NRC Form 366
(9-83)

U.S. NUCLEAR REGULATORY COMMISSION
APPROVED OMB NO. 3150-0104
EXPIRES: 8/31/85

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
McGuire Nuclear Station - Unit 2	0 5 0 0 0 3 7 0	1 OF 1 1

TITLE (4)

Pipe in Auxiliary Letdown System Damaged by Water Hammer

EVENT DATE (5)			LER NUMBER (6)			REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)	
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	MONTH	DAY	YEAR	FACILITY NAMES	DOCKET NUMBER(S)
										0 5 0 0 0
0 8	0 6	8 4	8 4	- 0 1 7	- 0 1	0 6	2 4	8 5		0 5 0 0 0

OPERATING MODE (9)	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)			
5	20.402(b)	20.405(c)	50.73(a)(2)(iv)	73.71(b)
POWER LEVEL (10)	20.405(a)(1)(i)	50.36(c)(1)	X 50.73(a)(2)(v)	73.71(c)
0 0 0	20.405(a)(1)(ii)	50.36(c)(2)	50.73(a)(2)(vii)	OTHER (Specify in Abstract below and in Text, NRC Form 366A)
	20.405(a)(1)(iii)	50.73(a)(2)(i)	50.73(a)(2)(viii)(A)	
	20.405(a)(1)(iv)	50.73(a)(2)(ii)	50.73(a)(2)(viii)(B)	
	20.405(a)(1)(v)	50.73(a)(2)(iii)	50.73(a)(2)(x)	

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER
	AREA CODE
Jerry Day - Licensing	7 0 4 3 7 3 - 7 0 3 3

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS	
B	C B	V	F 1 3 0	N							

SUPPLEMENTAL REPORT EXPECTED (14)		EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
YES (If yes, complete EXPECTED SUBMISSION DATE)	X NO				

ABSTRACT (Limit to 1400 spaces, i.e., approximately fifteen single-space typewritten lines) (16)

On August 6, 1984, McGuire Unit 2 operators discovered a broken weld on the Residual Heat Removal (ND) System letdown line to the Chemical and Volume Control System (NV). The ND System was in service at the time, and water was spraying from the broken pipe and from the stem of the valve (2NV-121) in the NV System. An estimated 3000 to 7000 gallons of contaminated water was contained in the Heat Exchanger Room, the ND and containment spray sump, and the B floor drain sump and tank. Upon discovery the leaking line was isolated. A subsequent inspection revealed a number of supports/restraints (S/Rs) damaged, and the broken socket weld completely separated.

On April 5, 1985, seven socket welds with crack indications were discovered on the two inch crossover piping between valves 2ND-17 and 2ND-32. No weld failure occurred as in August 1984. Six of the welds with indications were in piping replaced after the failure, but before vibration testing following the August 1984 failure.

Causes of the August event are attributed to component malfunction/failure, due to loose packing in 2NV-121, and to an unusual service condition, because a gas void in the line resulted in water hammer. The cause of the April event is classified as an unusual service event, because socket welds were not designed to withstand the severe loading of the vibration testing that occurred in August, 1984.

The unit was in Mode 5, cold shutdown, at the time of the August event, and in Mode 6, refueling, at the time of the April event.

Damaged piping and S/Rs have been replaced. The subject valves have been modified to prevent further "chugging" during reverse flow conditions. All welds were

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radiographed prior to returning the system to service. Suspect welds (welds expected to crack first) in this section of piping will be reexamined during the next three outage cycles to verify that fatigue loading has been eliminated and no additional cracking has occurred.

INTRODUCTION: At approximately 0245 on August 6, 1984, operators discovered a broken weld on the Residual Heat Removal (ND) System letdown line to the Chemical and Volume Control (NV) System. The ND system was in service at that time and water was spraying from the broken pipe and from the stem on 2NV-121 (valve which controls flow from ND system to the letdown heat exchangers) into the B train ND Heat Exchanger Room. The operator had entered the room to check on 2NV-121 which was not working properly. Upon discovery the leak he called the Control Room and the leaking line was isolated. A subsequent inspection found a number of support-restraints (S/Rs) damaged, and the broken socket weld completely separated.

Contaminated water from the leaks was contained in the Heat Exchanger Room, ND and NS (containment spray) sump and the B floor drain sump and tank. Total leakage appeared to be between 3000 and 7000 gallons.

On April 4, 1985, seven socket welds with crack or gross lack of penetration indications were discovered on the two inch crossover piping between valves 2ND-17 and 2ND-32 on the ND system. The indications were found as a result of Radiographic Examination. Positive proof of welds actually being cracked can only be gained by destructive metallurgical examination.

Design Engineering personnel suspect any actual cracks to have been caused by fatigue. The most probable source of fatigue loading is the same source which caused the cracking of the weld prior to August, 1984. During the investigation of the August 1984 incident, it was determined that Kerotest isolation valve 2ND-32 "Chugged" (cycled open and closed) when it experienced uncontrolled backflow during vibration analysis testing.

The unit was in Mode 5, Cold Shutdown at the time of the August incident, and was in Mode 6 undergoing refueling when the April radiographs were made.

Causes of the August event are Component Malfunction/Failure, because the packing on 2NV-121 was loose and the valve would not seat properly, and an Unusual Service Condition, because a gas void in the auxiliary letdown line resulted in a water hammer which broke the fatigue weakened welds.

The April incident is classified as an Unusual Service Condition, because socket welds were not designed to withstand the severe loading of the vibration testing that occurred in August 1984.

EVENT DESCRIPTION: At the time of the event, Unit 2 was in Mode 5 and drained down to about 220 inches for maintenance. Operators were preparing to fill the Reactor Coolant (NC) System, which required 2NV-121 to be verified closed. After the operators began letdown flow, indications were received that 2NV-121 seemed to be at least partially open. An operator was sent to check on the valve. At about 0240, Chemistry personnel reported a high level alarm in the floor drain tank sump (FDTS). At about that time, the operator entered the B ND Heat Exchanger Room and discovered the leak. He notified the Control Room by phone, and the leak was isolated. Also about this time, a high level alarm in the ND and NS Pump Room sump was recieved, indicating a leak through the packing of 2NV-121.

EVALUATION: The auxiliary ND to NV letdown path consists of two ND headers (see Figure 1) to the normal NV letdown line. The path is isolated from each header by motor operated Kerotest valves, 2ND-17 and 2ND-32. Flow to the letdown line is controlled by piston operated, Fisher regulating valve, 2NV-121. The weld that was broken was immediately downstream of 2ND-17, following the break, the pipe was completely separated. Maintenance personnel also found the packing assembly on 2NV-121 had moved away from the valve body, along the valve stem. The two nuts that secure the packing flange were completely off of the studs and were later found on the floor of the B ND Heat Exchanger Room. Both of the studs were undamaged, indicating that it was forced from the stud during the event. Since the nuts were relatively undamaged, the packing flange must have been loose prior to the event.

It has been determined that the forces that caused the damage were the result of a water hammer. There was work activity performed on August 4, 1984, which could have introduced air into the letdown piping downstream of 2NV-121. Limit switches on divert valve 2NV-137A were being adjusted, and the valve was open to the Recycle Holdup Tank (RHT) for about two hours. During this time a drain path existed from 2NV-121 which is located near elevation 750, to the RHT which is located on the 716 elevation.

The vent for this draining operation would have been through the loose packing on 2NV-121. The RHT pressure was maintained near atmospheric during this time, which would not have prevented draining. In this fashion, at least some of the water in the line might have been replaced with air. The morning of the event was the first time the auxiliary letdown line was used after the air was drawn into the line. 2NV-121 was leaking through the seat extensively, as shown by the letdown flow rate observed by the operators when the line was put in service. This prevented the operators from gradually increasing flow in the line. Isolation valve 2ND-32 is an open/shut valve with seal-in circuits and a relatively quick opening Kerotest body. When the operators opened 2ND-32, flow increased rapidly in the auxiliary letdown line. The rapidly increasing flow combined with the air pocket resulted in the severe water hammer. In the event under discussion, the number and location of gas voids in the system is unknown. The size of the leak through the packing on 2NV-121 is also unknown, since the packing was further damaged during the event.

Although the water hammer is thought to have occurred about 0055, major leakage did not appear until 0230. All of the damage to the system including the broken weld, S/R damage, and stem packing blown out of 2NC-121, apparently resulted from the same event. The only explanation found during this investigation is that the weld was broken at 0055, but did not completely separate until 0230. Chemistry personnel have stated that the major leakage could not have occurred much more than ten minutes prior to the B FDTS alarm at 0240. Control operators also saw a marked change in the VCT level and letdown flowrate about that time. VCT level, which had been steady for about 1 1/2 hours, began to drop; indicating the letdown flow or makeup flow to the VCT had decreased. Letdown flow dropped from 20 gpm to about 8 gpm, although this flow instrument is not accurate at low flows and the actual flow might have been less than 8 gpm. (The letdown flow drop was caused by water being directed through the leak instead of going to the letdown line.) Preliminary analysis of the broken weld found no evidence that would explain a delay in pipe separation after the break.

NC level throughout the event was above the minimum level necessary to operate the ND pumps. This fact eliminates the possibility of a water hammer caused by air entrainment in the ND suction line. Prior to August 4, the date when the letdown line is postulated to have been drained, the letdown line was used several times to reduce NC level without any apparent problems.

The auxiliary letdown line consists of 2" diameter, schedule forty, 304 stainless steel pipe connected to 3000 psig rated fittings by socket welds. All of the piping up to and including 2NV-121 is contained in the ND heat exchanger rooms between elevations 740 and 752. Piping supports consist of gravity hangers, seismic supports, and sometimes rigid supports that are designed to prevent thermal growth of a pipe in a direction that would impose excessive stresses on joints or components. The systems were designed to prevent vibration and water hammer problems. In addition, preoperational testing was used to help identify problem areas. When problems were found, the system design or operating methods were revised to eliminate them.

2NV-121

2NV-121 is a 2" piston actuated, Fisher control valve (type 476D-ES, 86 actuator), "Equal Percentage" internals provide good control qualities and positive shutoff capability. A positive positioner mounted on top of the cylinder assures predictable response and stem mounted limit switches provide full stroke position indication. The valve body is mounted in a vertical pipe with the flow upward. The actuator is, therefore, mounted in a horizontal position and is supported by S/R NV-5729(S). Stem packing leakoff is piped to the ND-NS pump room sump on elevation 695. Following the event, the packing hardware was found pushed back away from the valve body on the stem. Water from the valve packing leakoff line drained into the ND-NS pump room sump, filling it (along with other leaks not associated with the event) and setting off area radiation monitor EMF-1. (Control operators placed the Auxiliary Building Ventilation System filtered exhaust in the "Filter" mode in response to this alarm.) The actuator arms on the limit switches were found damaged, and several of the air tubes on the actuator were damaged. It was not possible to determine if the damage was caused by the water spraying out of the stem packing, the water hammer, or previous vibration. No work requests were found for any previous work on 2NV-121.

Two facts are known about the condition of 2NV-121 prior to the event. The valve would not control flow in the letdown line, and the packing flange was loose. Maintenance technicians who rebuilt the valve, found no visible signs of damage or wear on the internals. Due to time and exposure considerations, the entire valve internals package was replaced along with the positioner and stem mounted limit switch package. The valve was repacked and jam nuts were used to secure the valve stem packing flange. Mechanical Maintenance personnel also verified the valve was installed with the normal flow in the correct direction.

Support/Restraint Damage

Sixteen S/Rs were found damaged. The majority of damaged S/Rs were located in the ND heat exchanger rooms. Addition damaged S/Rs were found in the auxiliary letdown line downstream of 2NV-121. Spring supports were readjusted, but none of them were damaged in a way that would prevent continued support of the piping. Rigid support damage consisted of anchors loosened or pulled from concrete walls. Some mechanical snubbers were broken or leaked and were replaced. Also hydraulic and mechanical snubber anchors were loosed or pulled from the walls. These were all corrected.

The broken weld was a 2 inch socket weld. It was properly installed and tested, using dye penetrant. Proper gap was maintained between the end of the pipe and the socket during the fitup. Although there was some lack of penetration of the weld metal, this was very small and not unusual for this type of weld. The weld was found to be satisfactory in all aspects. The weld was inspected at McGuire, following the event, using a glove box and unmagnified observation. It was then further decontaminated and sent to a research laboratory for more detailed examination. Although the final report

has not been received, a preliminary report showed the weld broke in a ductile fashion, probably due to one high stress event; however, they also found a majority of the weld break area had been fatigued. A crack had started on the inside diameter of the weld and progressed radially outward. Although the crack appeared to have included 360° of the weld, it had not penetrated the outer surface of the weld at any point. Therefore, the welded area was not leaking prior to the failure. Since the weld was found to have been degraded by the fatigue induced crack prior to the event, other welds in the system that might have been subjected to the same vibration were examined. A section of pipe downstream of the broken weld was cut out for examination. The section included four welds. All four of the welds were radiographed by QA, and the films were inspected for cracks. No cracks were found. Two of the welds were cut radially into four section, polished as necessary, and tested with dye penetrant. No indications of cracks were found.

Additional Weld Replacement and Destructive Examination

Although no cracks were found in the additional welds, it was decided to replace all of the socket welds in the auxiliary letdown lines that were not isolable from ND piping. This included the pipe sections between the 8" ND headers and the isolation valves 2ND-17 and 2ND-32. The two welds at the isolation valves, along with the two welds that connected the piping to the half couplings on the 8" headers, were sectioned and inspected. Each weld was cut radially into eight sections. The sections were polished, as necessary, and inspected for cracks using dye penetrant. No cracks were found in any of the 32 sections.

Unit 2 Support/Restraint Inspection

Following the discovery of the damaged S/Rs, sections of the plant that could have been affected by the water hammer event were inspected. The inspections of piping and S/Rs consisted of visual inspections and augmented inservice inspections. Augmented inservice inspections included visual examinations and some physical checks of S/Rs. Technicians attempted to move the S/Rs to insure the anchors and attachments were tight. Snubbers were stroked to insure no damage had occurred. Augmented inspections were performed on the auxiliary letdown piping, from each 8" ND header, downstream through 2NV-121, and put to the point where the 2" line connects to the 3" normal letdown line. Also included were sections of the 8" ND headers near the auxiliary letdown line connections. Visual-only inspections were extended to include the normal letdown line from the reactor building penetration, downstream to the volume control tank, excluding piping in the reactor coolant letdown filter rooms. Also included in the visual inspection was the letdown reheat heat exchanger of the Boron Thermal Regeneration System.

2ND-17 and 2NA-32

Isolation valves 2ND-17 and 2ND-32 are Kerotest globe valves which serve to isolate the "B" and "A" letdown system headers, respectively. These valves are open/shut only and cannot control flow due to their design. The valves have a tendency to chatter or cycle open/closed rapidly, when flow is introduced in the reverse direction, as is the case when an ND train is being pressurized. This can cause the pipe to vibrate severely. This potential for vibration was analyzed, as described below.

Vibration Measurement Program

A program to measure the vibration at various parts of the ND and auxiliary letdown systems was instituted, using several operating modes and conditions to find excessive vibration. Vibration probes (accelerometers), two per valve, were installed near 2ND-14, 2ND-29 ("B" and "A" ND Heat Exchanger outlets, respectively), 2ND-17, 2NC-32, and 2NV-121. Operators attempted to pressurize the A train of ND by opening 2ND-32 completely, and gradually opening 2ND-17 by manually turning the handwheel. A severe, low frequency (3 - 5 HZ.) vibration was observed in the auxiliary letdown piping and the operator closed 2ND-17. Thinking the vibration, or hammering, was caused by air between 2ND-17 and 2ND-32, operators again attempted to flush out the air and pressurize the A train. The severe vibration occurred again, on two attempts. The Operations personnel were convinced by this time that no air remained in the line and the hammering (or "chugging") was caused by 2ND-32 alternately closing and reopening. Kerotest valves, such as 2ND-32, have been known to remain closed, close suddenly, or to cycle in this fashion when flow is reversed. In response to questions about the integrity of the ND system on Unit 1, several actions were taken, including overlaying all socket welds between the 8" ND headers and the isolation valves.

During the Unit 2 refueling outage, additional follow-up radiography was performed on welds between isolation valves 2ND-17 and 2ND-32. The purpose of this radiography was to determine if the "chugging" of 2ND-32 and/or 2ND-17, which caused the socket weld to be damaged had initiated fatigue cracks in other welds not examined in 1984. Piping between the 8" ND headers and isolation valves 2ND-17 and 2ND-32 was replaced after the August, 1984 failure and it was felt that the "chugging" which occurred during testing did not produce enough fatigue to cause cracking in the new welds.

The follow-up radiography found seven welds with indications of fatigue cracking or lack of penetration. Six of the welds with crack indications are in piping which was replaced after the August, 1984 failure, but prior to the vibration testing. One of the welds with an indication has been in place since before the August, 1984 failure, and all welds in question are located near valve 2ND-17. None of the welds radiographed in the section of piping containing 2ND-32 showed indications. Although company personnel have not yet confirmed that the crack indications are actually cracks, their location, orientation and appearance on the radiographs are of the same nature as the previous fatigue cracks found on the Residual Heat Removal System. Inspection was continued on the isolatable piping downstream from valve 2ND-17 until three consecutive uncracked welds were found.

The three uncracked weld criteria is based on the fact that the cracked weld indications are at locations where they act as hinges for the adjacent oscillating pipe member. If three consecutive uncracked weld indications are found, it can be assumed that the fatigue loading did not occur further downstream. This would be due to the vibrations dampening out or to a pipe member being rigidly supported causing the vibrational energy to be absorbed at the last cracked weld.

Operating Practice

The practice of pressuring an idle ND train, as described above, before starting the associated pump was recommended in April of 1983, to prevent water hammer in the 8" ND header when starting a pump. The type of severe cycling observed during the vibration test probably did not occur each time an ND train was pressurized on the two units since April 1983. If it had, S/R damage would have been found on Unit 1, and also on Unit 2 prior to the water hammer event. The probability of the Kerotest valve chattering due

to reverse flow, depends on the flow rate and static differential pressure across the valve when it is shut. Flow rate during the pressurization process while swapping ND trains would depend on the difference in pressure between the operating and idle trains, the volume of condensible and non-condensible gases in the idle train, leaks in the idle train, and leaks through the idle train heat exchanger outlet valve. Flow rate involved in pressurizing ND via 2NV-121 would depend on the aforementioned factors plus the setting of the 2NV-121 controller. Further testing of the 2" Kerotest valves to determine critical flow rates was not done because of possible damage to piping and S/Rs.

Unit 1 Inspections

The following actions were taken on Unit 1:

1. S/Rs on the Unit 1 auxiliary letdown were checked for signs of damage. No damage was found.

2. 1ND-17 and 1ND-32 were checked for loose or missing bolts. No problems were found.

3. 1NV-121 was inspected with particular attention to the packing flange and packing flange nuts. The flange was in place and the nuts were tight. Maintenance personnel found some signs that the packing had been leaking slightly, and the valve was repacked during the refueling outage. Jam nuts were installed to secure the packing flange nuts.

4. The welds between the 8" ND headers and the isolation valves were inspected visually for signs of leakage. No leakage was found. Overlay welds were made on all six of the socket welds between the 8" ND headers and the isolation valves. (B train has an elbow in the pipe, which accounts for the two extra sockets). Overlay welds consist of additional weld material which is applied from the socket to the pipe, over the existing weld (see Figure 2). The overlay welds were designed to insure the integrity of the non-isolable socket joints for all design events. No credit was taken for any strength that may be added to the joints by the original welds.

Corrective Action August Event:

All support/restraints, piping and valves damaged during the event have been repaired. Extensive radiographic and/or dye-penetrant testing was performed on ND system welds to verify that no cracks existed. Evaluations have been performed which verify the suitability of existing bolt holes in concrete walls to reinstall S/Rs.

A vibration measurement program was conducted to determine the cause of the fatigue damage found on the weld. The problem was found to be caused by back flow through the Kerotest valves when operators pressurized idle ND trains from operating trains. The ND system startup procedure was changed to use the 8" crossover line including valves 2ND-18 ("B" ND HX BYPASS) and 2ND-33 ("A"ND BYPASS) for this purpose. 2ND-18 and 2ND-33 control circuits were modified to allow operators to electrically throttle the valves.

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TEXT (If more space is required, use additional NRC Form 366A's) (17)

April Event:

Immediate: Unit 2

During the 1985 refueling outage Kerotest isolation valves 2ND-17 and 2ND-32 were modified to prevent further "chugging" during reverse flow conditions. The success of this modification was verified by visual observation of the valves during modes of operation when back flow normally occurs.

The weld was cut out and rewelded and the section of piping containing the welds with crack indications was refabricated and replaced with all welds radiographed prior to returning the system to service.

Planned: The suspect welds in this section of piping will be reexamined during the next three outage cycles to verify the fatigue loading has been eliminated and that no additional cracking has occurred.

Unit 1

The same permanent modification will be made to Kerotest isolation valves 1ND-17 and 1ND-32 as was made to the Unit 2 valves. These valves will also be visually observed to verify that the modification is successful.

All overlayed welds between 1ND-17 and IND-32 and their respective 8" headers have been radiographed with no crack indications found. These overlayed welds will be left intact and placed under a surveillance program for the next three refueling outages. All welds in the isolable section of the system have been radiographed and some crack indications were found.

Some sections of the system containing indications of cracked welds will be replaced and "baseline" radiographs made of the replaced welds after the piping has been welded into position.

Safety Analysis August Event:

The broken weld was located downstream of isolation valves 2ND-17 and 2ND-32. Operators were able to isolate the break without disturbing ND operation. Had the break occurred in an area that was non-isolable from one train of ND, the other train would have been used to continue core cooling. All of the contaminated water was contained and processed without any danger of release. Although some airborne contamination occurred outside of the heat exchanger room, no general evacuation of areas of the auxiliary building was necessary and all of the contaminated air was contained within the building. Operators swapped the auxiliary building ventilation system to the charcoal filter mode, as a precaution, when they received the EMF-1 alarm. Automatic swapover would have occurred if radiation levels had risen significantly in the auxiliary building ventilation system exhaust. The reactor was not endangered by this incident and no radioactive releases occurred. Therefore, the health and safety of the public were not affected.

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TEXT (If more space is required, use additional NRC Form 366A's) (17)

The operation of Unit 1 in the interim period between the Unit 2 event and the addition of weld overlays to Unit 1 ND piping was considered justified based on the negative results of the inspections which were performed. The absence of damage to S/Rs and valves 1ND-17, 1ND-32 and 1NY-121 indicate that the system had not experienced abnormal vibration or unusual operating conditions, and therefore could be expected to operate satisfactorily.

April Event: Six of the seven socket welds with crack indications were located downstream of isolation valves 2ND-17 and 2ND-32, thus having the capability of being isolated in the event any leakage occurred. The seventh weld (number ND2FW22-27) was located at the 8" header and was non-isolable. Nuclear Maintenance personnel have determined the crack indicated in the radiograph of weld ND2FW22-27 is much smaller than a fault which could result in failure of the weld during normal or emergency operation. Cracks in ND welds would not be expected to grow larger since the only significant source of fatigue loading on the system has been eliminated.

If, however, a break did occur on either train of ND, the entire train could be isolated and the alternate train used for cooldown.

Since the integrity of the ND piping was not endangered, the health and safety of the public were not affected by this event.

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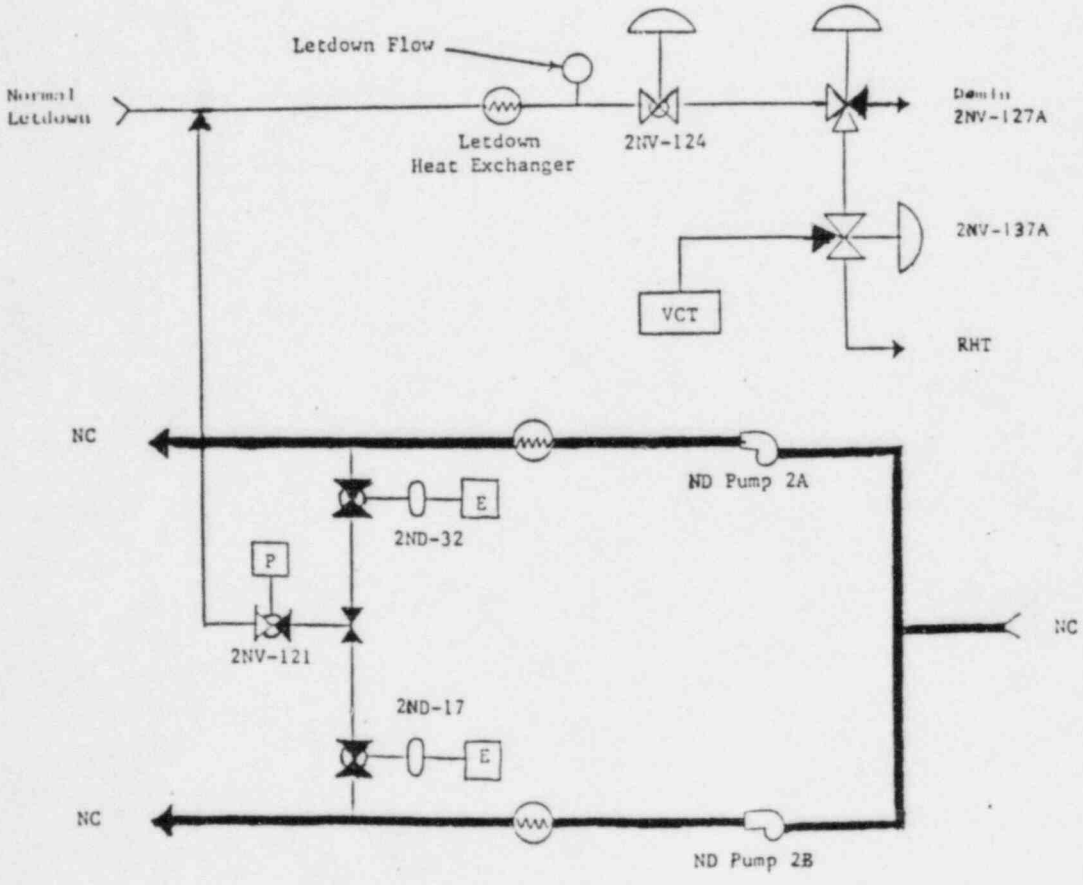
TEXT *(If more space is required, use additional NRC Form 366A's)* (17)

FIGURE 1

SIMPLIFIED DRAWING
OF
AUXILIARY LETDOWN LINE



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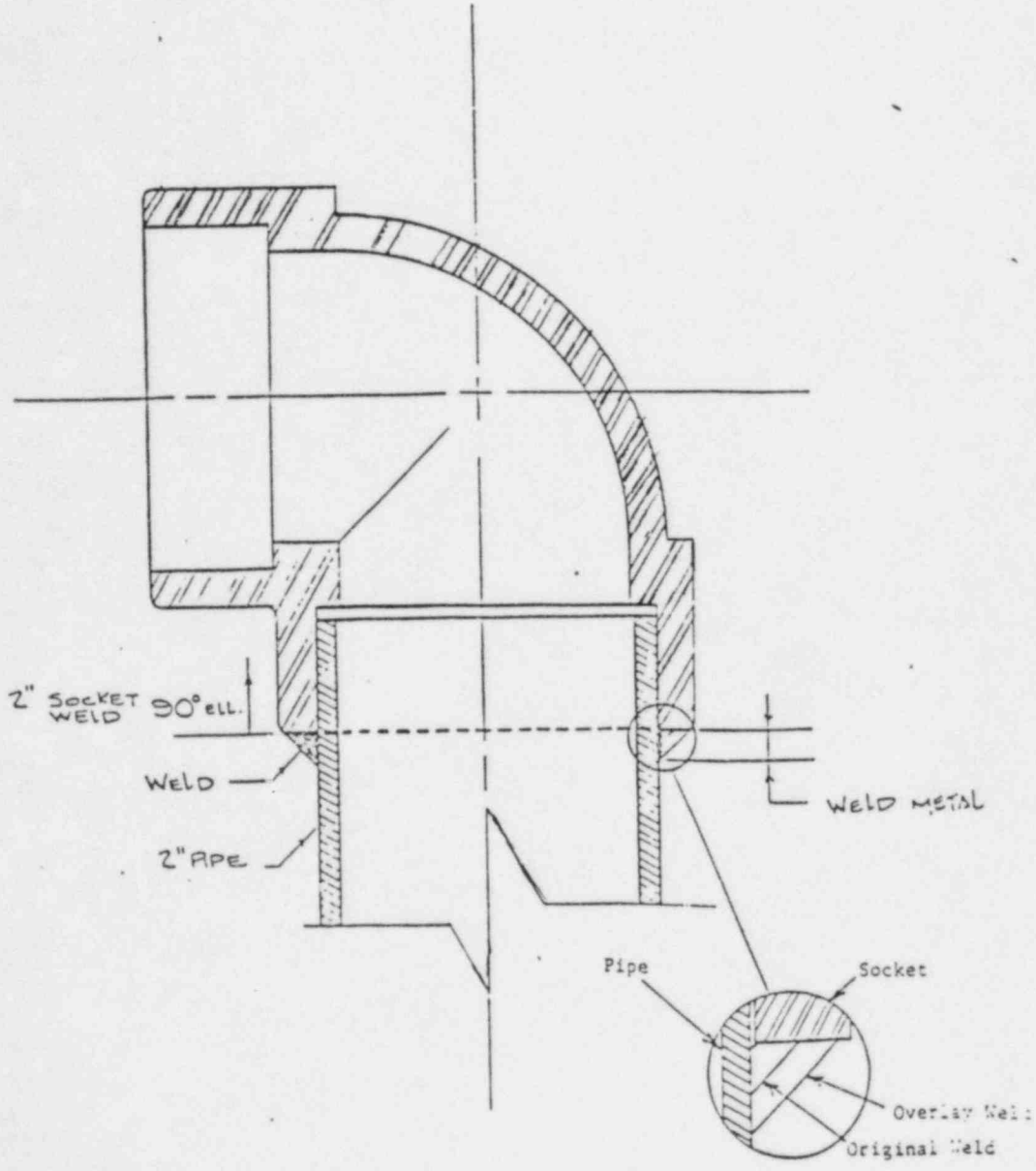
TEXT (If more space is required, use additional NRC Form 366A's) (17)

FIGURE 2

SOCKET WELD
(NO SCALE)



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HAL B. TUCKER
VICE PRESIDENT
NUCLEAR PRODUCTION

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June 24, 1985

Document Control Desk
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Subject: McGuire Nuclear Station, Unit 2
Docket No. 50-370
LER 370/84-17

Gentlemen:

Pursuant to 10 CFR 50.73 Sections (a)(1) and (d), attached is Revision 1 to Licensee Event Report 370/84-17 concerning cracked welds in the auxiliary letdown system. This event was considered to be of no significance with respect to the health and safety of the public.

Very truly yours,

H.B. Tucker 1/1/85

Hal B. Tucker

JBD/mjf

Attachment

cc: Dr. J. Nelson Grace, Regional Administrator
U. S. Nuclear Regulatory Commission
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