	53 Winchester Street Newton, Massachusetts 02161
		(203) 646-4400	Answering Service Connecticut
05 - Kenilworth	Ed Fee	(201) 245-3725	P.O. Box 98 340 Carnegie Avenue Kenilworth, New Jersey 07033
06 - Philadelphia	Joe Kiczek	(215) 277-1190	201 King Manor Drive Suite F King of Prussia, Pennsylvania 19406
		(717) 829-1996	Answering Service Pennsylvania
		(717) 757-1502	3755 East Market Street York, Pennsylvania 17402
09 - Baltimore	John O'Malley	(301) 391-7010	8909 Kelso Drive Baltimore, Maryland 21221
		(703) 971-2432;33	5419A Vine Street Alexandria, Virginia 22310

EASTERN REGION (Continued)

<u>DISTRICT OFFICE</u>	<u>MANAGER</u>	<u>TELEPHONE</u>	<u>ADDRESS</u>
40 - Richmond	Gary Johnson	(804) 264-2548	6719 Janway Road 1st Floor Richmond, Virginia 23228
42 - Greensboro	Joe Ratcliff *	(919) 852-4110	311 - D Pomona Drive Greensboro, North Carolina 27405
		(704) 568-7175	4921 Albermarle Road Suite 124 Charlotte, North Carolina 28205
75 - San Juan	Eliett Barreras	(809) 781-0740 781-0872	G.P.O. Box 71313 San Juan Puerto Rico 00936

*ACTING DISTRICT MANAGER

CENTRAL REGION

<u>REGION OFFICE</u>	<u>REGION V.P.</u>	<u>TELEPHONE</u>	<u>ADDRESS</u>
25 - Youngstown	Bill Blockinger	(216) 758-9767	P.O. Box 3389 7221 Market Street Youngstown, Ohio 44512
<u>DISTRICT OFFICE</u>	<u>MANAGER</u>	<u>TELEPHONE</u>	<u>ADDRESS</u>
11 - Buffalo	Pat Kelly	(716) 675-9100	60 Ransler Drive West Seneca, New York 14224
		(315) 463-4568	P.O. Box 400 6295 E. Molloy Road E. Syracuse, New York 13057
16 - Pittsburgh	John Sylvester	(412) 828-4196	P.O. Box 71 930 Third Street Oakmont, Pennsylvania 15139
17 - Cleveland	Leon Chill	(216) 238-9330	19668 Progress Drive Strongsville, Ohio 44136
		(419) 385-0818	4758A Angola Toledo, Ohio 43615
19 - Youngstown	Ray Wilkinson	(216) 758-2391	P.O. Box 3389 7221 Market Street Youngstown, Ohio 44512
		(614) 231-2005	2016 Zettler Road Columbus, Ohio 43227
		(304) 697-4770	P.O. Box 7757 845 Jackson Ave. Huntington, West Virginia 25778
21 - Cincinnati	Phil Skufis	(513) 793-4994	10800 Millington Court Cincinnati, Ohio 45242
24 - Detroit	Tony Berger	(313) 477-9100	23921 Freeway Park Drive Farmington Hills, Michigan 48024
28 - Indianapolis	Bruce Agan	(317) 547-3555	2900 N. Catherwood Avenue Indianapolis, Indiana 46219
		(502) 491-1912	300 Production Drive Louisville, Kentucky 40299

GULF REGION

<u>REGION OFFICE</u>	<u>REGION V.P.</u>	<u>TELEPHONE</u>	<u>ADDRESS</u>
85 - Houston	Joe Posey	(713) 781-6870	5824 Parkersburg Houston, Texas 77036
		(404) 452-1415	3731 Northcrest Road Doraville, Georgia 30340
<u>DISTRICT OFFICE</u>	<u>MANAGER</u>	<u>TELEPHONE</u>	<u>ADDRESS</u>
29 - Houston	Dow Carder, Jr.	(713) 781-4393	5824 Parkersburg Houston, Texas 77036
38 - New Orleans	Manuel De Alarcon	(504) 362-5277	P.O. Box 489 1800 Monroe Street Gretna, Louisiana 70053
		(205) 479-5441	P.O. Box 6316 3151 A Midtown Park South Mobile, Alabama 36606
39 - Birmingham	(Under Atlanta District Manager)	(205) 592-9631	P.O. Drawer 31048 4329 Morris Avenue Birmingham, Alabama 35222
		(601) 922-9131	P.O. Box 20044 4658 Van Winkle Park Drive Jackson, Mississippi 39209
44 - Atlanta	Mike Brown	(404) 452-1415	3731 Northcrest Road Doraville, Georgia 30340
		(803) 736-0700 -0711	3037 B McNaughton Columbia, South Carolina 29206
46 - Nashville	Glenn Cherry	(615) 254-3421	2131 Utopia Avenue Nashville, Tennessee 37211
		(615) 690-5931	8705 Unicorn Drive Suite B 310 Knoxville, Tennessee 37919
51 - Tampa	Dennis Marra	(813) 247-5454	2625 East Fourth Avenue Tampa, Florida 33605
		(305) 484-2267	2957 N.W. 27th Street Fort Lauderdale, Florida 33334
82 - Tulsa	Bill McRae	(918) 836-6493	1863 North 105th East Avenue Tulsa, Oklahoma 74116
88 - Dallas	Richard Enkey	(817) 640-9866	803 Avenue H East, Suite 305 Arlington, Texas 76011
		(318) 688-7420	P.O. Box 9050 7505 Pines Road, Suite 1105 Shreveport, Louisiana 71109
89 - San Antonio	Ed Kirk	(512) 824-0251	P.O. Box 17447 2438 Brockton San Antonio, Texas 78217



Automatic Sprinkler
CORPORATION OF AMERICA

GENERAL OFFICES

November 15, 1984

POST OFFICE BOX 180
1000 EAST EDGERTON ROAD
CLEVELAND, OHIO 44147
PHONE: 216-526-9900
TELEX: 098-5406

SUBJECT: DELUGE, PRE-ACTION AND FOAM-WATER DELUGE SPRINKLER SYSTEMS; MODEL C DELUGE VALVES

Gentlemen:

We have become aware of a potential problem which may affect the fire protection sprinkler system in your building or property. If the problem exists, IT MAY PREVENT THE SPRINKLER SYSTEM FROM OPERATING IN THE EVENT OF A FIRE. The following outlines:

- A. The nature of the problem,
- B. How to identify whether a system may be affected,
- C. Recommended course of action.

A. THE NATURE OF THE PROBLEM

Within the last year we have had three reported instances, involving seven valves, in which 6" Model C deluge valves failed to trip when full water pressure was applied to the valve. It appears that the impact of the release weight (item 22 on the attached drawing G-14) was not sufficient to disengage the latch (item 12) from the clapper (item 6) under certain time, pressure and water conditions.

All three reported failures occurred in the 6" Model C deluge valve size, operating under relatively high pressure, (over 100 psi) and installed for over 6 years. It is felt that the roughness of the two mating surfaces, the clapper nose and latch, may change enough to prevent opening because of increased starting friction. However, we have been unable to ascertain precisely what conditions cause the change in surface roughness in the isolated cases reported to date. We do know that all valves have been factory tested before shipment. This test is at high (200 psi) and medium (50-75 psi) pressure.

We further caution you that this condition may not be evident. Superficial inspections may not satisfactorily duplicate actual fire conditions. You may think your valve would work when in fact it would not. Your system's actual pressure may be greater (over 100 psi) when a fire pump is operating than when in the static condition.

Since your present inspection procedure may not detect a potential malfunction, we strongly recommend that you have a competent mechanic follow the below mentioned procedure. Where we have encountered the problem, this relatively simple procedure has restored the valves to proper working order.

B. HOW TO IDENTIFY WHETHER YOUR SYSTEM MAY BE AFFECTED

Model C deluge valves are installed in Rate-of-Rise Sprinkler Systems and in Pilot Head Sprinkler Systems. The systems are further subdivided into Deluge Sprinkler Systems, Pre-Action Sprinkler Systems or Foam-Water Deluge Sprinkler Systems.

The valves are also identified as "Deluge", "Suprotex", "Pre-Action", "Suprotex-Deluge", and "Suprotex/Pre-Action". In Foam-Water deluge systems, both the water deluge valve and the foam deluge valve may be Model C deluge valves.

The Model C deluge valve has also been installed by Grinnell under the name "Multitrol" and by Rockwood Sprinkler Company under the name "Dualguard".

C. RECOMMENDED COURSE OF ACTION

We recommend that at the earliest possible opportunity, the following procedure be followed and REPEATED ON AN ANNUAL BASIS:

1. Use a competent mechanic. These systems often require specialized knowledge and should not be tampered with by inexperienced personnel.
2. Determine if the protected facility can safely conduct a partial flow test. If it can, conduct the procedure outlined in the next paragraph.
3. Adjust the OS & Y control valve to the nearly closed position (open about 3/4 to 1 turn from fully closed). Remove the enclosing box cover and grasp the weight firmly. Release the weight by pulling on the manual release handle. Lower the weight on a 6" Model C valve to 4" - 4 1/2" below its latched position. On a 2 1/2" Model C valve, lower the weight to 2" - 2 1/2" below its latched position. Allow the weight to freely drop on the latch arm. The clapper, under full water pressure should open. Immediately close the OS & Y control valve. Open the drain valve to drain the system piping. If the valve tripped, reset the valve in accordance with the applicable procedure (see instruction for Care and Maintenance), setting the system back into operation.
4. If the system fails to trip, please notify the Quality Assurance Manager, "Automatic" Sprinkler Corporation of America at (216) 526-9900. We are most interested in identifying and assisting you in resolving any problems which may arise.

November 14, 1984

Page 3

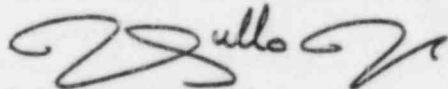
C. RECOMMENDED COURSE OF ACTION (Cont'd)

5. If a partial flow test cannot be conducted, perform the following maintenance procedure.
6. Shut off the OS & Y control valve and open the drain valve to remove any pressure from the underside of the clapper. Remove the enclosing box cover. Release the weight by pulling the manual release mechanism. Remove the hand hole cover. Remove the clapper.
7. Inspect the clapper and latch mating surfaces. These surfaces must be smooth. Refinish the surfaces using 220 grit sandpaper followed by crocus cloth to obtain a smooth finish on both surfaces.
8. Inspect the clapper facing, seat ring and valve interior in accordance with applicable Care and Maintenance Procedure.
9. Reassemble the valve. Reset the weight. Slowly open the OS & Y control valve until water begins to flow from the drain. Slowly close the drain. Fully open the OS & Y control valve, setting the system back into operation.

While we have identified only seven Model C deluge valve malfunctions out of an estimated 75,000 valves installed since 1931, we feel it is our obligation to notify you of this potential problem. Conducting the maintenance procedure is your choice. We strongly recommend you do so.

Very truly yours,

"AUTOMATIC" SPRINKLER CORPORATION OF AMERICA
a division of Figgie International, Inc.

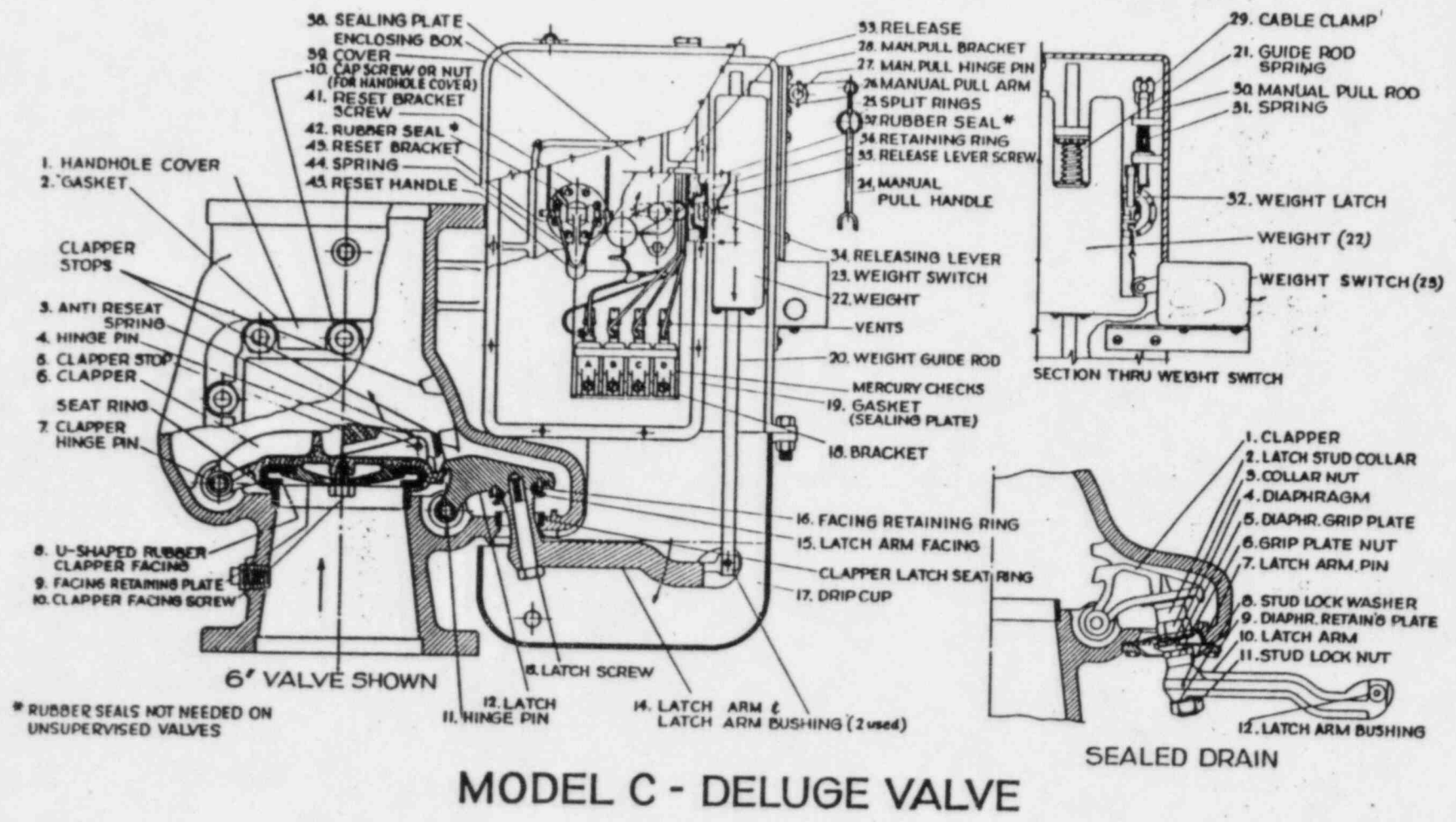


John J. Gullo, Jr.
Quality Assurance Manager

JJG/cmr

- Att: 1. Replacement Parts for All Model C Valves: Data Page G-14
2. Data Page G-8a
3. Data Page G-22a
4. List of our District Offices and
Phone Numbers

**REPLACEMENT PARTS
FOR ALL MODEL C VALVES**





"Automatic" Model C Deluge Valves

"Automatic" Model C Suprotex-Deluge Valves

MAINTENANCE

The "Automatic" Model C Deluge and Suprotex-Deluge Valves and their related equipment should be examined periodically to ensure proper operation and trouble-free service. Several areas to be routinely inspected are:

Clapper / Clapper Latch. The mating surfaces of the clapper nose and the clapper latch must be kept clean and smooth. As required, sand each surface with No. 220 grit sandpaper until smooth, then finish the surface with crocus cloth.

Clapper Facing. The rubber clapper facing should be checked for wear or damage, and to determine that it is free of dirt and other foreign substances. If found to be worn or damaged (e.g., foreign matter imbedded in the surface), the facing should be replaced. If it is dirty, it should be cleaned, but compounds which could damage the rubber facing must never be used.

Seat Ring. The seat ring should be cleaned thoroughly and checked for possible damage. If it is found to be severely damaged, the complete deluge valve assembly should be replaced or returned to "Automatic" for possible reconditioning.

Alarm Line Strainer. The strainer in the alarm line should be checked and cleaned thoroughly.

Alarm Test Valve & Main Drain Valve. All controlling valves normally closed when the deluge valve is in the set position should be checked to be sure that they are fully closed and not leaking.

System Control Valve, Alarm Control Valve & Air (or Nitrogen) Supply Control Valve. All controlling valves normally open when the deluge valve is in the set position should be checked to be sure that they are in the fully open position and sealed, where required.

Deluge Valve & Trim. The overall setup should be checked for visible leaks and possible physical damage to the valve and connections (e.g., broken gages).

Valve Enclosure. The temperature in the enclosure around the deluge valve should be maintained at a temperature above 40° F (4° C).

Supervisory Air Supply. Strainers and regulators should be checked and cleaned as required. Air reservoirs and drum drips should be drained as often as required to remove any water that has accumulated.

The air dryer should be checked and replaced when the blue granules become pink or white.

Air Compressor. The air compressor should be lubricated as recommended by the manufacturer. The motor unit should be kept free of dirt. Filters and strainers should be cleaned as required.

Air Pressure. Air or nitrogen pressure must be maintained on the detection system as recommended in the operational instructions. Low-air-pressure alarms should be tested and switches should be checked to see that they are properly set to operate at the required pressure level.

Detection System. The detection system and related components are to be tested and checked as recommended in the operational instructions.



"Automatic" Model C Pre-Action Valves

"Automatic" Model C Suprotex Valves

MAINTENANCE

The "Automatic" Model C Pre-Action and Suprotex (supervised Pre-Action) Valves and their related equipment should be examined periodically to ensure proper operation and trouble-free service. Several areas to be routinely inspected are:

Clapper / Clapper Latch. The mating surfaces of the clapper nose and the clapper latch must be kept clean and smooth. As required, sand each surface with No. 220 grit sandpaper until smooth, then finish the surface with crocus cloth.

Clapper Facing. The rubber clapper facing should be checked for wear or damage, and to determine that it is free of dirt and other foreign substances. If found to be worn or damaged (e.g., foreign matter imbedded in the surface), the facing should be replaced. If it is dirty, it should be cleaned, but compounds which could damage the rubber facing must never be used.

Seat Ring. The seat ring should be cleaned thoroughly and checked for possible damage. If it is found to be severely damaged, the complete pre-action valve assembly should be replaced or returned to "Automatic" for possible reconditioning.

Alarm Line Strainer. The strainer in the alarm line should be checked and cleaned thoroughly.

Alarm Test Valve & Main Drain Valve. All controlling valves normally closed when the pre-action valve is in the set position should be checked to be sure that they are fully closed and not leaking.

System Control Valve, Alarm Control Valve & Air (or Nitrogen) Supply Control Valve. All controlling valves normally open when the pre-action valve is in the set position should be checked to be sure that they are in the fully open position and sealed, where required.

Pre-Action Valve & Trim. The overall setup should be checked for visible leaks and possible physical damage to the valve and connections (e.g., broken gages).

Valve Enclosure. The temperature in the enclosure around the pre-action valve should be maintained at a temperature above 40° F (4° C).

Supervisory Air Supplies. Strainers and regulators should be checked and cleaned as required. Air reservoirs and drum drips should be drained as often as required to remove any water that has accumulated.

The air dryer should be checked and replaced when the blue granules become pink or white.

Air Compressors. The air compressors should be lubricated as recommended by the manufacturer. The motor units should be kept free of dirt. Filters and strainers should be cleaned as required.

Air Pressure. Air or nitrogen pressure must be maintained on the sprinkler and detection system as recommended in the operational instructions. Low-air-pressure alarms should be tested and switches should be checked to see that they are properly set to operate at the required pressure level.

Detection System. The detection system and related components are to be tested and checked as recommended in the operational instructions.



POST OFFICE BOX 180
1000 EAST EDGERTON ROAD
CLEVELAND, OHIO 44147
PHONE: 216-526-9900
TELEX: 098-5406

December 1, 1984

SUBJECT: DELUGE, PRE-ACTION AND FOAM-WATER DELUGE SPRINKLER SYSTEMS; MODEL C
DELUGE VALVES

Gentlemen:

We have become aware of a potential problem which may affect the fire protection sprinkler system in your building or property. If the problem exists, IT MAY PREVENT THE SPRINKLER SYSTEM FROM OPERATING IN THE EVENT OF A FIRE. The following outlines:

- A. The nature of the problem,
- B. How to identify whether a system may be affected,
- C. Recommended course of action.

A. THE NATURE OF THE PROBLEM

Within the last year we have had three reported instances, involving seven valves, in which 6" Model C deluge valves failed to trip when full water pressure was applied to the valve. It appears that the impact of the release weight (item 22 on the attached drawing G-14) was not sufficient to disengage the latch (item 12) from the clapper (item 6) under certain time, pressure and water conditions.

All three reported failures occurred in the 6" Model C deluge valve size, operating under relatively high pressure, (over 100 psi) and installed for over 6 years. It is felt that the roughness of the two mating surfaces, the clapper nose and latch, may change enough to prevent opening because of increased starting friction. However, we have been unable to ascertain precisely what conditions cause the change in surface roughness in the isolated cases reported to date. We do know that all valves have been factory tested before shipment. This test is at high (200 psi) and medium (50-75 psi) pressure.

We further caution you that this condition may not be evident. Superficial inspections may not satisfactorily duplicate actual fire conditions. You may think your valve would work when in fact it would not. Your system's actual pressure may be greater (over 100 psi) when a fire pump is operating than when in the static condition.

Since your present inspection procedure may not detect a potential malfunction, we strongly recommend that you have a competent mechanic follow the below mentioned procedure. Where we have encountered the problem, this relatively simple procedure has restored the valves to proper working order.

C/12

B. HOW TO IDENTIFY WHETHER YOUR SYSTEM MAY BE AFFECTED

Model C deluge valves are installed in Rate-of-Rise Sprinkler Systems and in Wet Head Sprinkler Systems. The systems are further subdivided into Deluge Sprinkler Systems, Pre-Action Sprinkler Systems or Foam-Water Deluge Sprinkler Systems.

Deluge valves are also identified as "Deluge", "Suprotex", "Pre-Action", "Suprotex-Deluge", and "Suprotex/Pre-Action". In Foam-Water deluge systems, both the water deluge valve and the foam deluge valve may be Model C deluge valves.

The Model C deluge valve has also been installed by Grinnell under the name "Multitrol" and by Rockwood Sprinkler Company under the name "Dualguard".

C. RECOMMENDED COURSE OF ACTION

We recommend that at the earliest possible opportunity, the following procedure be followed and REPEATED ON AN ANNUAL BASIS:

1. Use a competent mechanic. These systems often require specialized knowledge and should not be tampered with by inexperienced personnel.
2. Determine if the protected facility can safely conduct a partial flow test. If it can, conduct the procedure outlined in the next paragraph.
3. Adjust the OS & Y control valve to the nearly closed position (open about 3/4 to 1 turn from fully closed). Remove the enclosing box cover and grasp the weight firmly. Release the weight by pulling on the manual release handle. Lower the weight on a 6" Model C valve to 4" - 4 1/2" below its latched position. On a 2 1/2" Model C valve, lower the weight to 2" - 2 1/2" below its latched position. Allow the weight to freely drop on the latch arm. The clapper, under full water pressure should open. Immediately close the OS & Y control valve. Open the drain valve to drain the system piping. If the valve tripped, reset the valve in accordance with the applicable procedure (see instruction for Care and Maintenance), setting the system back into operation.
4. If the system fails to trip, please notify the Quality Assurance Manager, "Automatic" Sprinkler Corporation of America at (216) 526-9900. We are most interested in identifying and assisting you in resolving any problems which may arise.

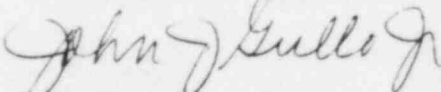
C. RECOMMENDED COURSE OF ACTION (Cont'd)

5. If a partial flow test cannot be conducted, perform the following maintenance procedure.
6. Shut off the OS & Y control valve and open the drain valve to remove any pressure from the underside of the clapper. Remove the enclosing box cover. Release the weight by pulling the manual release mechanism. Remove the hand hole cover. Remove the clapper.
7. Inspect the clapper and latch mating surfaces. These surfaces must be smooth. Refinish the surfaces using 220 grit sandpaper followed by crocus cloth to obtain a smooth finish on both surfaces.
8. Inspect the clapper facing, seat ring and valve interior in accordance with applicable Care and Maintenance Procedure.
9. Reassemble the valve. Reset the weight. Slowly open the OS & Y control valve until water begins to flow from the drain. Slowly close the drain. Fully open the OS & Y control valve, setting the system back into operation.

While we have identified only seven Model C deluge valve malfunctions out of an estimated 75,000 valves installed since 1931, we feel it is our obligation to notify you of this potential problem. Conducting the maintenance procedure is your choice. We strongly recommend you do so.

Very truly yours,

"AUTOMATIC" SPRINKLER CORPORATION OF AMERICA
a division of Figgie International, Inc.



John J. Gullo, Jr.
Quality Assurance Manager

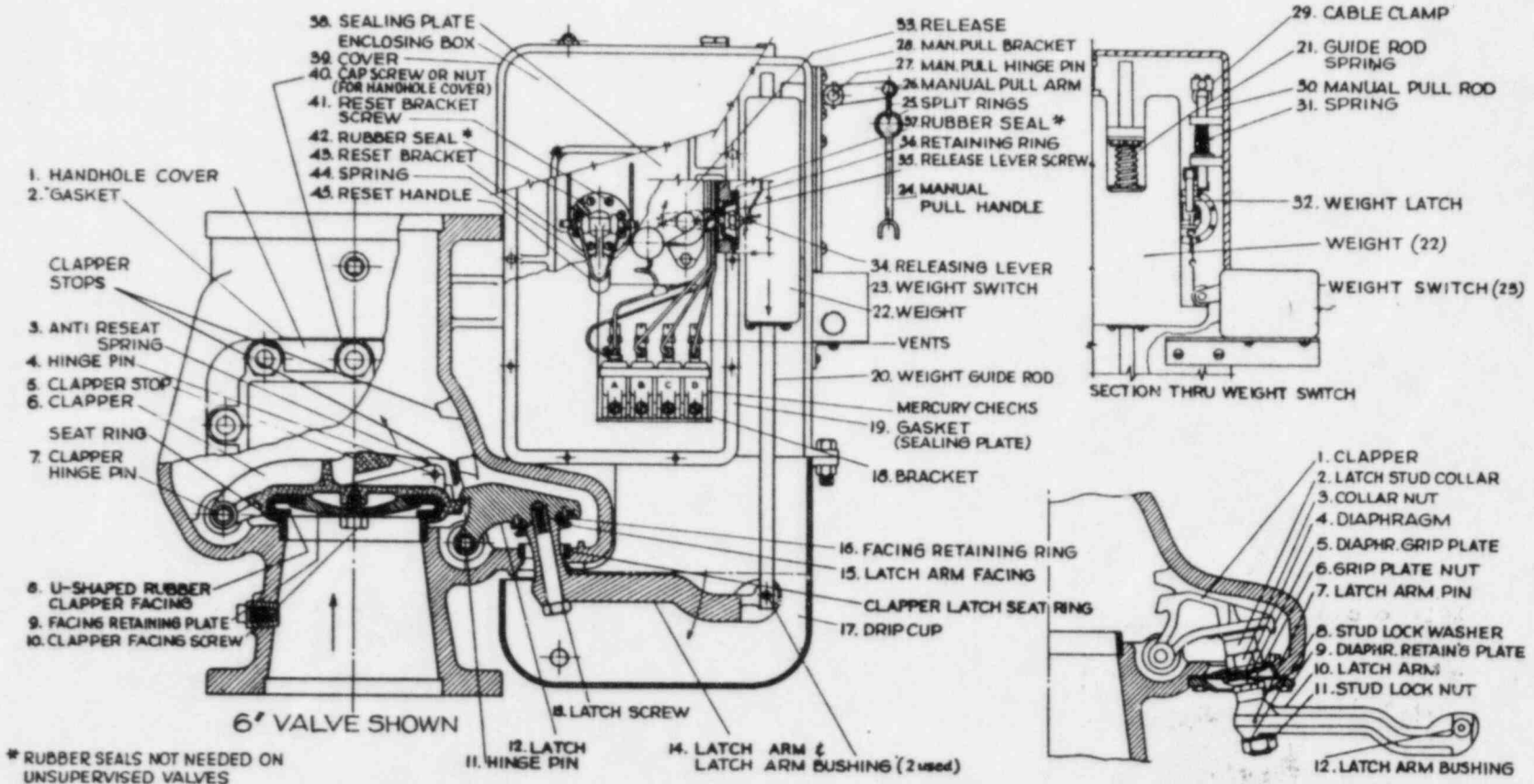
JJG/cnr

- Att: 1. Replacement Parts for All Model C Valves: Data Page G-14
2. Data Page G-8a
3. Data Page G-22a
4. List of our District Offices and
Phone Numbers

REPLACEMENT PARTS FOR ALL MODEL C VALVES

Automatic Sprinkler CORPORATION OF AMERICA

Automatic Sprinkler CORPORATION OF AMERICA



MODEL C - DELUGE VALVE



"Automatic" Model C Deluge Valves

"Automatic" Model C Suprotex-Deluge Valves

MAINTENANCE

The "Automatic" Model C Deluge and Suprotex-Deluge Valves and their related equipment should be examined periodically to ensure proper operation and trouble-free service. Several areas to be routinely inspected are:

Clapper / Clapper Latch. The mating surfaces of the clapper nose and the clapper latch must be kept clean and smooth. As required, sand each surface with No. 220 grit sandpaper until smooth, then finish the surface with crocus cloth.

Clapper Facing. The rubber clapper facing should be checked for wear or damage, and to determine that it is free of dirt and other foreign substances. If found to be worn or damaged (e.g., foreign matter imbedded in the surface), the facing should be replaced. If it is dirty, it should be cleaned, but compounds which could damage the rubber facing must never be used.

Seat Ring. The seat ring should be cleaned thoroughly and checked for possible damage. If it is found to be severely damaged, the complete deluge valve assembly should be replaced or returned to "Automatic" for possible reconditioning.

Alarm Line Strainer. The strainer in the alarm line should be checked and cleaned thoroughly.

Alarm Test Valve & Main Drain Valve. All controlling valves normally closed when the deluge valve is in the set position should be checked to be sure that they are fully closed and not leaking.

System Control Valve, Alarm Control Valve & Air (or Nitrogen) Supply Control Valve. All controlling valves normally open when the deluge valve is in the set position should be checked to be sure that they are in the fully open position and sealed, where required.

Deluge Valve & Trim. The overall setup should be checked for visible leaks and possible physical damage to the valve and connections (e.g., broken gages).

Valve Enclosure. The temperature in the enclosure around the deluge valve should be maintained at a temperature above 40° F (4° C).

Supervisory Air Supply. Strainers and regulators should be checked and cleaned as required. Air reservoirs and drum drips should be drained as often as required to remove any water that has accumulated.

The air dryer should be checked and replaced when the blue granules become pink or white.

Air Compressor. The air compressor should be lubricated as recommended by the manufacturer. The motor unit should be kept free of dirt. Filters and strainers should be cleaned as required.

Air Pressure. Air or nitrogen pressure must be maintained on the detection system as recommended in the operational instructions. Low-air-pressure alarms should be tested and switches should be checked to see that they are properly set to operate at the required pressure level.

Detection System. The detection system and related components are to be tested and checked as recommended in the operational instructions.



"Automatic" Model C Pre-Action Valves

"Automatic" Model C Suprotex Valves

MAINTENANCE

The "Automatic" Model C Pre-Action and Suprotex (supervised Pre-Action) Valves and their related equipment should be examined periodically to ensure proper operation and trouble-free service. Several areas to be routinely inspected are:

Clapper / Clapper Latch. The mating surfaces of the clapper nose and the clapper latch must be kept clean and smooth. As required, sand each surface with No. 220 grit sandpaper until smooth, then finish the surface with crocus cloth.

Clapper Facing. The rubber clapper facing should be checked for wear or damage, and to determine that it is free of dirt and other foreign substances. If found to be worn or damaged (e.g., foreign matter imbedded in the surface), the facing should be replaced. If it is dirty, it should be cleaned, but compounds which could damage the rubber facing must never be used.

Seat Ring. The seat ring should be cleaned thoroughly and checked for possible damage. If it is found to be severely damaged, the complete pre-action valve assembly should be replaced or returned to "Automatic" for possible reconditioning.

Alarm Line Strainer. The strainer in the alarm line should be checked and cleaned thoroughly.

Alarm Test Valve & Main Drain Valve. All controlling valves normally closed when the pre-action valve is in the set position should be checked to be sure that they are fully closed and not leaking.

System Control Valve, Alarm Control Valve & Air (or Nitrogen) Supply Control Valve. All controlling valves normally open when the pre-action valve is in the set position should be checked to be sure that they are in the fully open position and sealed, where required.

Pre-Action Valve & Trim. The overall setup should be checked for visible leaks and possible physical damage to the valve and connections (e.g., broken gages).

Valve Enclosure. The temperature in the enclosure around the pre-action valve should be maintained at a temperature above 40° F (4° C).

Supervisory Air Supplies. Strainers and regulators should be checked and cleaned as required. Air reservoirs and drum drips should be drained as often as required to remove any water that has accumulated.

The air dryer should be checked and replaced when the blue granules become pink or white.

Air Compressors. The air compressors should be lubricated as recommended by the manufacturer. The motor units should be kept free of dirt. Filters and strainers should be cleaned as required.

Air Pressure. Air or nitrogen pressure must be maintained on the sprinkler and detection system as recommended in the operational instructions. Low-air-pressure alarms should be tested and switches should be checked to see that they are properly set to operate at the required pressure level.

Detection System. The detection system and related components are to be tested and checked as recommended in the operational instructions.

EASTERN REGION

<u>REGION OFFICE</u>	<u>REGION V.P.</u>	<u>TELEPHONE</u>	<u>ADDRESS</u>
20- Baltimore	A.D. O'Neill	(301) 391-3292	8907 Kelso Drive Essex, Maryland 21221
		(215) 277-3002	201 King Manor Drive Suite F King of Prussia, Pennsylvania 19406
		(401) 738-2308	2699 Post Road Warwick, Rhode Island 02886
		(201) 850-1155	P.O. Box 469 108 High Street 2nd Floor Hackettstown, New Jersey 07840
<u>DISTRICT OFFICE</u>	<u>MANAGER</u>	<u>TELEPHONE</u>	<u>ADDRESS</u>
02 - Portland	Al Sands	(207) 767-2166	P.O. Box 2311 78 Pleasant Avenue South Portland, Maine 04106
		(207) 942-3444	Answering Service Bangor, Maine
		(603) 622-0965	Answering Service New Hampshire
03 - Boston	Bill Newell	(617) 332-7504	53 Winchester Street Newton, Massachusetts 02161
		(203) 646-4400	Answering Service Connecticut
05 - Kenilworth	Ed Fee	(201) 245-3725	P.O. Box 98 340 Carnegie Avenue Kenilworth, New Jersey 07033
06 - Philadelphia	Joe Kiczek	(215) 277-1190	201 King Manor Drive Suite F King of Prussia, Pennsylvania 19406
		(717) 829-1996	Answering Service Pennsylvania
		(717) 757-1502	3755 East Market Street York, Pennsylvania 17402
09 - Baltimore	John O'Malley	(301) 391-7010	8909 Kelso Drive Baltimore, Maryland 21221
		(703) 971-2432;33	5419A Vine Street Alexandria, Virginia 22310

EASTERN REGION (Continued)

<u>DISTRICT OFFICE</u>	<u>MANAGER</u>	<u>TELEPHONE</u>	<u>ADDRESS</u>
40 - Richmond	Gary Johnson	(804) 264-2548	6719 Janway Road 1st Floor Richmond, Virginia 23228
42 - Greensboro	Joe Ratcliff *	(919) 852-4110	311 - D Pomona Drive Greensboro, North Carolina 27405
		(704) 568-7175	4921 Albermarle Road Suite 124 Charlotte, North Carolina 28205
75 - San Juan	Eliett Barreras	(809) 781-0740 781-0872	G.P.O. Box 71313 San Juan Puerto Rico 00936

*ACTING DISTRICT MANAGER

CENTRAL REGION

<u>REGION OFFICE</u>	<u>REGION V.P.</u>	<u>TELEPHONE</u>	<u>ADDRESS</u>
25 - Youngstown	Bill Blockinger	(216) 758-9767	P.O. Box 3389 7221 Market Street Youngstown, Ohio 44512
<u>DISTRICT OFFICE</u>	<u>MANAGER</u>	<u>TELEPHONE</u>	<u>ADDRESS</u>
11 - Buffalo	Pat Kelly	(716) 675-9100	60 Ransler Drive West Seneca, New York 14224
		(315) 463-4568	P.O. Box 400 6295 E. Molloy Road E. Syracuse, New York 13057
16 - Pittsburgh	John Sylvester	(412) 828-4196	P.O. Box 71 930 Third Street Oakmont, Pennsylvania 15139
17 - Cleveland	Leon Chitt	(216) 238-9330	19668 Progress Drive Strongsville, Ohio 44136
		(419) 385-0818	4758A Angola Toledo, Ohio 43615
19 - Youngstown	Ray Wilkinson	(216) 758-2391	P.O. Box 3389 7221 Market Street Youngstown, Ohio 44512
		(614) 231-2005	2016 Zettler Road Columbus, Ohio 43227
		(304) 697-4770	P.O. Box 7757 845 Jackson Ave. Huntington, West Virginia 25778
21 - Cincinnati	Phil Skuffis	(513) 793-4994	10800 Millington Court Cincinnati, Ohio 45242
24 - Detroit	Tony Berger	(313) 477-9100	23921 Freeway Park Drive Farmington Hills, Michigan 48024
28 - Indianapolis	Bruce Agan	(317) 547-3555	2900 N. Catherwood Avenue Indianapolis, Indiana 46219
		(502) 491-1912	300 Production Drive Louisville, Kentucky 40299

MIDWEST REGION

<u>REGION OFFICE</u>	<u>REGION V.P.</u>	<u>TELEPHONE</u>	<u>ADDRESS</u>
35 - Chicago	Bill McCardell-Only Regional Office	(312) 459-1080 (312) 459-0700	851 Seton Court Wheeling, Illinois 60090
<u>DISTRICT OFFICE</u>	<u>MANAGER</u>	<u>TELEPHONE</u>	<u>ADDRESS</u>
26 - Chicago	Frank Robertson	(312) 956-6120	2480 Estes Avenue Elk Grove Village, Illinois 60007
27 - Milwaukee	(Under Chicago District Manager)		6 Meyer Industrial Park Cudahay, Wisconsin 53228
30 - Minneapolis	Chuck Raab	(612) 935-0327	5419 Opportunity Court Minnetonka, Minnesota 55343
32 - St. Louis	Rick Lennerth	(314) 432-1828	2445 Rock Island Boulevard Maryland Heights, Missouri 63043
33 - Quad Cities	Rick Lennerth	(319) 386-2710	R.R. 3 N. Brady Industrial Park Davenport, Iowa 52806
34 - Kansas City	Rich Butts	(816) 221-4191	24 West 15th Avenue North Kansas City, Missouri 64116
37 - Denver	Tom Prymak	(303) 371-4363	4897 Oakland Street Denver, Colorado 80239
63 - Omaha	Mike Rice	(402) 331-8340 (515) 244-4232	11055 1 Street Omaha, Nebraska 68137 820 Keo Way Room 219 Des Moines, Iowa 50308

GULF REGION

<u>REGION OFFICE</u>	<u>REGION V.P.</u>	<u>TELEPHONE</u>	<u>ADDRESS</u>
85 - Houston	Joe Posey	(713) 781-6870	5824 Parkersburg Houston, Texas 77036
		(404) 452-1415	3731 Northcrest Road Doraville, Georgia 30340
<u>DISTRICT OFFICE</u>	<u>MANAGER</u>	<u>TELEPHONE</u>	<u>ADDRESS</u>
29 - Houston	Dow Carder, Jr.	(713) 781-4393	5824 Parkersburg Houston, Texas 77036
38 - New Orleans	Manuel De Alarcon	(504) 362-5277	P.O. Box 489 1800 Monroe Street Gretna, Louisiana 70053
		(205) 479-5441	P.O. Box 6316 3151 A Midtown Park South Mobile, Alabama 36606
39 - Birmingham	(Under Atlanta District Manager)	(205) 592-9631	P.O. Drawer 31048 4329 Morris Avenue Birmingham, Alabama 35222
		(601) 922-9131	P.O. Box 20044 4658 Van Winkle Park Drive Jackson, Mississippi 39209
44 - Atlanta	Mike Brown	(404) 452-1415	3731 Northcrest Road Doraville, Georgia 30340
		(803) 736-0700 -0711	3037 B McNaughton Columbia, South Carolina 29206
46 - Nashville	Glenn Cherry	(615) 254-3421	2131 Utopia Avenue Nashville, Tennessee 37211
		(615) 690-5931	8705 Unicorn Drive Suite B 310 Knoxville, Tennessee 37919
51 - Tampa	Dennis Marra	(813) 247-5454	2625 East Fourth Avenue Tampa, Florida 33605
		(305) 484-2267	2957 N.W. 27th Street Fort Lauderdale, Florida 33334
82 - Tulsa	Bill McRae	(918) 836-6493	1863 North 105th East Avenue Tulsa, Oklahoma 74116
88 - Dallas	Richard Enkey	(817) 640-9866	803 Avenue H East, Suite 305 Arlington, Texas 76011
		(318) 688-7420	P.O. Box 9050 7505 Pines Road, Suite 1105 Shreveport, Louisiana 71109
89 - San Antonio	Ed Kirk	(512) 824-0251	P.O. Box 17447 2438 Brockton San Antonio, Texas 78217

WESTERN REGION

<u>REGION OFFICE</u>	<u>REGION V.P.</u>	<u>TELEPHONE</u>	<u>ADDRESS</u>
55 - San Francisco	Fred Benn	(415) 487-3980	33480 Western Ave. Union City, California 94587
<u>DISTRICT OFFICE</u>	<u>MANAGER</u>	<u>TELEPHONE</u>	<u>ADDRESS</u>
59 - Phoenix	Mike Dempsey	(602) 437-0381	5002 S. 40th Street Suite E Phoenix, Arizona 85040
61 - San Diego		(619) 579-8934	1466 Pioneer Way, Suite 6 El Cajon, California 92020
62 - Los Angeles	Larry Anderson	(213) 921-8545	13100 East Firestone Boulevard Santa Fe Springs, California 90670
65 - San Francisco	Jim Weimer	(415) 471-8400	33470 Western Avenue Union City, California 94587
68 - Seattle	Kent Fricks	(206) 872-9570	7018 S. 220th Street Kent, Washington, 98031
98 - Hawaii	Greg Jewell	(808) 677-9121	94-515C Ukee Street Waipahu, Hawaii 96797

Nebraska Public Power District
P.O. Box 499
Columbus, Nebraska 68601
402/564-8561

Rochester Gas & Electric Corporation
89 East Avenue
Rochester, New York 14649
716/546-2700

Niagara Mohawk Power Corporation
300 Erie Boulevard West
Syracuse, New York 13202
315/474-1511

Sacramento Municipal Utility District
P. O. Box 15830
Sacramento, California 95813
916/452-3211

Northeast Nuclear Energy Company
P. O. Box 270
Hartford, Connecticut 06101
203/666-6911

South Carolina Electric & Gas Company
P. O. Box 764
Columbia, South Carolina 29218
803/748-3000

Northern States Power Company
414 Nicollet Mall
Minneapolis, Minnesota 55401
612/330-6007

Southern California Edison Company
2244 Walnut Grove Avenue
Rosemead, California 91770
213/572-1212

Omaha Public Power District
1623 Harney Street
Omaha, Nebraska 68102
402/536-4000

Tennessee Valley Authority
400 W. Summit Hill Drive
Knoxville, Tennessee 37902
615/632-6000

Pacific Gas & Electric Company
77 Beale Street
San Francisco, California 94106
415/781-4211

Toledo Edison Company
300 Madison Avenue
Toledo, Ohio 43652
419/259-5000

Pennsylvania Power & Light Company
2 North Ninth Street
Allentown, Pennsylvania 18101
215/770-5151

Vermont Yankee Nuclear Power Corp.
P. O. Box 157
Vernon, Vermont 05354
802/257-7711

Philadelphia Electric Company
2301 Market Street
Philadelphia, Pennsylvania 19101
215/841-4122

Virginia Electric & Power Company
P. O. Box 26666
Richmond, Virginia 23261
804/771-3000

Portland General Electric Company
121 Southwest Salmon Street
Portland, Oregon 97204
503/226-8333

Wisconsin Electric Power Company
231 West Michigan Street
Milwaukee, Wisconsin 53201
414/277-2345

Power Authority of the State of New York
10 Columbus Circle
New York, New York 10019
212/397-6200

Wisconsin Public Service Corporation
P. O. Box 1200
Green Bay, Wisconsin 54305
414/433-1598

Public Service Company of Colorado
550 15th Street
Denver, Colorado 80202
303/571-7511

Yankee Atomic Electric Company
1671 Worchester Road
Framingham, Massachusetts 01701
617/366-4475

Public Service Electric & Gas Company
80 Park Plaza
Newark, New Jersey 07101
201/430-7000



December 1, 1984

SUBJECT: DELUGE, PRE-ACTION AND FOAM-WATER DELUGE SPRINKLER SYSTEMS; MODEL C DELUGE VALVES

Gentlemen:

We have become aware of a potential problem which may affect the fire protection sprinkler system in your building or property. If the problem exists, IT MAY PREVENT THE SPRINKLER SYSTEM FROM OPERATING IN THE EVENT OF A FIRE. The following outlines:

- A. The nature of the problem,
- B. How to identify whether a system may be affected,
- C. Recommended course of action.

A. THE NATURE OF THE PROBLEM

Within the last year we have had three reported instances, involving seven valves, in which 6" Model C deluge valves failed to trip when full water pressure was applied to the valve. It appears that the impact of the release weight (item 22 on the attached drawing G-14) was not sufficient to disengage the latch (item 12) from the clapper (item 6) under certain time, pressure and water conditions.

All three reported failures occurred in the 6" Model C deluge valve size, operating under relatively high pressure, (over 100 psi) and installed for over 6 years. It is felt that the roughness of the two mating surfaces, the clapper nose and latch, may change enough to prevent opening because of increased starting friction. However, we have been unable to ascertain precisely what conditions cause the change in surface roughness in the isolated cases reported to date. We do know that all valves have been factory tested before shipment. This test is at high (200 psi) and medium (50-75 psi) pressure.

We further caution you that this condition may not be evident. Superficial inspections may not satisfactorily duplicate actual fire conditions. You may think your valve would work when in fact it would not. Your system's actual pressure may be greater (over 100 psi) when a fire pump is operating than when in the static condition.

Since your present inspection procedure may not detect a potential malfunction, we strongly recommend that you have a competent mechanic follow the below mentioned procedure. Where we have encountered the problem, this relatively simple procedure has restored the valves to proper working order.

B. HOW TO IDENTIFY WHETHER YOUR SYSTEM MAY BE AFFECTED

Model C deluge valves are installed in Rate-of-Rise Sprinkler Systems and in Pilot Head Sprinkler Systems. The systems are further subdivided into Deluge Sprinkler Systems, Pre-Action Sprinkler Systems or Foam-Water Deluge Sprinkler Systems.

The valves are also identified as "Deluge", "Suprotex", "Pre-Action", "Suprotex-Deluge", and "Suprotex/Pre-Action". In Foam-Water deluge systems, both the water deluge valve and the foam deluge valve may be Model C deluge valves.

The Model C deluge valve has also been installed by Grinnell under the name "Multitrol" and by Rockwood Sprinkler Company under the name "Dualguard".

C. RECOMMENDED COURSE OF ACTION

We recommend that at the earliest possible opportunity, the following procedure be followed and REPEATED ON AN ANNUAL BASIS:

1. Use a competent mechanic. These systems often require specialized knowledge and should not be tampered with by inexperienced personnel.
2. Determine if the protected facility can safely conduct a partial flow test. If it can, conduct the procedure outlined in the next paragraph.
3. Adjust the OS & Y control valve to the nearly closed position (open about 3/4 to 1 turn from fully closed). Remove the enclosing box cover and grasp the weight firmly. Release the weight by pulling on the manual release handle. Lower the weight on a 6" Model C valve to 4" - 4 1/2" below its latched position. On a 2 1/2" Model C valve, lower the weight to 2" - 2 1/2" below its latched position. Allow the weight to freely drop on the latch arm. The clapper, under full water pressure should open. Immediately close the OS & Y control valve. Open the drain valve to drain the system piping. If the valve tripped, reset the valve in accordance with the applicable procedure (see instruction for Care and Maintenance), setting the system back into operation.
4. If the system fails to trip, please notify the Quality Assurance Manager, "Automatic" Sprinkler Corporation of America at (216) 526-9900. We are most interested in identifying and assisting you in resolving any problems which may arise.

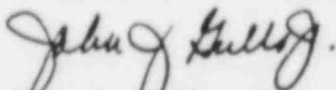
C. RECOMMENDED COURSE OF ACTION (Cont'd)

5. If a partial flow test cannot be conducted, perform the following maintenance procedure.
6. Shut off the OS & Y control valve and open the drain valve to remove any pressure from the underside of the clapper. Remove the enclosing box cover. Release the weight by pulling the manual release mechanism. Remove the hand hole cover. Remove the clapper.
7. Inspect the clapper and latch mating surfaces. These surfaces must be smooth. Refinish the surfaces using 220 grit sandpaper followed by crocus cloth to obtain a smooth finish on both surfaces.
8. Inspect the clapper facing, seat ring and valve interior in accordance with applicable Care and Maintenance Procedure.
9. Reassemble the valve. Reset the weight. Slowly open the OS & Y control valve until water begins to flow from the drain. Slowly close the drain. Fully open the OS & Y control valve, setting the system back into operation.

While we have identified only seven Model C deluge valve malfunctions out of an estimated 75,000 valves installed since 1931, we feel it is our obligation to notify you of this potential problem. Conducting the maintenance procedure is your choice. We strongly recommend you do so.

Very truly yours,

"AUTOMATIC" SPRINKLER CORPORATION OF AMERICA
a division of Figgie International, Inc.



John J. Gullo, Jr.
Quality Assurance Manager

JJG/cmr

- Att: 1. Replacement Parts for All Model C Valves: Data Page G-14
2. Data Page G-8a
3. Data Page G-22a
4. List of our District Offices and
Phone Numbers



Automatic Sprinkler
CORPORATION OF AMERICA



GENERAL OFFICES

POST OFFICE BOX 180
1000 EAST EDGERTON ROAD
CLEVELAND, OHIO 44147
PHONE: 216-526-9900
TELEX: 098-5406

December 12, 1985

SUBJECT: DELUGE, PRE-ACTION AND FOAM-WATER DELUGE SPRINKLER SYSTEMS: MODEL C DELUGE VALVES

Gentlemen:

We have become aware of a potential problem which may affect the fire protection sprinkler system in your building or property. If the problem exists, IT MAY PREVENT THE SPRINKLER SYSTEM FROM OPERATING IN THE EVENT OF A FIRE. The following outlines:

- A. The nature of the problem,
- B. How to identify whether your system is affected,
- C. Required course of action.

A. THE NATURE OF THE PROBLEM

We have discovered several 6" valves that failed to trip properly even after being serviced within the last six to twelve months. The valves stuck inside where the latch touches the valve clapper. We believe that the following factors contributed to the problem.

1. Relatively high water pressure, (over 100 psi),
2. Corrosive atmosphere,
3. Inadequate trip test procedures.

Please note that we may have previously notified you late last year or early this year about this valve. At that time we recommended a maintenance procedure which has since proven inadequate. If your system is of the serial numbers referenced below, follow this new procedure.

The corrective action provided by this letter is regarded as a TEMPORARY SOLUTION, but one which should be implemented IMMEDIATELY. We are preparing a final solution and will notify you when it is available. It is our current intent to have this final solution available by April 1986.

Although the problem encountered has only been found in 6" Model C valves, we are applying this corrective action to both the 2-1/2" and 6" sizes.

The valves involved in the immediate corrective action recommended by this letter are those manufactured since 1973.

DELUGE, PRE-ACTION AND FOAM-WATER DELUGE SPRINKLER SYSTEMS.

MODEL C DELUGE VALVES

December 12, 1985

Page 2

B. HOW TO IDENTIFY WHETHER YOUR MODEL C SYSTEM MAY BE AFFECTED

Model C deluge valves are installed in Rate-of-Rise Sprinkler Systems and in Pilot Head Sprinkler Systems. The systems are further subdivided into Deluge Sprinkler Systems, Pre-Action Sprinkler Systems or Foam-Water Deluge Sprinkler Systems.

The valves are also identified as "Deluge", "Suprotex", "Pre-Action", "Suprotex-Deluge", and "Suprotex/Pre-Action". In Foam-Water deluge systems, both the water deluge valve and the foam deluge valve may be Model C deluge valves.

The Model C deluge valve has also been installed by Grinnell under the name "Multitrol".

Serial numbers affected are:

2-1/2" Model C Deluge Valve: S/N S4,026 through S10,250
(Excluding SN S10244, S10245,
and S10246)

6" Model C Deluge Valve: S/N S6,024 through S12,350

Each Model C valve is identified by a serial number stamped into the front edge of the upper flange and by the lettering "Model C" cast in raised letters on the back of the valve.

C. REQUIRED COURSE OF ACTION

Your present inspection procedure may not detect a potential malfunction; therefore, we strongly recommend that you have a competent technician follow the procedure given below.

At the earliest possible opportunity, the following procedure should be performed on the 2-1/2" and 6" valves in the serial number ranges given above.

A molybdenum disulfide lubricant, 813MS, is required by this procedure. It can be obtained at no charge by calling the Quality Assurance Manager, "Automatic" Sprinkler Corporation at (216) 526-9900 or 1-800-ASCOA US or your local "Automatic" Sprinkler Office (see attached phone list). You may also obtain this lubricant by sending a telex request (telex no. 822054) giving the name and address of the location and the name of the person to whom the lubricant is to be sent.

Please provide the serial numbers of the valves at your facilities affected by this letter.

When each valve is serviced in accordance with the procedures given below, please observe appropriate precautions with respect to any electrical devices connected to the system. Make sure that the valve under test will not trip other valves.

DELUGE, PRE-ACTION AND FOAM-WATER DELUGE SPRINKLER SYSTEMS:
MODEL C DELUGE VALVES

November 15, 1985

Page 3

1. Use a competent technician. These systems require specialized knowledge and should not be tampered with by inexperienced personnel.
2. Shut off the OS & Y control valve and open the main drain valve to remove any pressure from the underside of the clapper. Release the weight by pulling the manual release mechanism. Remove the hand hole cover. Remove the clapper.
3. Inspect the clapper and latch mating surfaces. These surfaces must be smooth. Refinish the surfaces using 220 grit sandpaper followed by crocus cloth to obtain a smooth finish on both surfaces.
4. Clean the two surfaces with lacquer thinner and allow the surfaces to dry.
5. Apply a thin coating of 813MS lubricant to both the clapper and latch surfaces.
6. Inspect the clapper facing, seat ring and valve interior in accordance with applicable Care and Maintenance Instructions.
7. Reassemble the valve, reset the weight, then replace the hand hole cover. Slowly open the OS & Y control valve until water begins to flow from the main drain. Slowly close the drain.
8. Open the OS & Y control valve completely.

If the protected facility can safely conduct a partial flow test, it is recommended that a partial flow test be performed as follows:

9. Adjust the OS & Y control valve to the nearly closed position (open about 1 turn from fully closed). Release the weight by pulling on the manual release handle. The clapper, under full water pressure, should open. Immediately close the OS & Y control valve. Open the drain valve to drain the system piping.

DELUGE, PRE-ACTION AND FOAM-WATER DELUGE SPRINKLER SYSTEMS:
MODEL C DELUGE VALVES
November 15, 1985
Page 4

10. If the system fails to trip, please notify Manager Quality Assurance at "Automatic" Sprinkler Corp. of America at (216) 526-9900 or 1-800 ASCOA US.
11. If the valve tripped, reset the valve in accordance with steps 2 through 8 above.
12. Fully open the OS & Y control valve so that the system is in the ready condition.

We believe it is our obligation to notify you of this potential problem. Conducting this maintenance procedure is your choice. We strongly recommend that you do so.

Very truly yours,
"Automatic" Sprinkler Corporation of America
a division of Figgie International Inc.



John J. Gullo
Quality Assurance Manager

JJG/js

- Attachments:
1. Replacement Parts for all Model C Valves
Data Page G-14
 2. List of our District offices and Phone Numbers

**PROCEDURE FOR LOW AIR PRESSURE
TEST OF SUPROTEX-DELUGE VALVE***

1. Select a convenient H.A.D., remove the Test Plug, and note the time in seconds for the Trouble Alarm to sound.
2. Replace the Test Plug. The Trouble Alarm Signal should be silenced in a short period of time.

*CAUTION: On SUPROTEX-Deluge Valves equipped with a double acting Release, Valve will trip from loss of supervisory air pressure in H.A.D.'s. Valves equipped with double acting diaphragm have a warning sign installed on front of Release Enclosing Box.

**PROCEDURE FOR TESTING
QUICK OPENING VALVE**

1. Close Controlling Gate Valve.
(This will sound Trouble Horn.)
2. Open the Main Drain Valve.
3. Open the Quick Opening Valve. Opening the Quick Opening Valve exhausts the supervisory air pressure in the Release Enclosing Box which causes the Release to operate resulting in the dropping of the Weight and unlatching of the Clapper.

4. Close the Quick Opening Valve.
5. Allow sufficient time for the supervisory air pressure to build up in the Thermo-Pneumatic system and the Release Enclosing Box.
6. Reset the Release by pulling out on the Reset Handle and raise the Weight into the "set" position.
7. Close the Main Drain Valve.
8. Open the Controlling Gate Valve.
(This will silence the Trouble Horn.)

INSTALLATION CAUTION

One Deluge Valve should not supply open sprinklers or nozzles in different buildings or in different stories of one building except under considered conditions. The operation of such a system would deluge areas other than those affected by fire.

WATER PROOFING

Proper waterproofing and drainage is required to carry off the discharge from the Deluge System. See latest N.F.P.A. pamphlet No. 13 "Installation of Sprinkler Systems" for detailed information.



"Automatic" Sprinkler
CORPORATION OF AMERICA

GENERAL OFFICES

POST OFFICE BOX 180
1000 EAST EDGERTON ROAD
CLEVELAND, OHIO 44147
PHONE: 216-526-9900
TELEX: 098-5406

November 19, 1984

Office of Inspection & Enforcement
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555
Attention: Mary Wegner
Addressee Only

Subject: Model C Deluge Valve Notification

Dear Ms. Wegner:

Per our telephone conversation, enclosed please find a copy of the notification letter we will be mailing out as soon as we develop a mailing list.

Also enclosed is a list of the utilities which we intend to notify.

If you have any questions, please call me.

Sincerely,

Mr. Jack Gullo
Quality Assurance Manager

JJG/cmr

Enclosures

cc: ASCOA - Cleveland
Model C File
Writer's File

~~860416022~~ 13 pp.



Automatic Sprinkler

CORPORATION OF AMERICA

GENERAL OFFICES

POST OFFICE BOX 180
1000 EAST EDGERTON ROAD
CLEVELAND, OHIO 44147
PHONE: 216-526-9900
TELEX: 098-5406

November 19, 1984

Office of Inspection & Enforcement
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555
Attention: Mary Wegner
Addressee Only

Subject: Model C Deluge Valve Notification

Dear Ms. Wegner:

Per our telephone conversation, enclosed please find a copy of the notification letter we will be mailing out as soon as we develop a mailing list.

Also enclosed is a list of the utilities which we intend to notify.

If you have any questions, please call me.

Sincerely,

Mr. Jack Gullo
Quality Assurance Manager

JJG/cmr

Enclosures

cc: ASCOA - Cleveland
Model C File
Writer's File

UTILITIES WITH PERMITS TO BUILD NUCLEAR POWER PLANTS

Arizona Public Service Company
P. O. Box 21666
Phoenix, Arizona 85036
602/271-7900

Carolina Power & Light Company
411 Fayetteville Street
Raleigh, North Carolina 27602
919/836-6111

Cincinnati Gas & Electric Company
P. O. Box 960
Cincinnati, Ohio 45201
513/387-2000

Cleveland Electric Illuminating Company
P.O. Box 5000
Cleveland, Ohio 44101
216/861-9000

Commonwealth Edison Company
P. O. Box 767
Chicago, Illinois 60690
312/294-4321

Consumers Power Company
212 West Michigan Avenue
Jackson, Michigan 49201
517/788-0550

Detroit Edison Company
2000 Second Avenue
Detroit, Michigan 48226
313/237-8000

Duke Power Company
P. O. Box 33189
Charlotte, North Carolina 28242
704/373-4011

Duquesne Light Company
One Oxford Center
301 Grant Street
Pittsburgh, Pennsylvania 15279
412/456-6000

Florida Power & Light Company
P. O. Box 529100
Miami, Florida 33152
305/552-3552

Georgia Power Company
P. O. Box 4545
Atlanta, Georgia 30302
404/526-6526

Gulf States Utility Company
P. O. Box 2951
Beaumont, Texas 77704
713/838-6631

Houston Lighting & Power Company
P. O. Box 1700
Houston, Texas 77001
713/228-9211

Illinois Power Company
P. O. Box 1505
Decatur, Illinois 62525
217/424-7000

Kansas Gas & Electric Company
P. O. Box 208
Wichita, Kansas 67201
316/261-6611

Long Island Lighting Company
250 Old Country Road
Mineola, New York 11801
516/228-2890

Louisiana Power & Light Company
142 Delaronde St.
New Orleans, Louisiana 70174
504/366-2345

Mississippi Power & Light Company
P. O. Box 1640
Jackson, Mississippi 39205
601/969-2311

Niagara Mohawk Power Corporation
300 Erie Boulevard West
Syracuse, New York 13202
315/474-1511

Northeast Nuclear Energy Company
P. O. Box 270
Hartford, Connecticut 06101
203/666-6911

Pacific Gas & Electric Company
77 Beale Street
San Francisco, California 94106
415/781-4211

Pennsylvania Power & Light Company
2 North Ninth Street
Allentown, Pennsylvania 18101
215/770-5151

Philadelphia Electric Company
2301 Market Street
Philadelphia, Pennsylvania 19101
215/841-4122

Public Service Company of New Hampshire
1000 Elm Street
Manchester, New Hampshire 03105
603/669-4000

Public Service Electric & Gas Company
80 Park Plaza
Newark, New Jersey 07101
201/420-7000

Public Service of Indiana
1000 East Main Street
Plainfield, Indiana 46168
317/839-9611

Tennessee Valley Authority
400 W. Summit Hill Drive
Knoxville, Tennessee 37902
615/632-6000

Texas Utilities Generating Company
2001 Bryan Tower
Dallas, Texas 75201
214/653-4600

Union Electric Company
P.O. Box 149
St. Louis, Missouri 63166
314/621-3222

Washington Public Power Supply System
P.O. Box 968
Richland, Washington 99352
509/372-5000

UTILITIES LICENSED TO OPERATE NUCLEAR POWER REACTORS

Alabama Power Company
600 North 18th Street
Birmingham, Alabama 35291
205/250-1000

Arkansas Power & Light Company
P. O. Box 551
Little Rock, Arkansas 72203
501/371-4000

Baltimore Gas & Electric Company
P. O. Box 1475
Baltimore, Maryland 21203
301/234-5000

Boston Edison Company
800 Boylston Street
Boston, Massachusetts 02199
617/424-2000

Carolina Power & Light Company
411 Fayetteville St.
Raleigh, North Carolina 27602
919/836-6111

Commonwealth Edison Company
P. O. Box 767
Chicago, Illinois 60690
312/294-4321

Connecticut Yankee Atomic Power Company
P. O. Box 270
Hartford, Connecticut 06101
203/666-6911

Consolidated Edison Company of New York
4 Irving Place
New York, New York 10003
212/460-4600

Consumers Power Company
212 West Michigan Avenue
Jackson, Michigan 49201
517/788-0550

Dairyland Power Cooperative
2615 East Avenue, South
LaCrosse, Wisconsin 54601
608/689-2331

Duke Power Company
P. O. Box 33189
Charlotte, North Carolina 28242
704/373-4011

Duquesne Light Company
One Oxford Center
301 Grant Street
Pittsburgh, Pennsylvania 15279
412/456-6000

Florida Power Corporation
P. O. Box 14042
St. Petersburg, Florida 33733
813/866-5151

Florida Power & Light Company
P. O. Box 529100
Miami, Florida 33152
305/552-3552

Georgia Power Company
P. O. Box 4545
Atlanta, Georgia 30302
404/526-6526

GPU Nuclear Corp.
Three Mile Island Station
P. O. Box 480
Middletown, Pennsylvania 17057
717/948-8197

GPU Nuclear Corporation
Oyster Creek Nuclear Station
P. O. Box 388
Forked River, New Jersey 08731
609/971-4020

Indiana & Michigan Electric Co.
2101 Spy Run Avenue
Fort Wayne, Indiana 46801
219/422-3456

Iowa Electric Light & Power Company
P. O. Box 351
Cedar Rapids, Iowa 52406
319/398-4411

Maine Yankee Atomic Power Company
Edison Drive
Augusta, Maine 04336
207/623-3521

Nebraska Public Power District
P.O. Box 499
Columbus, Nebraska 68601
402/564-8561

Niagara Mohawk Power Corporation
300 Erie Boulevard West
Syracuse, New York 13202
315/474-1511

Northeast Nuclear Energy Company
P. O. Box 270
Hartford, Connecticut 06101
203/666-6911

Northern States Power Company
414 Nicollet Mall
Minneapolis, Minnesota 55401
612/330-6007

Omaha Public Power District
1623 Harney Street
Omaha, Nebraska 68102
402/536-4000

Pacific Gas & Electric Company
77 Beale Street
San Francisco, California 94106
415/781-4211

Pennsylvania Power & Light Company
2 North Ninth Street
Allentown, Pennsylvania 18101
215/770-5151

Philadelphia Electric Company
2301 Market Street
Philadelphia, Pennsylvania 19101
215/841-4122

Portland General Electric Company
121 Southwest Salmon Street
Portland, Oregon 97204
503/226-8333

Power Authority of the State of New York
10 Columbus Circle
New York, New York 10019
212/397-6200

Public Service Company of Colorado
550 15th Street
Denver, Colorado 80202
303/571-7511

Public Service Electric & Gas Company
80 Park Plaza
Newark, New Jersey 07101
201/430-7000

Rochester Gas & Electric Corporation
89 East Avenue
Rochester, New York 14649
716/546-2700

Sacramento Municipal Utility District
P. O. Box 15830
Sacramento, California 95813
916/452-3211

South Carolina Electric & Gas Company
P. O. Box 764
Columbia, South Carolina 29218
803/748-3000

Southern California Edison Company
2244 Walnut Grove Avenue
Rosemead, California 91770
213/572-1212

Tennessee Valley Authority
400 W. Summit Hill Drive
Knoxville, Tennessee 37902
615/632-6000

Toledo Edison Company
300 Madison Avenue
Toledo, Ohio 43652
419/259-5000

Vermont Yankee Nuclear Power Corp.
P. O. Box 157
Vernon, Vermont 05354
802/257-7711

Virginia Electric & Power Company
P. O. Box 26666
Richmond, Virginia 23261
804/771-3000

Wisconsin Electric Power Company
231 West Michigan Street
Milwaukee, Wisconsin 53201
414/277-2345

Wisconsin Public Service Corporation
P. O. Box 1200
Green Bay, Wisconsin 54305
414/433-1598

Yankee Atomic Electric Company
1671 Worcester Road
Framingham, Massachusetts 01701
617/366-4475



Nrc
IE-09
Dist.

① Zuckerman
② Jordan

BS

GENERAL OFFICES

POST OFFICE BOX 180
1000 EAST EDGERTON ROAD
CLEVELAND, OHIO 44147
PHONE: 216-526-9900
TELEX: 098-5406

April 7, 1986

U.S. Nuclear Regulatory Commission
Washington, D.C. 20555
Attention: Director, Office of Inspection and Enforcement

RE: Title 10, Code of Federal Regulations, Part 21, Reporting of Defects and Noncompliances

Dear Sir or Madam:

Recently we have received inquiries from NRC Region I and II about our Model "C" Deluge Valve notification program.

"Automatic" Sprinkler Corporation manufactures and sells a deluge valve for fire protection systems in sizes 2-1/2" and 6" that we call our Model "C" Deluge Valve. This valve is a commercial grade item that is used in some fire protection systems at some nuclear power plants.

We have become aware of a potential problem which may affect the operation of the valve. We would like to point out that we do not believe that this problem is a defect, a deviation, or a noncompliance. It is a condition that occurs after the valves are installed for a period of time. Regardless, we would like to advise you of our situation and to address to you a response to NRC Region I and II's inquiries.

The valve is listed by Underwriter's Laboratory and approved by Factory Mutual Research Corporation, both independent approval organizations. Each valve is tested for operation at both 200 psi and 50 to 75 psi water pressure for release of the clapper and latch prior to shipment. Every valve functions properly when it ships from our plant.

Following is a chronology of events:

October 1983: We became aware of a fire that occurred at Grand Gulf, Unit 1 Emergency Diesel Generator. NRC IE Information Notice No. 84-16, dated March 2, 1984 describes this (copy enclosed).

November 1983 thru June 1984: We investigated the incident at Grand Gulf and deduced that the operational failure was peculiar to that facility. Refer to a letter dated June 4, 1984 to NRC (copy enclosed).

~~8604160214~~ dpp.

C/14

April 7, 1986

November - December 1984: Upon further investigation of the situation, we decided to issue a notification letter to all users of our Model "C" valve. Enclosed please find a copy of our December 1, 1984 notification letter. We included in our mailing campaign all utilities which have a license to operate or construct a nuclear power plant. We advised your office in a letter dated November 19, 1984 (copy enclosed) that we would be starting a mailing campaign and a list of the utilities we would notify.

December 1985: As a result of our continued evaluations, it was decided to issue another notification letter (copy attached) that supersedes our December 1984 letter. We advised a temporary solution to the situation and used the same mailing list used in 1984. A copy of our December 12, 1985 notification letter was sent to your office, attention Mary Wegner, via certified mail on January 16, 1986. We have a return receipt dated January 21, 1986 signed by N.W. Matovich.

We have stopped all shipments of our Model "C" valve. At present, we intend to change the material of the latch and latch arm.

Once we have finalized this program, we will instigate another mailing campaign.

We will keep you advised of any further developments.

Sincerely,



Mr. John J. Gullo, Jr.
Manager, Quality Assurance

JJG/cmb

cc: USNRC
631 Park Avenue
King of Prussia, PA 19406
Attn: Ari Krasotoulos

USNRC
101 Marietta Street, Suite 3100
Atlanta, GA 30303
Attn: Gerry Wiseman