

S-28

Staff Exh. 28

50-348/364-CIVP

2/13/92



Alabama Power

NS-87-0281

Gen. 1182

Subject: Evaluation for Continued Operation-
Limiterque MOV Motor Power Lead Splices
In Environmental Qualification Scope

Date: July 30, 1987

'92 MAR 13 P12:12

To: Mr. J. D. Woodard

From: W. G. Hairston, III
At: Vice President,
Nuclear Generation
OFFICE OF SECRETARY
DOCKETING & SERVICE
BRANCH

Enclosures 1 and 2 compile a justification for continued operation (JCO) developed by Bechtel to assist FNP in their evaluation of splices utilized in certain environmentally qualified (EQ) Limitorque MOV motor power leads. The Unit 1 evaluation to determine if terminal strips exist has been completed. The Unit 2 evaluation for terminal strips has not been completed. This JCO assumes the Unit 2 valves that have not been inspected do not contain terminal strips. No deficiencies are known regarding motor power cables terminated on terminal strips; therefore, they are not included. Also not included in the enclosed JCO are MOV 3660, 3872A and 3872B. The JCO also assumes no potential deficiencies exist on MOV 3660.

The evaluation methodology was based on the location of the valve operators and the resulting severity of the design basis accident environmental conditions. For valve operators located inside the Containment (CTMT) or Main Steam Valve Room (MSR), an operability analysis was performed by evaluating the normal plant operation position of each valve, and the required accident mitigation and post accident positioning. For valve operators located outside the CTMT and MSR, the design basis accident environmental conditions are less severe with the primary concern being only radiation degradation due to post LOCA recirculated fluids, as valve operator temperatures are expected to be within normal operating design considerations. Valve operators outside the CTMT and MSR were evaluated by analyzing the environmental effects on the motor power lead splices. The splice material and configuration assumed in this evaluation is the worse case expected at FNP.

As a result of this evaluation it has been determined that the required safety functions within the scope of this evaluation can be expected to be performed by the valves considered or by alternate means during a design basis event.

The Bechtel evaluation has divided the subject valves into four groups. The valves in Group 2 are located in the main steam valve room or containment and do not require post accident operation. Seven of the Group 2 valves are included in Emergency Response Procedures and could be repositioned during the accident. This evaluation assumes these valves do not reposition because an alternate means of performing these functions exists as described below.

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PDR ADOCK 05000348
G PDR

NUCLEAR REGULATORY COMMISSION

Docket No. 50-348/364 Original Exam No. STF.28
 Is the master of APC
 Staff RECEIVED 2/11/92
 Approved RECEIVED 2/13/92
 On RECEIVED
 On DATE
 On WITNESS
 Signature L. Estep

The post accident venting system consists of the instrument air supply to containment (MOV 3536) and the post accident vent from containment (MOV 3530). FSAR Section 6.2.5 identifies operation of the post accident venting system for combustible gas control in containment. MOV 3536 and MOV 3530 may be assumed to remain in the closed position with no long term post accident operation requirement. This is justified since the post accident venting system is a backup to the redundant post LOCA hydrogen recombiners.

The recombiner system incorporates several design features intended to assure the capability of the system to be operable in the event of an accident. Among these are: (1) seismic category I design, (2) protection from missile and jet impingement and (3) redundancy to the extent that no single component failure disables both recombiners.

As stated in NUREG-U117 Supplement 4 (Farley Nuclear Plant SER), "redundant ... recombiners in the containment are the primary means of post-accident combustible gas control. In addition the post-accident venting system is provided as a backup system for the redundant hydrogen recombiners."

The Emergency Response Procedures (ERPs) instruct the operator to verify both post LOCA hydrogen recombiners are in service if containment hydrogen concentration is less than 4%. FSAR Table 15.4-11 shows the total hydrogen accumulated in containment for the maximum credible accident will not reach 4% for 100 days. Since the post accident venting system is a backup system and the ERPs instruct the operator to place the post accident LOCA hydrogen recombiners in service, opening MOV 3536 and MOV 3530 is not required.

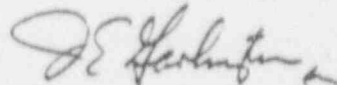
The post LOCA hydrogen analyzer sample flow path isolation valves (MOV 3528A, B and C, and MOV 3835 A and B) are normally locked in the closed position. Subsequent long term operations for the purpose of placing the hydrogen analyzers in service is addressed in the emergency response procedures. However, these long term operations are not essential to mitigate design bases events.

Manual post accident containment atmosphere sampling capability is provided via a system which is not dependent on the post LOCA hydrogen analyzer flow path. Emergency response procedures provide for obtaining and analyzing grab samples if the post LOCA hydrogen analyzers are not functional.

Mr. J. D. Woodard
Page 2

Group 3 valves in Unit 1 include MOV 3046. This valve receives a Phase B actuation signal. The post accident operation of this valve has been evaluated to be short term only in the case of design basis events. This is consistent with the post accident profiles submitted to the NRC.

A copy of this evaluation should be placed in the Environmental Qualification Central File under Limitorque MOVs.



W. G. Hairston, III

WGH,III/BDM:dst-D60

Enclosure

cc: Mr. W. B. Shipman
Mr. J. E. Garlington
Mr. D. H. Jones
Mr. K. C. Gandhi
File: A-5001 IEB 79-013

Bechtel Eastern Power Corporation

Engineers — Constructors

15740 Shady Grove Road
Gaithersburg, Maryland 20877-1454
301-258-3000 **MUL 8 0 1987**



In reply refer to AP-13217

Mr. W. G. Hairston, III
Alabama Power Company
600 North 18th Street
Post Office Box 2641
Birmingham, Alabama 35291-0400

Dear Mr. Hairston:

Joseph M. Farley Nuclear Plant Units 1 and 2
Bechtel Job 7597-011
EQ Motor Operated Valve Splices - Justification
for Continued Operation (87-0-4441)
Bechtel Files A-78, E-91
AP-13217

This letter supplements our letter AP-13202 dated July 29, 1987.

Attachment 1 was forwarded by APCO on July 30, 1987. Based on Attachment 1 we have expanded Tables 5, 6, 7 and 8. These expanded tables are included as Attachment 2. It is noted that all valves added to tables 5 thru 8 fall under Groups 1, 2, or 3 and justifications made in AP-13202 for these groups of valves are valid.

Please note for valves where the actual connection (terminal block or splice) has not been verified, we have assumed the connection to be a splice (indicated by a "Blank" in the table).

If you have any questions or comments, please contact us.

Yours very truly,

K. C. Gandhi
Project Engineer

KCG/AJD/DGB:sg

Enclosures

As stated above

cc J. R. Crane, w/1
J. D. Woodard, w/1
J. E. Garlington, w/1
R. G. Berryhill, w/1

[illegible]

[illegible][illegible]

[illegible]

Table 2: A report (OPERATIONS FOR UNIT 2) OF THE MONITORING SYSTEM FOR THE MONITORING OF THE

ROW NUMBER	FUNCTION	LOCATION	EXPOSED TO SIN 10000	REMARKS EXPOSURE CLASS	UNIT 2 REMARKS	UNIT 2 REMARKS
00001-010	000 010 010 010 010	010	010	010	010	010
00001-020	000 020 020 020 020	020	020	020	020	020
00001-030	000 030 030 030 030	030	030	030	030	030
00001-040	000 040 040 040 040	040	040	040	040	040
00001-050	000 050 050 050 050	050	050	050	050	050
00001-060	000 060 060 060 060	060	060	060	060	060
00001-070	000 070 070 070 070	070	070	070	070	070
00001-080	000 080 080 080 080	080	080	080	080	080
00001-090	000 090 090 090 090	090	090	090	090	090
00001-100	000 100 000 100 000	000	000	000	000	000
00001-110	000 110 000 110 000	000	000	000	000	000
00001-120	000 120 000 120 000	000	000	000	000	000
00001-130	000 130 000 130 000	000	000	000	000	000
00001-140	000 140 000 140 000	000	000	000	000	000
00001-150	000 150 000 150 000	000	000	000	000	000
00001-160	000 160 000 160 000	000	000	000	000	000
00001-170	000 170 000 170 000	000	000	000	000	000
00001-180	000 180 000 180 000	000	000	000	000	000
00001-190	000 190 000 190 000	000	000	000	000	000
00001-200	000 200 000 200 000	000	000	000	000	000
00001-210	000 210 000 210 000	000	000	000	000	000
00001-220	000 220 000 220 000	000	000	000	000	000
00001-230	000 230 000 230 000	000	000	000	000	000
00001-240	000 240 000 240 000	000	000	000	000	000
00001-250	000 250 000 250 000	000	000	000	000	000
00001-260	000 260 000 260 000	000	000	000	000	000
00001-270	000 270 000 270 000	000	000	000	000	000
00001-280	000 280 000 280 000	000	000	000	000	000
00001-290	000 290 000 290 000	000	000	000	000	000
00001-300	000 300 000 300 000	000	000	000	000	000
00001-310	000 310 000 310 000	000	000	000	000	000
00001-320	000 320 000 320 000	000	000	000	000	000
00001-330	000 330 000 330 000	000	000	000	000	000
00001-340	000 340 000 340 000	000	000	000	000	000
00001-350	000 350 000 350 000	000	000	000	000	000
00001-360	000 360 000 360 000	000	000	000	000	000
00001-370	000 370 000 370 000	000	000	000	000	000
00001-380	000 380 000 380 000	000	000	000	000	000
00001-390	000 390 000 390 000	000	000	000	000	000
00001-400	000 400 000 400 000	000	000	000	000	000
00001-410	000 410 000 410 000	000	000	000	000	000
00001-420	000 420 000 420 000	000	000	000	000	000
00001-430	000 430 000 430 000	000	000	000	000	000
00001-440	000 440 000 440 000	000	000	000	000	000
00001-450	000 450 000 450 000	000	000	000	000	000
00001-460	000 460 000 460 000	000	000	000	000	000
00001-470	000 470 000 470 000	000	000	000	000	000
00001-480	000 480 000 480 000	000	000	000	000	000
00001-490	000 490 000 490 000	000	000	000	000	000
00001-500	000 500 000 500 000	000	000	000	000	000

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Bechtel Eastern Power Corporation

Engineers — Constructors

15740 Shady Grove Road
Gaithersburg, Maryland 20877-1454
301-258-3000 JUL 29 1987



In reply refer to AP-13202

Mr. W. G. Hairston, III
Alabama Power Company
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Birmingham, Alabama 35291-0400

Dear Mr. Hairston:

Joseph M. Farley Nuclear Plant Units 1 and 2
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EQ Motor Operated Valve Splices - Justification
for Continued Operation (87-0-4441)
Bechtel Files E-91, A-78
AP-13202

In a telephone call on July 27, 1987 APCo (Mr. J. E. Garlington) requested Bechtel provide justification of continued operation for EQ motor operated valves (those specifically listed in Appendix A to Attachment 1) that use a splice connection between the motor power leads and the field conductors.

The requested justification for continued operation is attached.

If you have any questions or comments, please contact us.

Yours very truly,

A handwritten signature in dark ink, appearing to read "K. C. Gandhi".

K. C. Gandhi
Project Engineer

KCG/AJD/DGB:rah

Encl. es

As stated above

cc J. R. Crane, w/l
J. D. Woodard, w/l
J. E. Garlington, w/l
R. G. Berryhill, w/l

SUBJECT: Evaluation of splices used on motor power leads for Safety Related Motor Operated Valves in the scope of the Environmental Qualification Program.

1.0 INTRODUCTION

The list of motor valves evaluated is contained in Appendix A. For this evaluation the motor operated valves have been divided into four groups. These four groups are:

a. GROUP 1

Motor operated valves that are not located inside the containment or the main steam valve room. These valves are listed in Table 1 (Unit 1) and Table 5 (Unit 2).

b. GROUP 2

Motor operated valves that are located inside the containment or the main steam valve room that do not require post event operation. (No repositioning required). These valves are listed in Table 2 (Unit 1) and Table 6 (Unit 2).

c. GROUP 3

Motor operated valves located inside the containment or main steam valve room that require short term post event operation. These valves are listed in Table 3 (Unit 1) and Table 7 (Unit 2).

d. GROUP 4

Motor operated valves located inside the containment or main steam valve room that require long term post event operation. These valves are listed in Table 4 (Unit 1) and Table 8 (Unit 2).

2.0 DESCRIPTION OF THE SPLICE

The splice evaluated is a bolted ring tongue form a "V" configuration enclosed by T95 tape. (See Figure 1). This type splice is the worst case configuration suspected at FNP.

3.0 ANALYSIS

a. GROUP 1

For this group of valves radiation is the only environmental parameter that needs to be considered in the evaluation. Temperature, pressure, and humidity are all considered to be in the normal operating range.

T95 Tape has been qualified to 200 MRADS (Okonite Test Report NQRN-3 Rev. 1). Radiation levels in areas under consideration are less than 200 MRADS.

Based on the above there is every reason to believe that the motor operated valves would operate as required.

b. GROUP 2

For this group of valves the motor starter power contacts are all normally open and there is no reason to change the state of these contacts (manual or automatic) during or after an event. Since motor power contacts are open, there is no potential available to cause valve repositioning or malfunction.

c. GROUP 3

Valves in this group receive automatic actuation signals as a result of an event(s). On receipt of the automatic signal these valves stroke to their safety position and remain in that position. These valves are not required to be repositioned during or after the event. Considering the above, power is applied to the motor and the splice under consideration for a very short period of time (approximately 30 seconds). When the valve(s) reaches its safety position the valve scarter contacts are opened and remain open thus eliminating any voltage in the area of the splice. Therefore, no potential exists to cause the valve to reposition or malfunction.

Considering the moisture resistance of T95 tape and the motor operator enclosure, coupled with the short length of time that power is required to the valve operator; it is reasonable to believe that these valves will stroke to their required safety position on demand.

d. GROUP 4

Repositioning of these valves is required at approximately 5 minutes or longer after an event.

Due to the length of time that these splices could be exposed to a harsh environment it is recommended that the actual configuration of the splice be determined and evaluated for acceptability.

4.0. CONCLUSIONS.

a. GROUP 1

Since the valves in this group are only subjected to post LOCA radiation and not subject to temperatures, pressures and humidity above the plant normal design conditions and T95 tape has been qualified to 200 MRADS, it is reasonable to believe that these valves will perform their intended safety function on demand.

b. GROUP 2

Valves in this group will not malfunction regardless of the condition of the motor pigtail splice since there is no potential in the area of the splice to cause the valve to reposition or malfunction.

c. GROUP 3

It is reasonable to believe that the valves in this group will stroke to their required safety position based on the following:

- o Moisture resistance of the motor enclosure.
- o Moisture resistance of the T95 tape.

- c Existing qualification data on T95 tape.
- o The short period of time (Approx. 30 seconds). That power is required to the valve to perform its safety function (and correspondingly the same period of time that splice must perform without malfunction.)
- o Valve does not have to be repositioned after initial stroke to its safety position.

The valves in this group will not reposition or malfunction after reaching their safety related position since there is no potential in the area of the splice.

d. GROUP 4

If a field inspection shows that splices for this group of valves are not in accordance with an approved detail for E.Q. splices, the existing splice should be further evaluated or remade in accordance with an approved detail as soon as practicable.

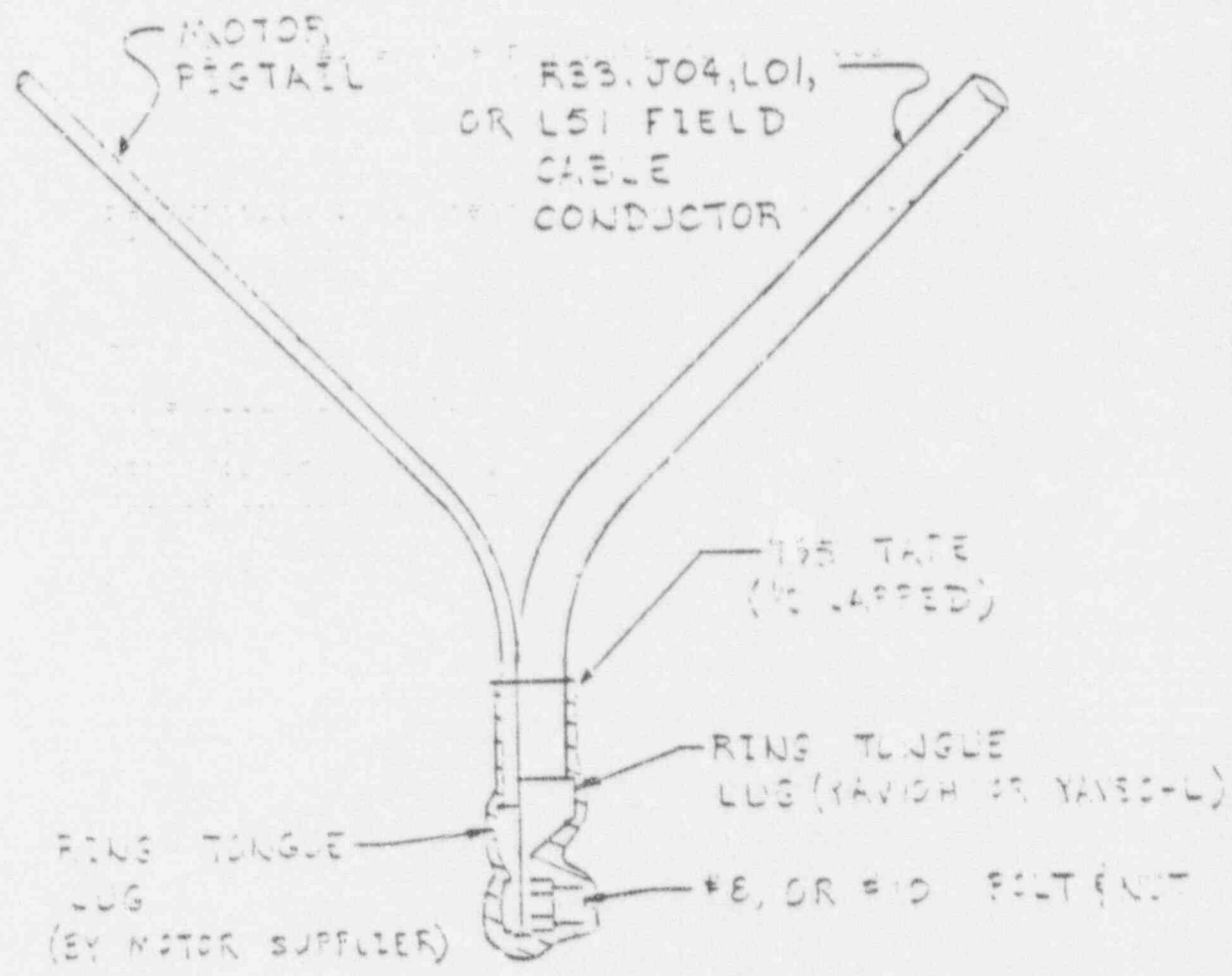


CALCULATION SHEET

DEPC 2704 Rev. 6/84 (ED4)

JOB NO.	CALC NO.	REV NO.	SHEET NO.
ORIGINATOR	DATE	CHECKED	DATE

FIGURE 1



Page 20
04/25/98

Reptiles 151 of 177 rept. studies

2000

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LEGEND FOR TABLES 1 THRU' 8

LEGEND FOR NORMAL POSITION

- MC - Normally Closed
- MO - Normally Open
- LO - Valve in Open Position with Operator Control Power or Motor Power Administratively Removed.
- LC - Valve in Closed Position with Operator Control Power or Motor Power Administratively Removed.

GENERAL LEGEND

- N - No
- Y - Yes
- CTMT - Containment Building
- MCR - Main Steam Valve Room
- SIS - Safety Injection Signal
- CIS - Containment Isolation Signal

[illegible]

参考文献

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TABLE 2. A summary of the results of the 1970-71 survey of the fishery for the 1970-71 season.

Area	Date	Location	Number of fish caught	Species	Length (mm)	Weight (g)	Sex	Age	Remarks
North	1970-71	1970-71	1970-71	1970-71	1970-71	1970-71	1970-71	1970-71	1970-71
	1970-71	1970-71	1970-71	1970-71	1970-71	1970-71	1970-71	1970-71	1970-71
	1970-71	1970-71	1970-71	1970-71	1970-71	1970-71	1970-71	1970-71	1970-71
South	1970-71	1970-71	1970-71	1970-71	1970-71	1970-71	1970-71	1970-71	1970-71
	1970-71	1970-71	1970-71	1970-71	1970-71	1970-71	1970-71	1970-71	1970-71
	1970-71	1970-71	1970-71	1970-71	1970-71	1970-71	1970-71	1970-71	1970-71

1970-71
1970-71
1970-71

STATION	DATE	TIME	LOCATION	TYPE	STATUS	REMARKS
STATION 1	1965	10:15	1000	1000	1000	1000
STATION 2	1965	10:30	1000	1000	1000	1000
STATION 3	1965	10:45	1000	1000	1000	1000
STATION 4	1965	11:00	1000	1000	1000	1000
STATION 5	1965	11:15	1000	1000	1000	1000
STATION 6	1965	11:30	1000	1000	1000	1000
STATION 7	1965	11:45	1000	1000	1000	1000
STATION 8	1965	12:00	1000	1000	1000	1000
STATION 9	1965	12:15	1000	1000	1000	1000
STATION 10	1965	12:30	1000	1000	1000	1000
STATION 11	1965	12:45	1000	1000	1000	1000
STATION 12	1965	13:00	1000	1000	1000	1000
STATION 13	1965	13:15	1000	1000	1000	1000
STATION 14	1965	13:30	1000	1000	1000	1000
STATION 15	1965	13:45	1000	1000	1000	1000
STATION 16	1965	14:00	1000	1000	1000	1000
STATION 17	1965	14:15	1000	1000	1000	1000
STATION 18	1965	14:30	1000	1000	1000	1000
STATION 19	1965	14:45	1000	1000	1000	1000
STATION 20	1965	15:00	1000	1000	1000	1000
STATION 21	1965	15:15	1000	1000	1000	1000
STATION 22	1965	15:30	1000	1000	1000	1000
STATION 23	1965	15:45	1000	1000	1000	1000
STATION 24	1965	16:00	1000	1000	1000	1000
STATION 25	1965	16:15	1000	1000	1000	1000
STATION 26	1965	16:30	1000	1000	1000	1000
STATION 27	1965	16:45	1000	1000	1000	1000
STATION 28	1965	17:00	1000	1000	1000	1000
STATION 29	1965	17:15	1000	1000	1000	1000
STATION 30	1965	17:30	1000	1000	1000	1000
STATION 31	1965	17:45	1000	1000	1000	1000
STATION 32	1965	18:00	1000	1000	1000	1000
STATION 33	1965	18:15	1000	1000	1000	1000
STATION 34	1965	18:30	1000	1000	1000	1000
STATION 35	1965	18:45	1000	1000	1000	1000
STATION 36	1965	19:00	1000	1000	1000	1000
STATION 37	1965	19:15	1000	1000	1000	1000
STATION 38	1965	19:30	1000	1000	1000	1000
STATION 39	1965	19:45	1000	1000	1000	1000
STATION 40	1965	20:00	1000	1000	1000	1000
STATION 41	1965	20:15	1000	1000	1000	1000
STATION 42	1965	20:30	1000	1000	1000	1000
STATION 43	1965	20:45	1000	1000	1000	1000
STATION 44	1965	21:00	1000	1000	1000	1000
STATION 45	1965	21:15	1000	1000	1000	1000
STATION 46	1965	21:30	1000	1000	1000	1000
STATION 47	1965	21:45	1000	1000	1000	1000
STATION 48	1965	22:00	1000	1000	1000	1000
STATION 49	1965	22:15	1000	1000	1000	1000
STATION 50	1965	22:30	1000	1000	1000	1000
STATION 51	1965	22:45	1000	1000	1000	1000
STATION 52	1965	23:00	1000	1000	1000	1000
STATION 53	1965	23:15	1000	1000	1000	1000
STATION 54	1965	23:30	1000	1000	1000	1000
STATION 55	1965	23:45	1000	1000	1000	1000
STATION 56	1965	00:00	1000	1000	1000	1000
STATION 57	1965	00:15	1000	1000	1000	1

Case No.	Age	Sex	Height	Weight	Build	Complexion	Hair	Eyes	Teeth	Other	Remarks
201-1000	25	M	5' 8"	150	Medium	Fair	Black	Blue	Good	None	Admitted 10/10/10
201-1001	26	F	5' 6"	120	Slender	Fair	Black	Blue	Good	None	Admitted 10/10/10
201-1002	27	M	5' 10"	180	Medium	Fair	Black	Blue	Good	None	Admitted 10/10/10
201-1003	28	F	5' 4"	110	Slender	Fair	Black	Blue	Good	None	Admitted 10/10/10
201-1004	29	M	5' 9"	160	Medium	Fair	Black	Blue	Good	None	Admitted 10/10/10
201-1005	30	F	5' 7"	130	Slender	Fair	Black	Blue	Good	None	Admitted 10/10/10
201-1006	31	M	5' 11"	190	Medium	Fair	Black	Blue	Good	None	Admitted 10/10/10
201-1007	32	F	5' 5"	115	Slender	Fair	Black	Blue	Good	None	Admitted 10/10/10
201-1008	33	M	5' 8"	165	Medium	Fair	Black	Blue	Good	None	Admitted 10/10/10
201-1009	34	F	5' 6"	125	Slender	Fair	Black	Blue	Good	None	Admitted 10/10/10
201-1010	35	M	5' 9"	170	Medium	Fair	Black	Blue	Good	None	Admitted 10/10/10
201-1011	36	F	5' 7"	135	Slender	Fair	Black	Blue	Good	None	Admitted 10/10/10
201-1012	37	M	5' 10"	185	Medium	Fair	Black	Blue	Good	None	Admitted 10/10/10
201-1013	38	F	5' 5"	118	Slender	Fair	Black	Blue	Good	None	Admitted 10/10/10
201-1014	39	M	5' 8"	168	Medium	Fair	Black	Blue	Good	None	Admitted 10/10/10
201-1015	40	F	5' 6"	128	Slender	Fair	Black	Blue	Good	None	Admitted 10/10/10
201-1016	41	M	5' 9"	172	Medium	Fair	Black	Blue	Good	None	Admitted 10/10/10
201-1017	42	F	5' 7"	138	Slender	Fair	Black	Blue	Good	None	Admitted 10/10/10
201-1018	43	M	5' 10"	188	Medium	Fair	Black	Blue	Good	None	Admitted 10/10/10
201-1019	44	F	5' 5"	120	Slender	Fair	Black	Blue	Good	None	Admitted 10/10/10
201-1020	45	M	5' 8"	170	Medium	Fair	Black	Blue	Good	None	Admitted 10/10/10
201-1021	46	F	5' 6"	130	Slender	Fair	Black	Blue	Good	None	Admitted 10/10/10
201-1022	47	M	5' 9"	175	Medium	Fair	Black	Blue	Good	None	Admitted 10/10/10
201-1023	48	F	5' 7"	140	Slender	Fair	Black	Blue	Good	None	Admitted 10/10/10
201-1024	49	M	5' 10"	190	Medium	Fair	Black	Blue	Good	None	Admitted 10/10/10
201-1025	50	F	5' 5"	122	Slender	Fair	Black	Blue	Good	None	Admitted 10/10/10
201-1026	51	M	5' 8"	172	Medium	Fair	Black	Blue	Good	None	Admitted 10/10/10
201-1027	52	F	5' 6"	132	Slender	Fair	Black	Blue	Good	None	Admitted 10/10/10
201-1028	53	M	5' 9"	175	Medium	Fair	Black	Blue	Good	None	Admitted 10/10/10
201-1029	54	F	5' 7"	142	Slender	Fair	Black	Blue	Good	None	Admitted 10/10/10
201-1030	55	M	5' 10"	192	Medium	Fair	Black	Blue	Good	None	Admitted 10/10/10
201-1031	56	F	5' 5"	124	Slender	Fair	Black	Blue	Good	None	Admitted 10/10/10
201-1032	57	M	5' 8"	174	Medium	Fair	Black	Blue	Good	None	Admitted 10/10/10
201-1033	58	F	5' 6"	134	Slender	Fair	Black	Blue	Good	None	Admitted 10/10/10
201-1034	59	M	5' 9"	176	Medium	Fair	Black	Blue	Good	None	Admitted 10/10/10
201											

TABLE 3. DATA OBSERVATIONS FOR UNIT 2 & 3. OBSERVATIONS ARE LISTED FOR EACH TIME PERIOD.

TIME

DATE MONITOR LOCATION COMMENTS TO MONITOR SAFETY CONC. FROM TEST W. T. 11/10 01/00/00
 510 50010 POSITION SIGN. 9 0 10/00/00 01/1

NO VALVES HAVE BEEN IDENTIFIED FOR UNIT #2

