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U-602566
L30-96(06 - 05)LP
8E.100c

June 5, 1996

Docket No. 50-461

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

10CFR50.55a

Subject: Submittal of Nine ASME Section XI Relief
Requests Regarding Performance of Non-Destructive
Examinations for the First 120-Month Inservice
Inspection Interval for Clinton Power Station

Dear Madam or Sir:

Attached for NRC review and approval are nine requests for relief from the requirements of Section XI of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code, 1980 Edition through Winter 1981 Addenda, with regard to the performance of non-destructive examination of welds and components for the first 120-month inservice inspection interval for Clinton Power Station (CPS). Details concerning the applicable ASME Section XI Code requirements, the affected components, and the basis and justification for the requested relief are provided in each of the attached relief requests (Attachments 1 through 9 of this letter). In accordance with NRC guidance, a relief request has been prepared for each ASME Section XI Examination Category. The format of each attached relief request is based on the format that has been used to date in the CPS Inservice Inspection Program manual. A brief description of each relief request (along with the corresponding attachment number to this letter) is provided below:

<u>Relief</u> <u>Request No.</u>	<u>Attachment No.</u>	<u>Description</u>
4005	1	This is a request to allow a reduction in the required volumetric examination volume for reactor pressure vessel (RPV) head-to-flange weld CH-C-2 (Code Class 1, Examination Category B-A, Item B1.40). The RPV head flange configuration/geometry limits the ability to fully scan this weld for ultrasonic examination.

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<u>Relief Request No.</u>	<u>Attachment No.</u>	<u>Description</u>
4006	2	This is a request to allow a reduction in the required volumetric examination volume of 29 RPV nozzle-to-shell welds (Code Class 1 Examination Category B-D, Item B3.90). The RPV nozzle configuration/geometry limits the ability to fully scan these welds for ultrasonic examination.
4007	3	This is a request to allow Illinois Power (IP) to select a different weld in the feedwater system for surface and volumetric examination in lieu of weld 1-FW-2-5 which is required to be examined per Note 1(b) of Table IWB-2500-1 (Code Class 1, Examination Category B-J, Item B9.11). Examination of weld 1-FW-2-5 (a pipe-to-valve weld) is obstructed by a large hanger (guide support).
4008	4	This is a request to allow a reduction in the required surface examination area for certain welds associated with integral attachments on piping in the Main Steam and Reactor Recirculation system (Code Class 1, Category B-K-1, Item B10.10), and to permit use of ASME Section XI Code Case N-509 which would allow a sample of attachment welds to be examined in lieu of examining all of the welds for shock suppressor lugs attached to the bowls of the "A" and "B" Reactor Recirculation pumps (Code Class 1, Category B-K-1, Item B10.20). Full examination of the piping integral attachment welds per the Code would require the undesirable and difficult removal/disassembly of piping supports.
4009	5	This is a request to require visual (VT-3) inspection of internal surfaces of the reactor recirculation pumps (Code Class 1, Examination Category B-L-2, Item B12.20) and certain valves (Code Class 1, Examination Category B-M-2, Item B12.50) only when opened for maintenance (versus being required to be done regardless of any maintenance performed). This will potentially prevent the unnecessary disassembly of a large pump and up to 11 valves in the next refueling outage. This request is based on allowing IP to implement the applicable requirement of the 1989 edition of ASME Section XI (vice the edition to which IP is currently committed for the first ten-year interval).

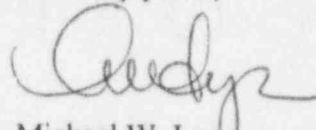
<u>Relief Request No.</u>	<u>Attachment No.</u>	<u>Description</u>
4010	6	This is a request to allow IP not to perform required volumetric examinations of certain RPV circumferential and vertical welds (Code Class 1, Examination Category B-A, Items B1.11 and B1.12). This request is based on allowing IP to adopt, as an alternative to the Code, the requirements of EPRI Topical Report TR-105697 (submitted to the NRC in September, 1995). A reduction in the number of required weld examinations would yield considerable savings in resources, dollars, and exposure.
4011	7	This is a request to allow a reduction in the required examination volume of head-to-vessel weld HEA-1 on RHR Heat Exchanger A (Code Class 2, Examination Category C-A, Item C1.20). Permanently installed/welded lifting lugs limit the ability to fully scan this weld for ultrasonic examination.
4012	8	This is a request to allow a reduction in the required surface examination area for four integral attachment welds on the Reactor Core Isolation and Cooling pump casing (Code Class 2, Examination Category C-C, Item C3.30). Since the associated attachments are utilized to mount the pump to its pedestal, lower portions of these attachment welds are not accessible for examination without removing the pump from its pedestal.
4013	9	This is a request to allow a reduction in the required surface examination area of weld RHR-A-2 on the casing of RHR pump "A" (Code Class 2, Examination Category C-G, Item C6.10). A permanently installed instrument line partially obstructs examination of this weld.

Inservice inspection of ASME Code Class 1, 2, and 3 components is required to be performed in accordance with Section XI of the ASME Code pursuant to 10CFR50.55a(g), except where specific written relief has been granted by the Commission. Per 10CFR50.55a(g)(5), if a licensee determines that conformance with an examination requirement of Section XI of the ASME Code is not practical for its facility, information shall be submitted to the NRC in support of that determination and a request made for relief from the ASME Code requirement. Further, 10CFR50.55a(a)(3) states that alternatives to the requirements of 10CFR50.55a(g) may be used, when authorized by the NRC, if the proposed alternatives would provide an acceptable level of quality and

safety, or compliance with the specified requirements would result in hardship or unusual difficulties without a compensating increase in the level of quality and safety. The attached relief requests are submitted accordingly, i.e., pursuant to 10CFR50.55a(g)(5). Relief Requests 4008 and 4010, it may be noted, involve requests for NRC approval to permit IP to utilize alternative requirements, pursuant to 10CFR50.55a(a)(3).

The applicable edition of Section XI of the ASME Code for the first 120-month inservice inspection (ISI) interval at CPS is the 1980 Edition through Winter 1981 Addenda. Inspection activities for the first 120-month ISI interval are due to be completed during the sixth refueling outage (RF-6) at CPS, currently scheduled to commence on October 13, 1996. (RF-6 is the last refueling outage scheduled before expiration of the first ISI interval.) The planning of work activities for RF-6 is significantly dependent on the NRC's approval of the attached relief requests. IP therefore respectfully requests NRC's prompt review and determination regarding approval of the relief requests in order that appropriate planning for RF-6 can be completed as soon as possible in advance of the outage.

Sincerely yours,



Michael W. Lyon
Director-Licensing

TBE/csm

Attachments

cc: NRC Clinton Licensing Project Manager
NRC Resident Office, V-690
Regional Administrator, Region III, USNRC
Illinois Department of Nuclear Safety

ILLINOIS POWER COMPANY
Clinton Power Station

ASME Section XI Relief Request

RELIEF REQUEST 4005 (Revision 0)

SYSTEM/ COMPONENT FOR WHICH RELIEF IS
REQUESTED

Reactor pressure vessel (RPV) head-to-flange weld, Code Class 1, Examination Category B-A, Item B1.40, weld number CH-C-2.

CODE REQUIREMENT

ASME Section XI, 1980 Edition through Winter 1981 Addenda, Table IWB-2500-1, Category B-A, Item B1.40 requires a volumetric examination of the weld and adjacent weld material as defined by Figure IWB-2500-5.

CODE REQUIREMENT FROM WHICH RELIEF IS
REQUESTED

Relief is requested from performing 100% volumetric examination of the examination volume which is restricted due to scanning limitations presented by the RPV head flange configuration/geometry. It is estimated that 69.6% of the composite Code examination volume can be examined by ultrasonic examination given that 30.4% is restricted by the configuration/geometry. See attached Figures 1A through 1E.

BASIS FOR RELIEF

A portion of the Code-required examination volume cannot be completed due to the RPV head flange configuration/geometry. Figures 1A through 1E identify the geometrical limitation presented by the RPV head flange with respect to the various ultrasonic examination techniques performed on the head-to-flange weld to date.

ALTERNATE EXAMINATIONS

Illinois Power Company (IP) proposes to complete ultrasonic examination of this weld to the maximum extent feasible for the required examination volume.

JUSTIFICATION FOR THE GRANTING OF
RELIEF

Performance of ultrasonic examination of approximately 69.6% of the required examination volume provides reasonable assurance of the structural integrity of the entire weld. IP has performed ultrasonic examination (to the maximum extent feasible) on two-thirds (2/3) of the length of this weld based on examinations conducted during RF-2 and RF-4. No unacceptable indications were found. The remaining one-third (1/3) of the weld length is scheduled to be examined during the next refueling outage (RF-6). IP estimates similar examination coverage (i.e., approximately 69.6% of the required examination volume). It should be noted that during initial plant construction, the entire weld was radiographed and the results were acceptable. The weld was also ultrasonically examined in accordance with the Preservice Inspection Plan, and the results of that examination were also acceptable.

ASME Section V, Article 4, requires that the examination volume (weld and adjacent base material) be scanned by straight and angle beam, 45° and 60°, techniques. Article 4 of ASME Section V allows that the examination can be performed from one side of the weld. Due to the flange configuration, ultrasonic examination can only be performed from the head side of the weld. Due to the bend radius on the flange side and the thickness of the flange, and based on previous examination experience with this configuration, only the following examination volumes can be scanned for the techniques listed below (not taking beam spread into account):

<u>Technique</u>	<u>% of Examination Volume Examined</u>
0° L-Wave	61.5%
45° P-Scan	61.5%
60° P-Scan	61.5%
45° T-Scan	85.6%
60° T-Scan	94%
Composite examination volume = 69.6%	

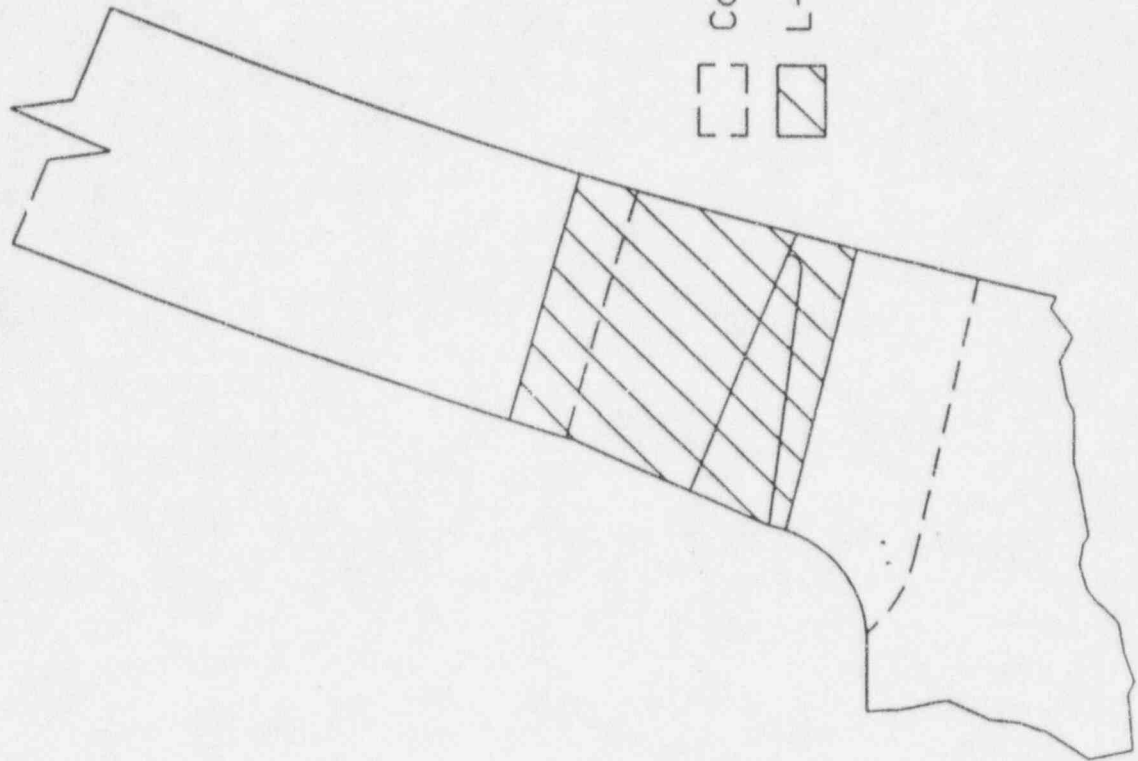
As shown above, at least one technique (60° T-Scan) covers over 90% of the examination volume, based on previous experience. IP believes that the actual area examined using the 45° T-Scan technique was also over 90%, however, if any indication would have been present in the area identified as not examined, it would have been difficult to size. For this reason, the examiner identified 85.6% coverage. IP also believes that the actual area previously examined using the 60° T-Scan technique was close to 100%. Again, if any indication would have been present in the 6% volume identified as not examined, it would have been difficult to size. It should be noted, given that the 60° T-Scan technique covers 94% of the examination volume, the ASME considers 90% coverage to be acceptable per Code Case N-460. Code Case N-460 has been incorporated into Regulatory Guide 1.147.

The examination limitation imposed by the RPV head-to-flange configuration makes it impractical to perform a complete volumetric examination (90% or more) of the weld for at least some of the examination techniques identified above. Based on the above, however, the structural integrity of the weld can be sufficiently confirmed by completing (in RF-6) the same ultrasonic examination methods and coverage for the remaining length of the weld as done for the first two-thirds of the weld length. IP has thus concluded that completion of the weld examination in this manner provides an acceptable level of quality and safety.

IMPLEMENTATION SCHEDULE

Relief is requested for the first ten-year interval at Clinton Power Station.

Figure 1A

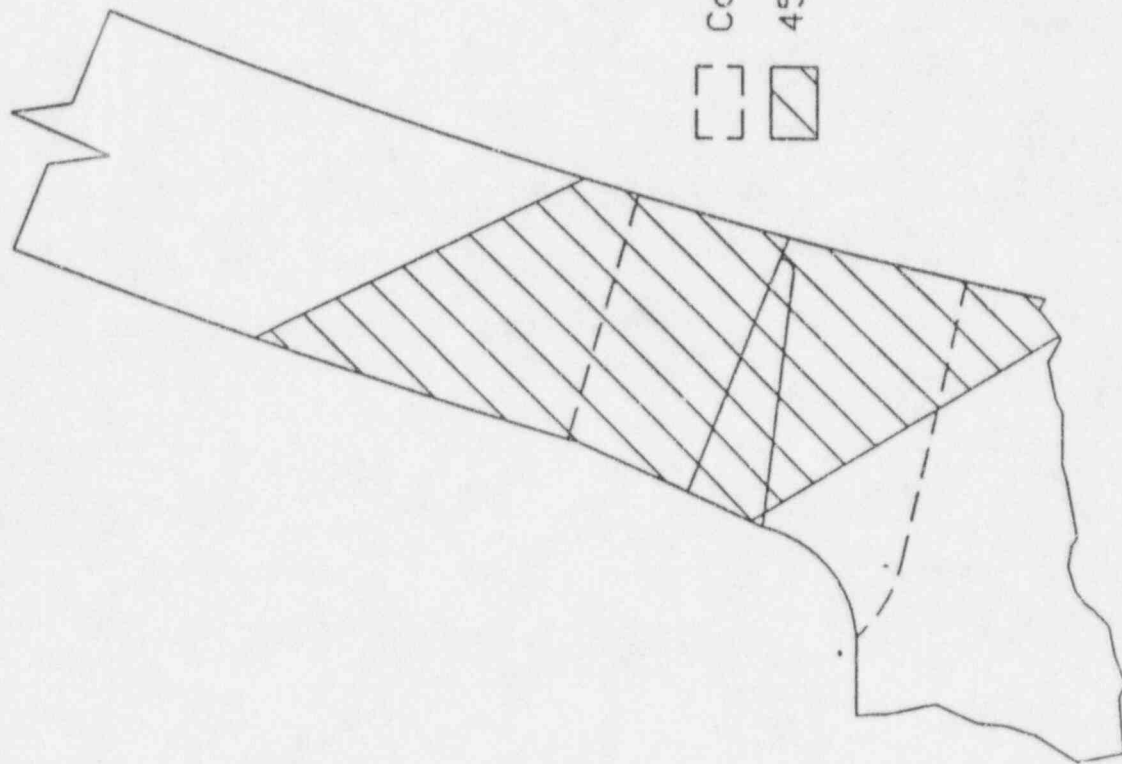


Clinton 1
Weld CH-C-2

[] Code cross-sectional coverage, 28.6 sq in

[/] L-wave weld metal examination coverage, 17.6 sq in

Figure 1B



Clinton 1
Weld CH-C-2



-  Code cross-sectional coverage, 28.6 sq in
-  45° T-scan examination coverage, 24.5 sq in

Figure 1C

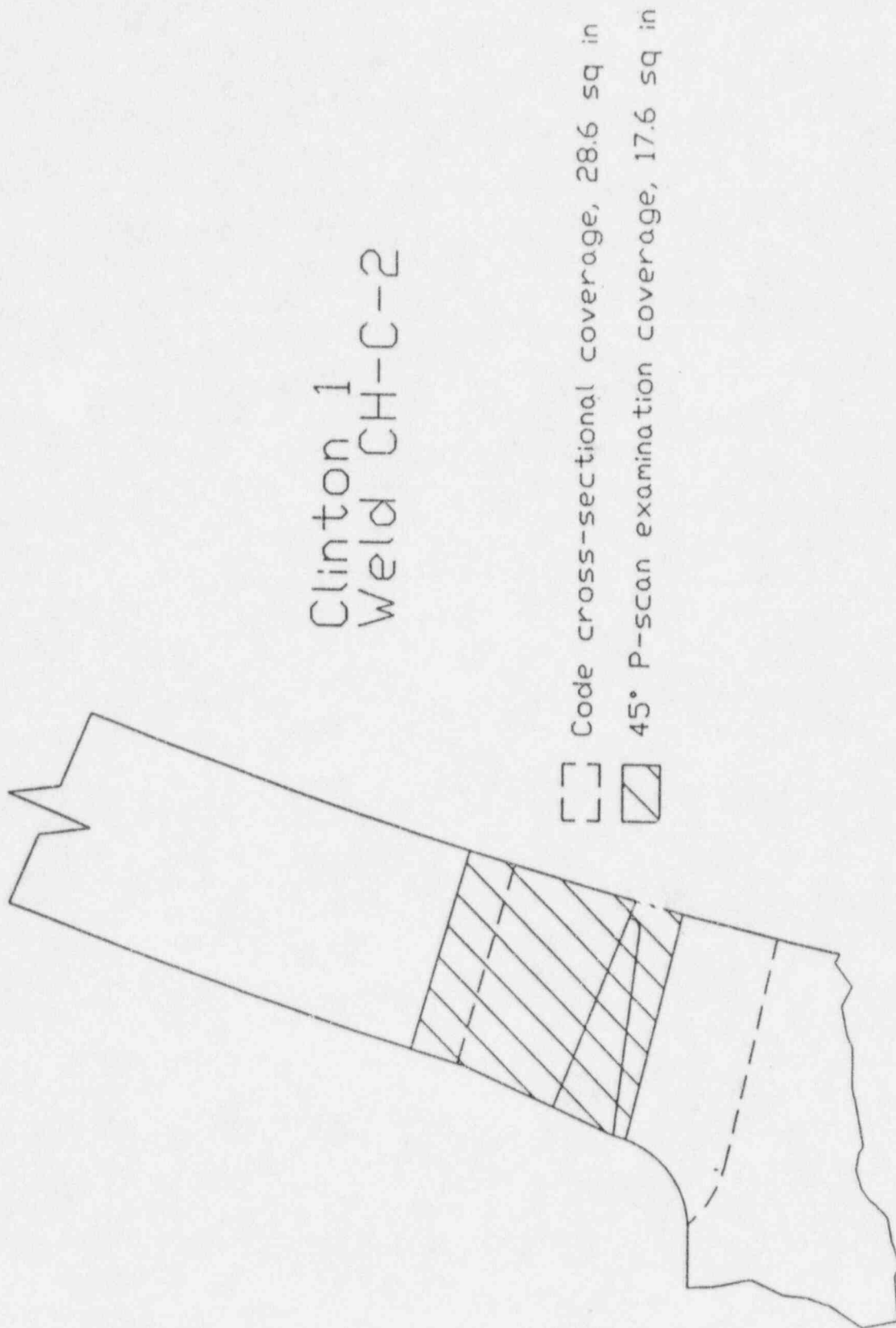
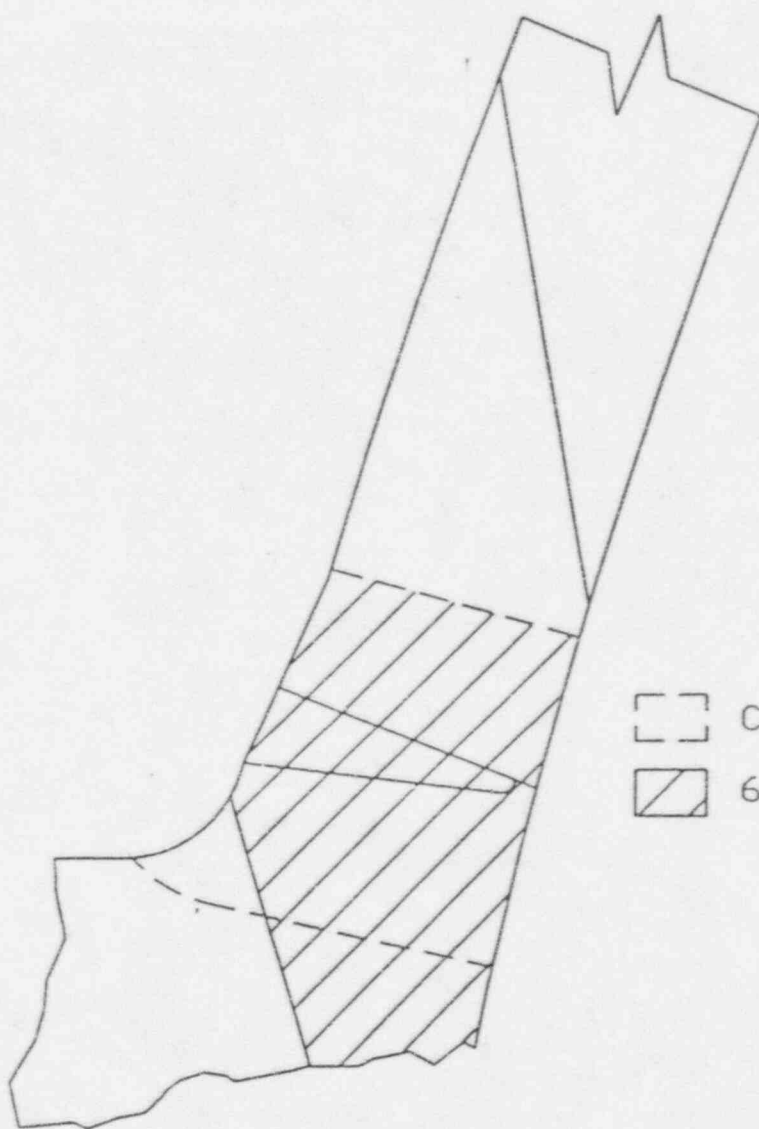



Figure 1D



Clinton 1
Weld CH-C-2

 Code cross-sectional coverage, 28.6 sq in


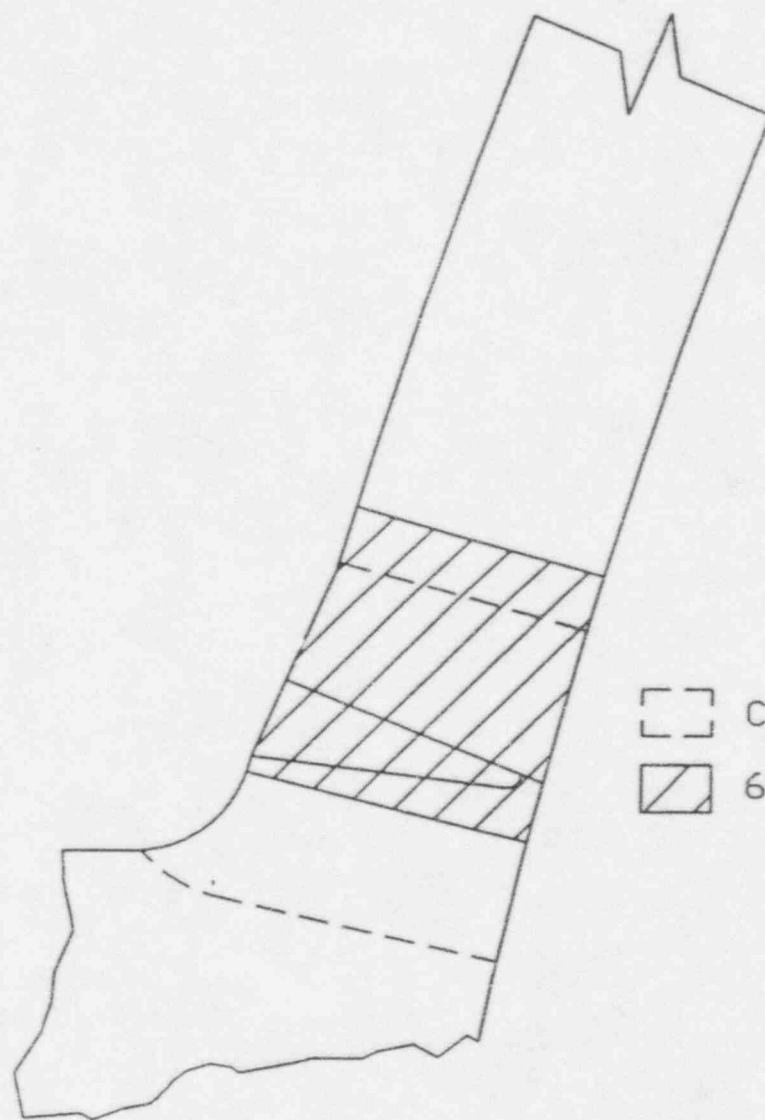


 60° T-scan examination coverage, 26.9 sq in

Figure 1E



Clinton 1
Weld CH-C-2

-  Code cross-sectional coverage, 28.6 sq in
-  60° P-scan examination coverage, 17.6 sq in

ILLINOIS POWER COMPANY
Clinton Power Station

ASME Section XI Relief Request

RELIEF REQUEST 4006 (Revision 0)

SYSTEM/ COMPONENT(S) FOR WHICH RELIEF
IS REQUESTED

Twenty-nine (29) reactor pressure vessel (RPV) nozzle-to-shell welds, Code Class 1, Examination Category B-D, Item B3.90. See attached Table 1 for weld numbers.

CODE REQUIREMENT

ASME Section XI, 1980 Edition through Winter 1981 Addenda, Table IWB-2500-1, Category B-A, Item B3.90 requires volumetric examination of the weld and adjacent base material as defined by Figure IWB-2500-7(b).

CODE REQUIREMENT FROM WHICH RELIEF IS
REQUESTED

For each of the identified nozzle-to-shell welds, relief is requested from performing complete volumetric examination of the examination volume which is restricted due to scanning limitations presented by the RPV nozzle

configuration/geometry. Attached Figures 1A through 1E depict a typical RPV nozzle weld, its required examination volume, what portion of the examination volume is restricted by nozzle configuration/geometry, and how that restriction affects what percentage of the volume can be examined by each of the various examination techniques (0° L-Wave, 45° P-Scan, 60° T-Scan, etc.). Attached Table 1 identifies the estimates of the composite Code examination volume that can be examined for each RPV nozzle weld.

BASIS FOR RELIEF

A portion of the Code-required examination volume cannot be completed due to the RPV nozzle configuration/geometry. Attached Figures 1A through 1E identify the limitations presented by a typical RPV nozzle

configuration/geometry for each examination technique employed at Clinton Power Station (CPS).

ALTERNATE EXAMINATIONS

Illinois Power Company (IP) proposes to perform ultrasonic examination of these welds to the maximum extent feasible for the required examination volume.

JUSTIFICATION FOR THE GRANTING OF
RELIEF

Performance of ultrasonic examination of approximately 60-70 percent of the required examination volume for each of the identified welds provides reasonable assurance of the structural integrity of each entire weld. IP performed

ultrasonic examination on 20 of these welds (to the maximum extent feasible) during two previous refueling outages (RF-2 and RF-4) and found no unacceptable indications. The remaining 9 welds are scheduled to be examined during the next refueling outage. IP estimates similar examination coverage for each of the remaining welds (i.e., approximately 60-70% of the required examination volume). It should be noted that during initial plant construction, all of these welds were radiographed and the results were acceptable. These welds were also ultrasonically examined in accordance with the Preservice Inspection Plan, and the results of those examinations were also acceptable.

ASME Section V, Article 4, requires that the examination volume (weld and adjacent base material) be scanned by straight and angle beam, 45° and 60°, techniques. Article 4 of ASME Section V allows that the examination can be performed from one side of the weld. Due to the RPV nozzle configuration, ultrasonic examination can only be performed from the shell side. Due to the bend radius and thickness of the nozzle, and based on previous examination experience with this configuration, the following examination volumes can be scanned for a typical nozzle using the techniques listed below (not taking beam spread into account):

<u>Technique</u>	<u>% of Examination Volume Examined</u>
0° L-Wave	50%
45° P-Scan	60%
60° P-Scan	72%
45° T-Scan	80%
60° T-Scan	88%
Composite examination volume = 70%	

As shown above, at least one technique (60° T-Scan) covers close to 90% of the examination volume. IP believes that the actual area examined using the 45° T-Scan and 60° T-Scan techniques was over 90%, however, if any indication would have been present in the area identified as not examined, it would have been difficult to size. For this reason, the examiner identified 80% and 88% coverage for the 45° T-Scan and 60° T-Scan techniques respectively. It should be noted that the ASME, per Code Case N-460, considers 90% coverage as meeting the Code requirements. Code Case N-460 has been incorporated into Regulatory Guide 1.147.

The examination limitation imposed by the RPV nozzle/shell configuration makes it impractical to perform a complete volumetric examination (90% or more) of the nozzle-to-shell welds. However, IP believes that performance of ultrasonic examination of the welds to the maximum extent feasible (for a composite examination volume of approximately 70%) is sufficient for confirming weld integrity and that such examination therefore provides an acceptable level of quality and safety.

IMPLEMENTATION SCHEDULE

Relief is requested for the first ten-year interval at CPS.

TABLE 1
CODE CATEGORY B-D
EXAMINATION COVERAGE

<u>Weld Number</u>	<u>Description</u>	<u>Estimated Percentage Of Volume Examined Due To Nozzle Configuration</u>
N1A, B	Recirculation Outlet Nozzles	69
N2B, C, D, E, F, G,	Recirculation Inlet Nozzles	63
N2 A, H, J, K	Recirculation Inlet Nozzles	*
N3A, C	Main Steam Nozzles	66
N3B, D	Main Steam Nozzles	*
N4A, B, C, D	Feedwater Nozzles	66
N5A	Core Spray Nozzles	66
N5B	Core Spray Nozzles	*
N6B, C	RHR Coolant Injection Nozzles	66
N6A	RHR Coolant Injection Nozzles	*
N9A	Jet Pump Instrument Nozzles	68
N9B	Jet Pump Instrument Nozzles	*
N10	CRD Return Nozzles	68
N16	Vibration Instrument Nozzles	66

* These weld examinations will be completed during the next refueling outage (RF-6). IP expects the percentage of volume examined for each weld to be between 60 and 70 percent.

Figure 1A
A Typical RPV Nozzle to Shell Weld

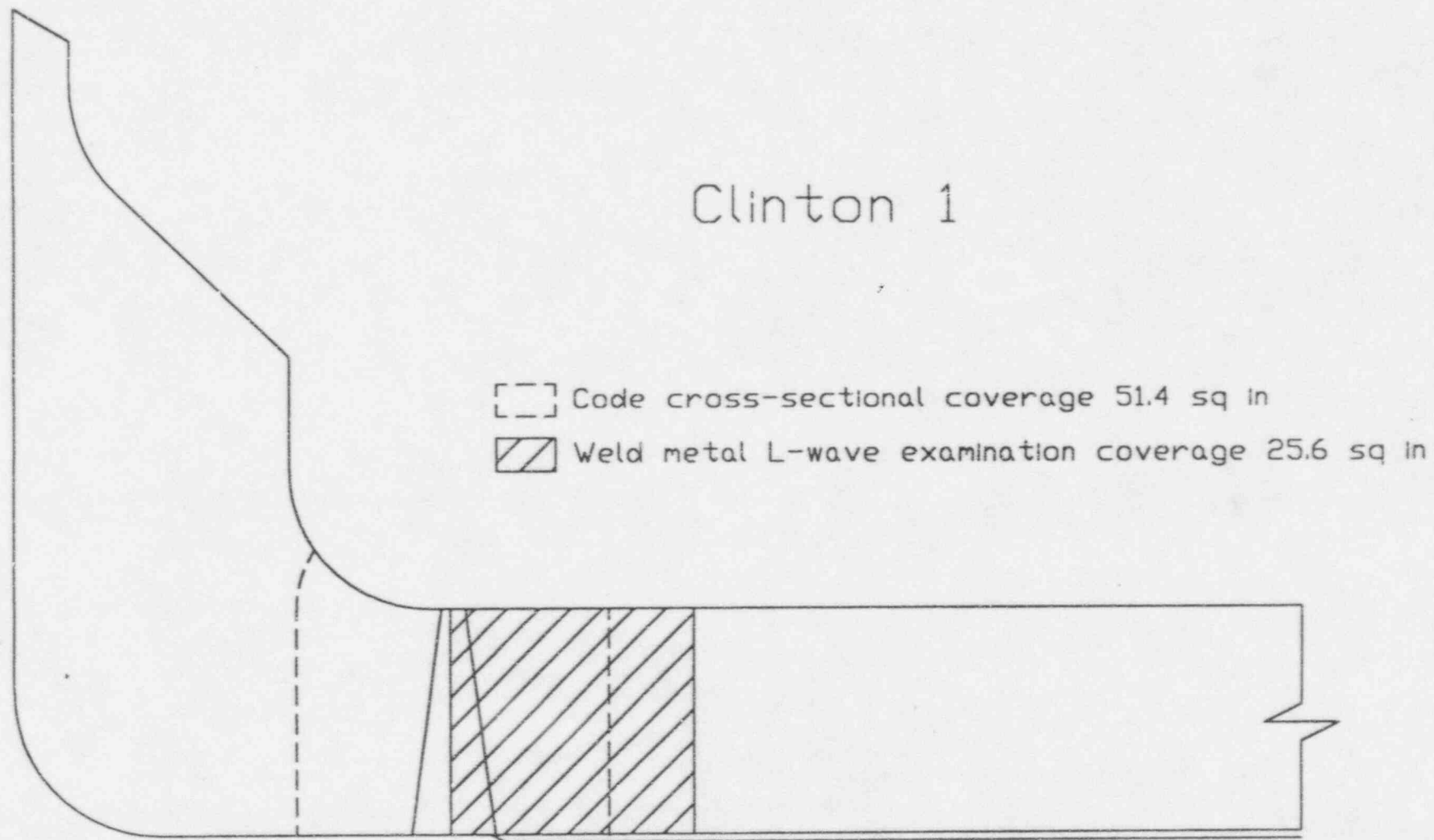


Figure 1B
A Typical RPV Nozzle to Shell Weld

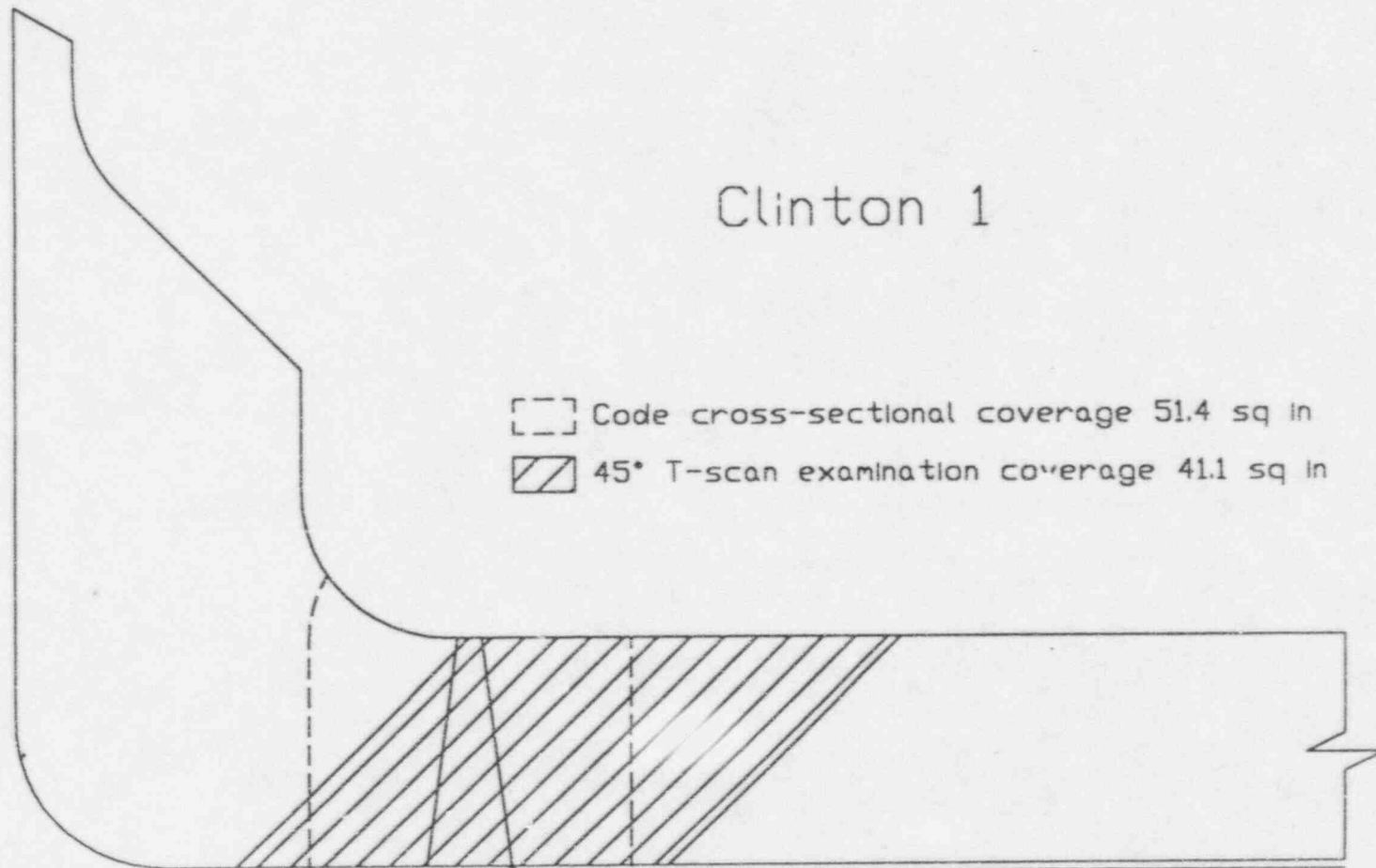


Figure 1C
A Typical RPV Nozzle to Shell Weld

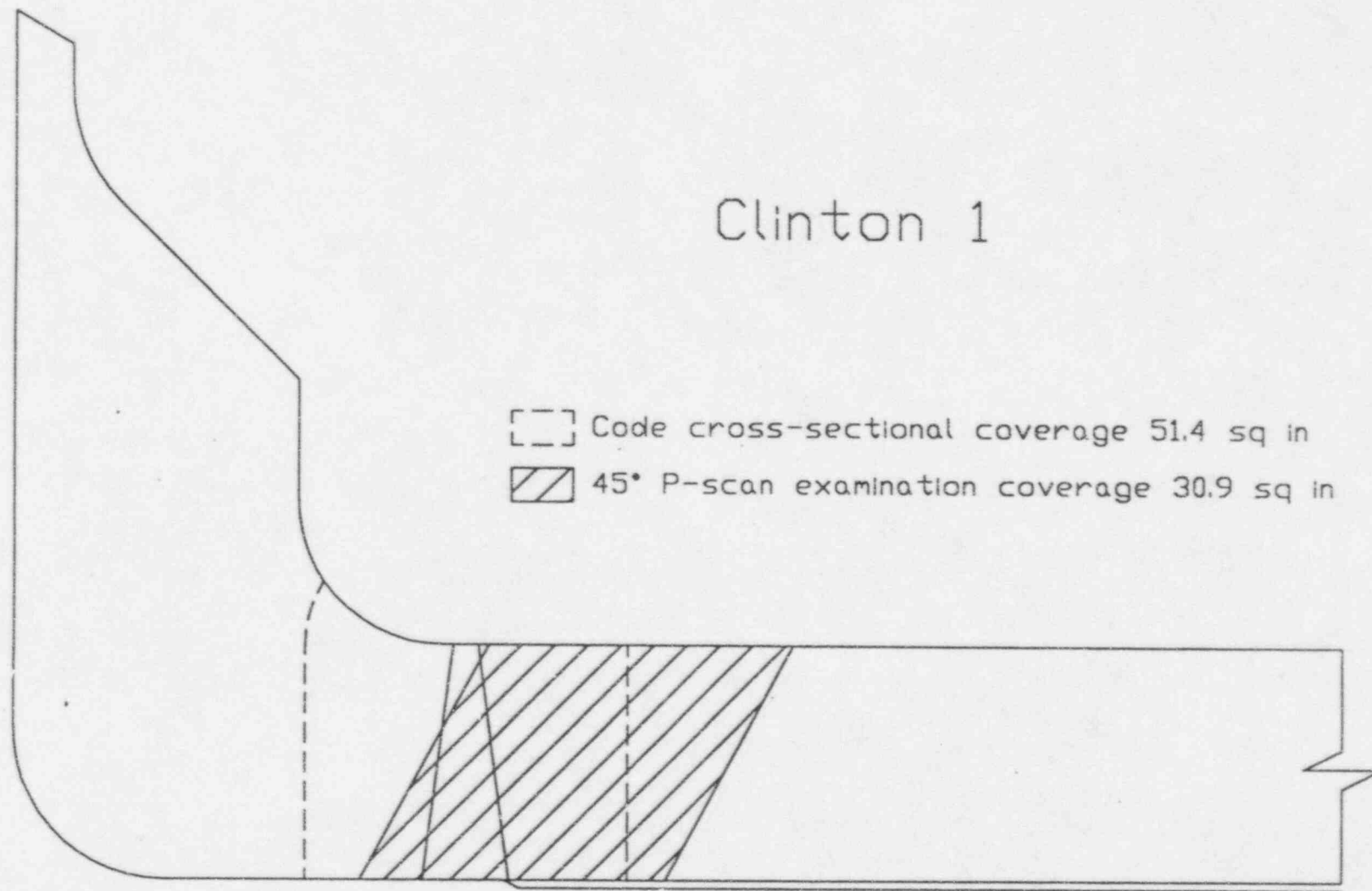


Figure 1D
A Typical RPV Nozzle to Shell Weld

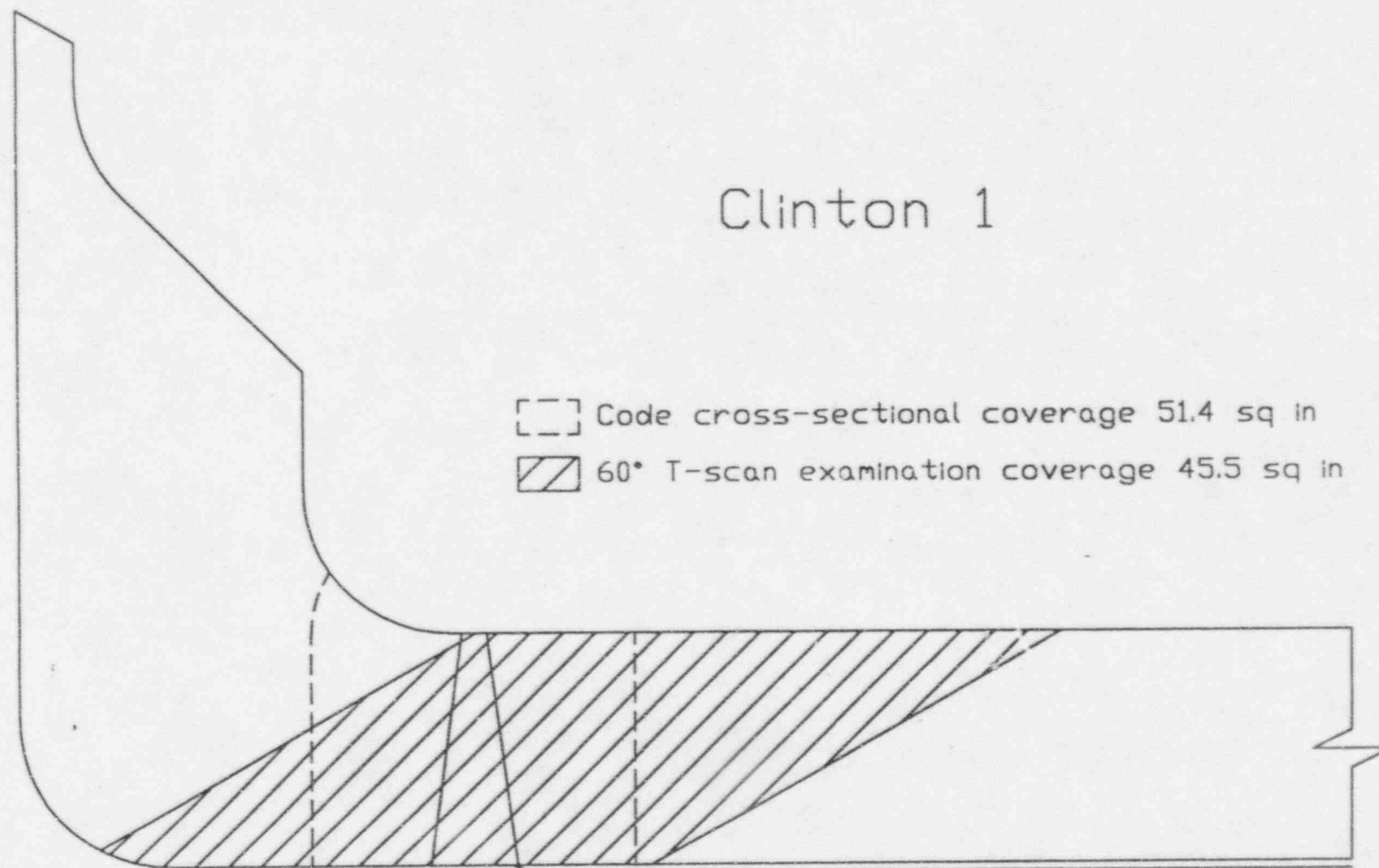
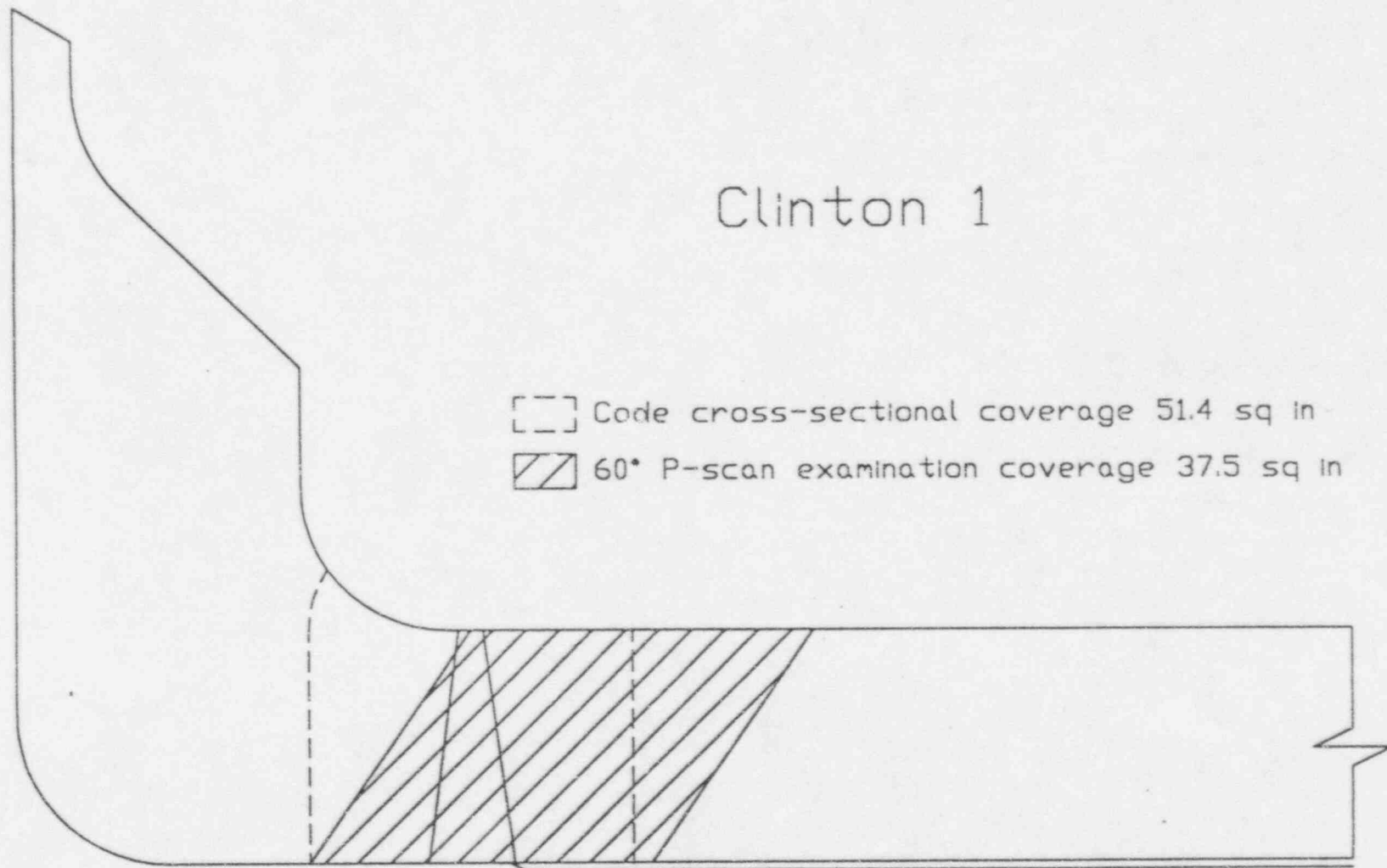


Figure 1E
A Typical RPV Nozzle to Shell Weld



ILLINOIS POWER COMPANY
Clinton Power Station

ASME Section XI Relief Request

RELIEF REQUEST 4007 (Revision 0)

SYSTEM/ COMPONENT FOR WHICH RELIEF IS REQUESTED	Feedwater system pipe-to-valve weld 1-FW-2-5, Code Class 1, Examination Category B-J, Item B9.11.
CODE REQUIREMENT	ASME Section XI, 1980 Edition through Winter 1981 Addenda, Table IWB-2500-1, Examination Category B-J, Item B9.11, Note 1(b), requires an outside surface examination of the weld and adjacent base metal and a volumetric examination of the weld and adjacent base metal (lower one-third volume) as defined by Figure IWB-2500-8.
CODE REQUIREMENT FROM WHICH RELIEF IS REQUESTED	Relief is requested from selecting weld 1-FW-2-5 for performance of surface and volumetric examinations during the first ten-year interval.
BASIS FOR RELIEF	The subject weld is a pipe-to-valve weld on one of the two, main 18-inch feedwater lines inside the drywell. The associated feedwater pipe (the "B" line) is supported by a large component support (guide support) that supports the pipe at the weld location. In order to perform the Code-required examination, the guide support would have to be disassembled to gain access to this weld. A drawing of this large and complicated guide support is attached (Figure 1).
ALTERNATE EXAMINATIONS	Illinois Power Company (IP) proposes, in lieu of selecting this weld for examination, selecting a different weld in the Feedwater system for examination.
JUSTIFICATION FOR THE GRANTING OF RELIEF	In order to perform the Code-required examination, guide support 1FW01014G would have to be disassembled to gain access to this weld. Removal and reassembly of the guide support is a tedious process. For example, a temporary support would have to be installed prior to removing the guide support from the piping. Also, some of the replacement parts that may be required, such as the associated Lubron plates, are not readily available. Based on previous experience at Clinton Power Station (CPS), i.e., during RF-2 when the sister guide support (for the "A" feedwater line) was removed for examination of weld 1-FW-1-5, hundreds of man-hours and several man-rem of exposure must be expended to disassemble and reassemble the guide support. Finally, notwithstanding the cost and effort, IP believes it is imprudent to disassemble this properly functioning guide support in light of IP's conclusion that a sufficient number of welds have been examined (or are scheduled to be examined during the next refueling outage) as further discussed below.

The reason for selecting weld 1-FW-2-5 for examination is that, based on the associated system stress report, this weld is subject to stress that exceeds the stress criteria identified in Note 1(b) of Table IWB-2500-1 for Category B-J. However, there are two more Feedwater system welds subject to stress levels that exceed the Note 1(b) stress criteria, and which are in the same Feedwater loop ("B") as the subject weld. These two welds, 1-FW-2-3-8 and 1-FW-2-3-9, are scheduled for examination in the next outage. In addition, there are three welds in Feedwater loop "A" at similar locations, for which applied stresses also exceed the Note 1(b) stress criteria. All of those welds, 1-FW-1-5 (mentioned previously), 1-FW-1-3-8 and 1-FW-1-3-9, have been examined, and the results were acceptable. Thus, by the conclusion of the next outage, five of the six welds to which Note 1(b) applies will have been examined. (The relative locations of these welds in the feedwater piping is shown on the attached isometric drawings, i.e., Figures 1 and 2 for feedwater loop "A," and Figures 2 and 3 for feedwater loop "B.") In addition, for all welds required to be examined in the feedwater system (loops "A" and "B"), approximately 27% of all applicable welds have been examined in the last five (5) outages, relative to the Code requirement of 25% over the ten-year interval. These welds were found to have no unacceptable indications. Based upon these examinations, IP believes the intent of the Code requirements for verifying the structural integrity of the feedwater system has been met. On that basis, selecting another weld in the feedwater system for examination instead of weld 1-FW-2-5 will still provide an acceptable level of quality or safety for the feedwater system.

IMPLEMENTATION SCHEDULE

Relief is requested for the first ten-year interval at CPS.

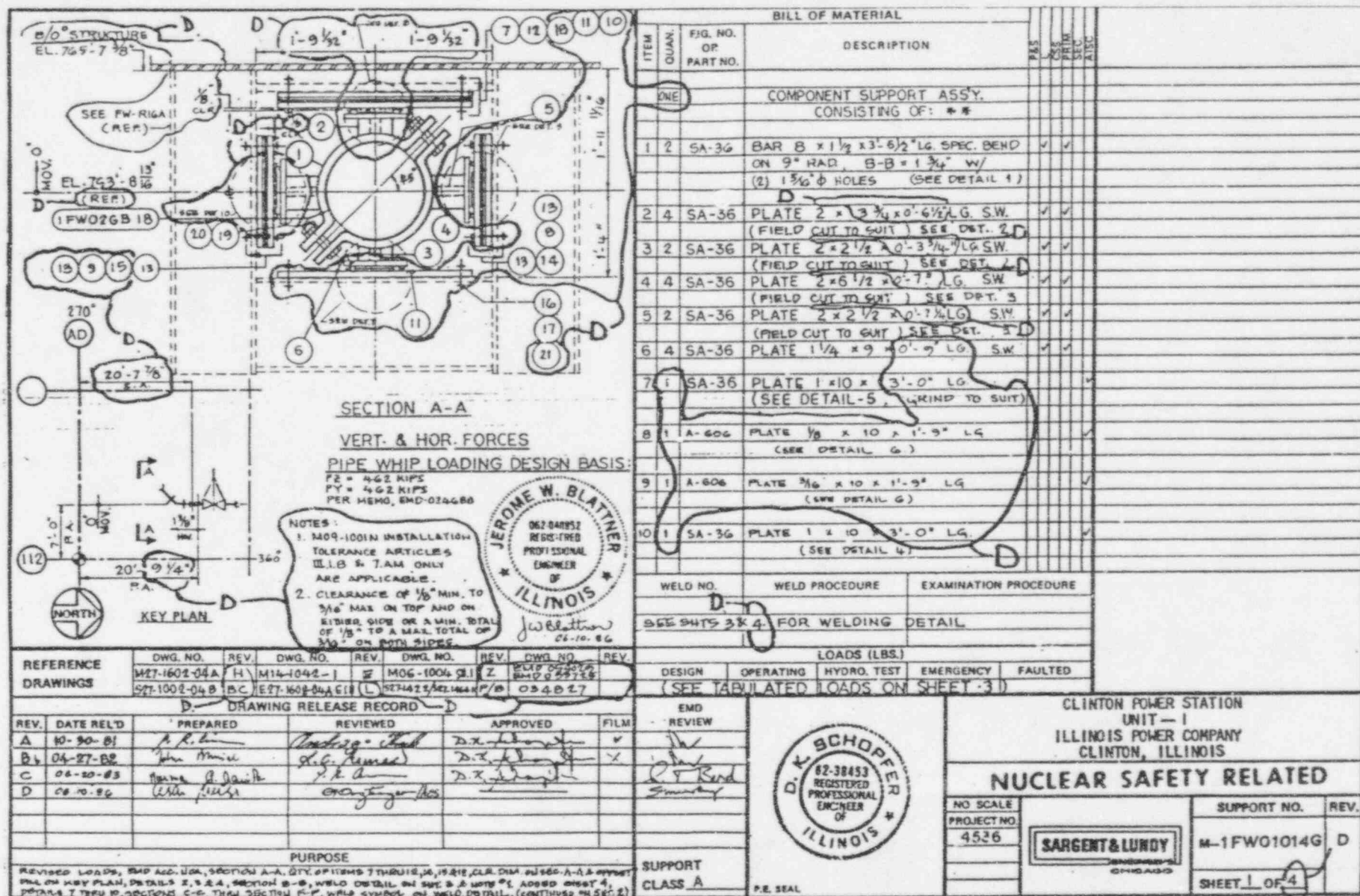
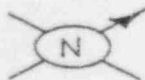
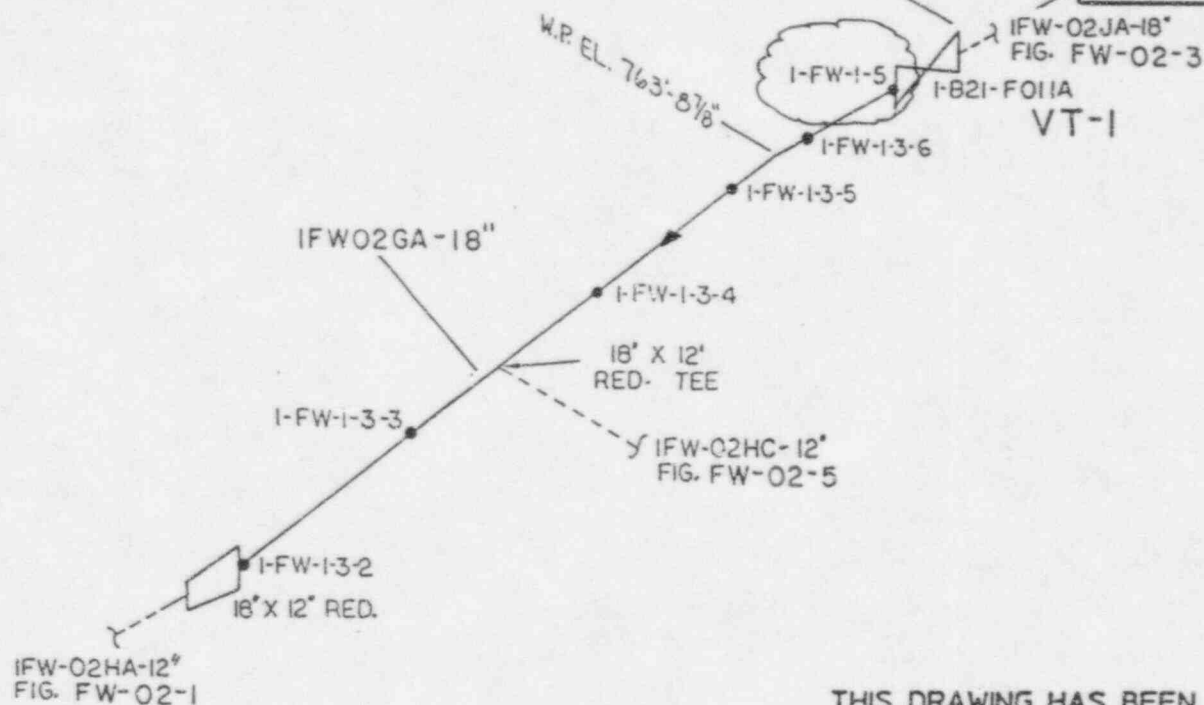


Figure 1

ACCESS INFORMATION



SIZE:	18"
SCH.:	100
MAT.:	CS
ASTM SPEC:	SA-106 GR-B SML'S NBM/SA-333 GR-6 SML'S
NOM WALL:	1.156"
CAL BLK:	15-CLT



CLINTON POWER STATION UNIT 1

WELD IDENTIFICATION ISOMETRIC

SYSTEM: FEEDWATER

LINE NO.: IFW-02GA-18"

FIGURE NO.: FW-02-2

REVISION NO.: 1 DATED: 11-5-92

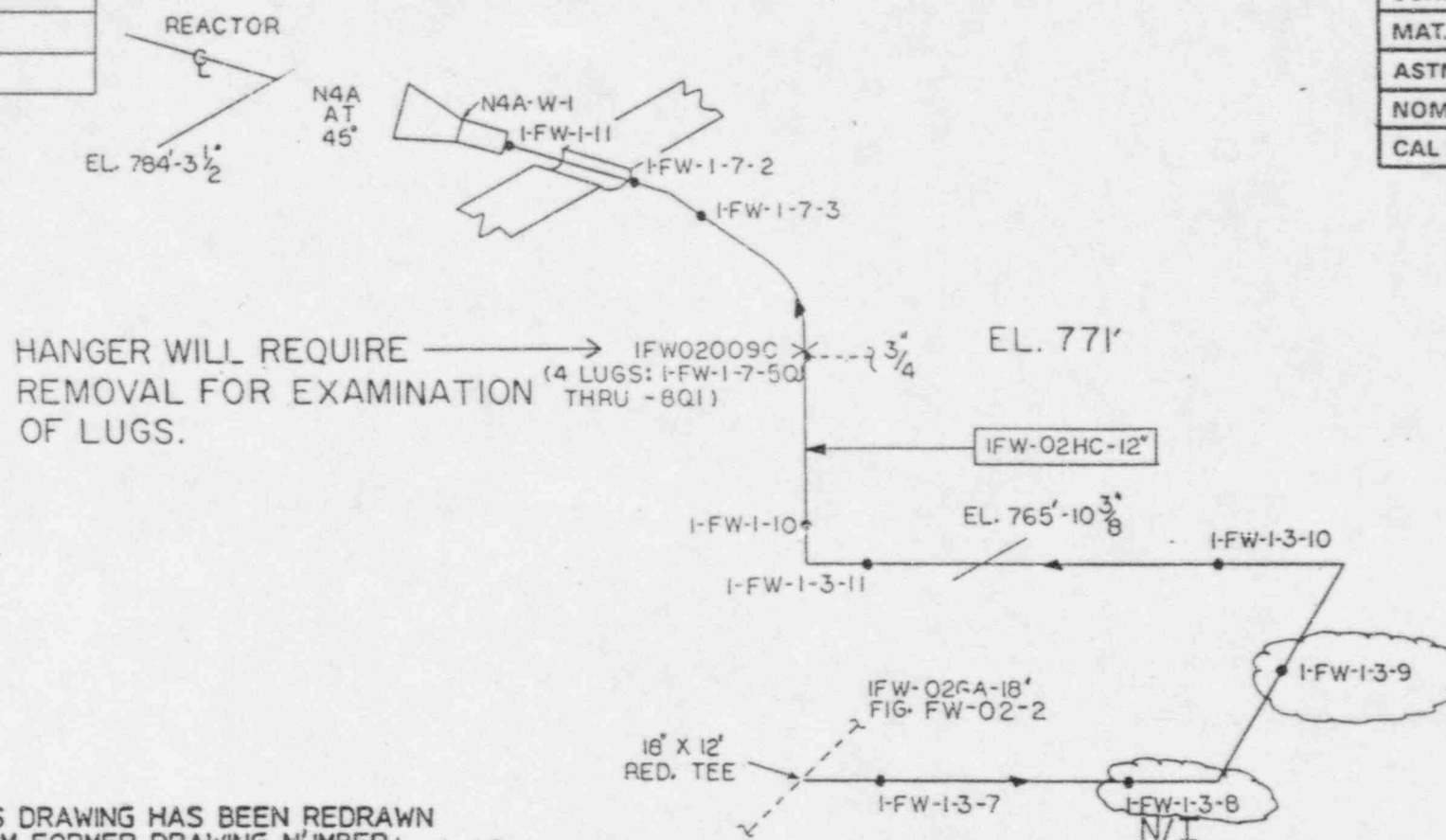
P&ID NO.: M05-1004

REFERENCE DWG. NO.: SWFC ISO FW-1 REV. 8A

Figure 2

ACCESS INFORMATION

SIZE:	12"
SCH.:	100
MAT.:	CS
ASTM SPEC:	SA-106 GR-B SML'S NBM. / SA-333 GR-6
NOM WALL:	0.884" SML'S
CAL BLK:	10-CLT



THIS DRAWING HAS BEEN REDRAWN
FROM FORMER DRAWING NUMBER A-12

CLINTON POWER STATION UNIT 1
WELD IDENTIFICATION ISOMETRIC
SYSTEM: FEEDWATER
LINE NO.: IFW-02HC-12"

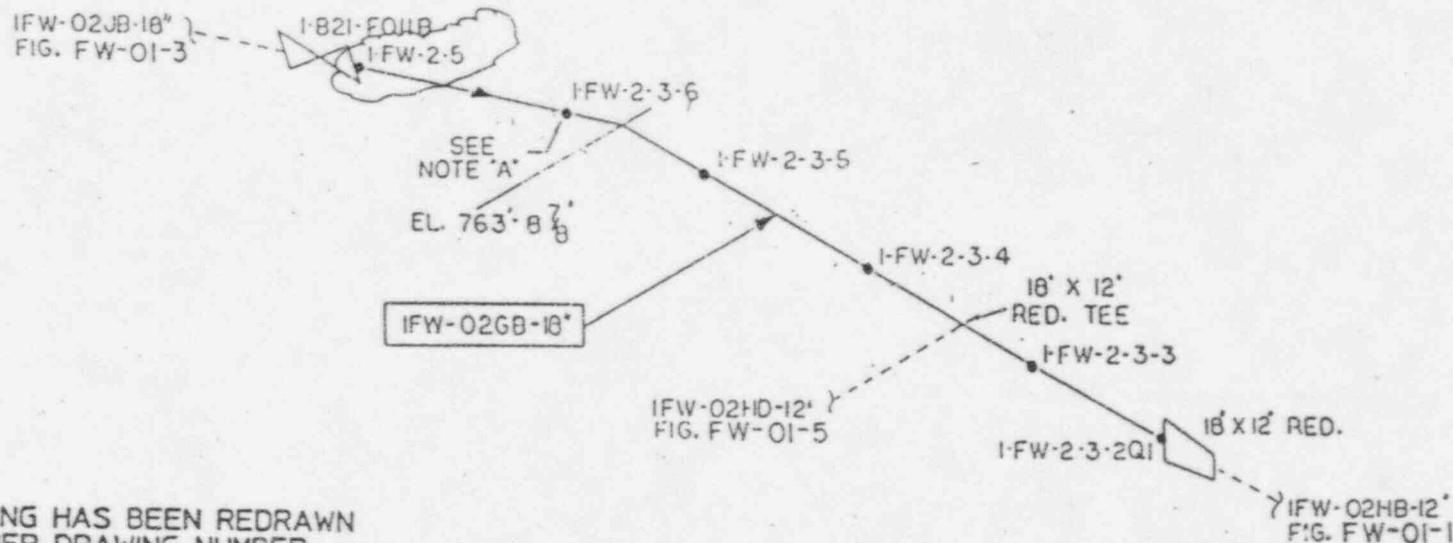
FIGURE NO.: FW-02-5
REVISION NO.: 1 DATED: 11-5-92
P&ID NO.: M05-1004
REFERENCE DWG. NO.: SWFC 150 FW-1 REV. 8A

Figure 3

ACCESS INFORMATION

SIZE:	18"
SCH.:	100
MAT.:	CS
ASTM SPEC:	SA-106 GR. B SAIL'S NOM. SA-333 GR. B
NOM WALL:	1.156" SAIL'S
CAL BLK:	15-CLT

NOTE "A": SCHED. CHANGE ALL THIS
WELD -
MTRL. UPSTREAM OF 1-FW-2-3-1.
IS SCH. 160, NOM. WALL 1.701",
CAL. BLK. 17-CLT.



THIS DRAWING HAS BEEN REDRAWN
FROM FORMER DRAWING NUMBER

A-9

CLINTON POWER STATION UNIT 1

WELD IDENTIFICATION ISOMETRIC

SYSTEM: FEEDWATER

LINE NO.: IFW-02GB-18"

FIGURE NO.: FW-01-2

REVISION NO.: 0 DATED: 2-3-92

P&ID NO.: M05-1004

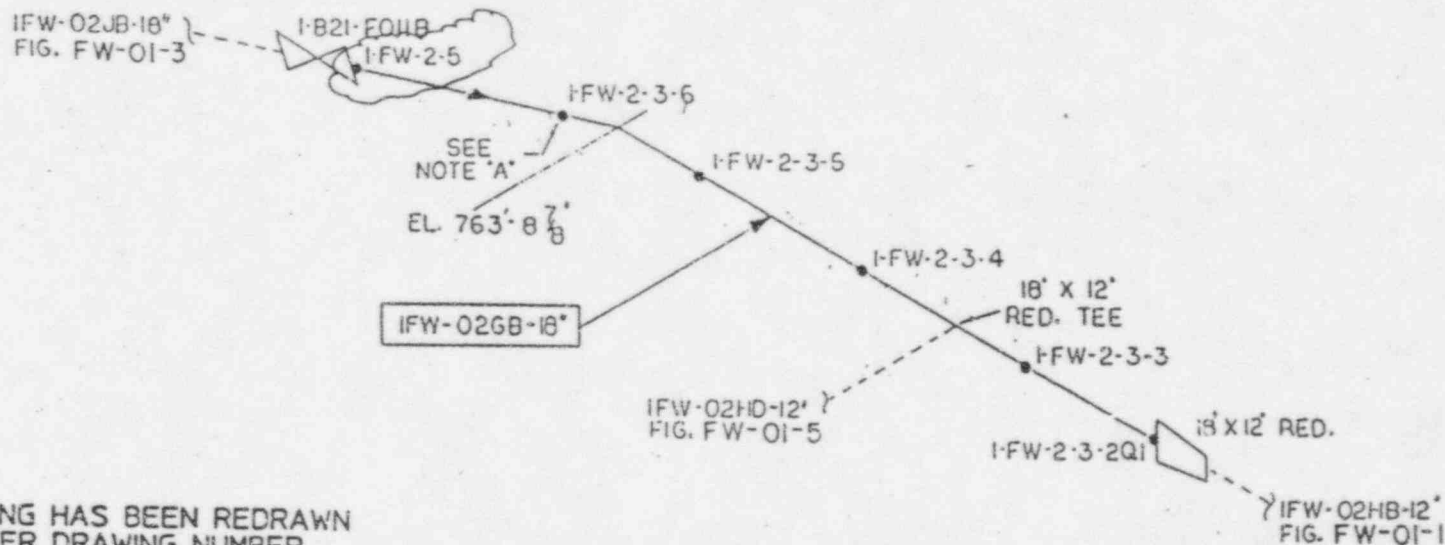
REFERENCE DWG. NO.: SWFC ISO FW-2 REV. BT

Figure 4

ACCESS INFORMATION

SIZE:	18"
SCH.:	100
MAT.:	C5
ASTM SPEC:	SA-106 GR. B SAIL'S NOM. SA-333 GR. B
NOM WALL:	1.56" SAIL'S
CAL BLK:	15-CLT

NOTE "A": SCHED. CHANGE AT THIS
WELD -
MTRL. UPSTREAM OF IFW-2-3-1,
IS SCH. 160, NOM. WALL 1.711",
CAL. BLK. 17-CLT.



THIS DRAWING HAS BEEN REDRAWN
FROM FORMER DRAWING NUMBER

A-9

CLINTON POWER STATION UNIT 1
WELD IDENTIFICATION ISOMETRIC
SYSTEM: FEEDWATER
LINE NO.: IFW-02GB-18"

FIGURE NO.: FW-01-2
REVISION NO.: 0 DATED: 2-3-92
P&ID NO.: M05-1004
REFERENCE DWG. NO.: 5WFC ISO FW-2 REV. BT

Figure 5

ILLINOIS POWER COMPANY
Clinton Power Station

ASME Section XI Relief Request

RELIEF REQUEST 4008 (Revision 0)

SYSTEM/ COMPONENT(s) FOR WHICH RELIEF
IS REQUESTED

8-PR-WA and 1-MS-D-7-PR-WA (for Main Steam system (MS) guide supports), and 1RR-A-PR-1-WA (for Reactor Recirculation system (RR) variable support); (2) Pump Attachments/Lugs: (Unnumbered) Welds for shock suppressor lugs attached to Reactor Recirculation Pump B bowl.

CODE REQUIREMENT

Examination Category B-K-1, Items B10.10 and B10.20 (integral attachments for piping and pumps, respectively), Code Class 1: (1) Piping Attachments/Lugs: Weld Numbers 1-MS-A-7PR-WA, 1-MS-B-8-PR-WA, 1-MS-C-

CODE REQUIREMENT FROM WHICH RELIEF IS
REQUESTED

ASME Section XI, 1980 Edition through Winter 1981 Addenda, requires surface examination of welds for integral attachments during the first ten-year interval.

component supports. For Item B10.20, relief is requested from performing surface examination of any of the shock suppressor lug welds for RR Pump B.

BASIS FOR RELIEF

For Item B10.10: Performing the required surface examination of the entire examination area for each of the welds associated with integral attachments or lugs on each of the main steam lines and on the RR Loop "A" suction

line requires the removal/disassembly of four guide supports (one for each steam line) and one variable support (for the RR loop "A" suction line) in order to gain access to the required examination areas. For Item B10.20: In order to perform the required surface examination of the shock suppressor lugs on Reactor Recirculation Pump B the entire insulation surrounding the pump bowl, which is located in a high radiation area, would have to be removed.

ALTERNATE EXAMINATIONS

For Item B10.10: Perform a surface examination of each of the weld areas to the maximum extent feasible without removal or disassembly of the associated component supports. Table 1 identifies the examination coverage

feasible based on examinations that have been completed to date and on what is projected to be done for the remaining welds to be examined in the next scheduled refueling outage. For Item B10.20: Utilize ASME Code Case N-509 issued by the ASME on November 25, 1992, which allows examination of integral attachments on a sample basis.

JUSTIFICATION FOR THE GRANTING OF
RELIEF

For Item B10.10 - Main steam line attachments: Based on the size, design and installation of the Main Steam guide supports, disassembly and removal of these guide supports (one for each steam line) would be a complicated

and tedious process, involving a difficult procedure to implement. (A drawing of one of the main steamline guide supports is attached as Figure 1.) Further, although none of the guide supports were removed for any of the attachment weld examinations performed to date for the main steam lines, based on the previous disassembly of a similar guide support in another system, Illinois Power Company (IP) believes that completion of the process would require replacing

the Lubron plates for the supports, which are difficult to procure. The intent of the ASME Section XI examination is to provide assurance of structural integrity rather than require disassembly and reassembly of properly functioning components/supports, possibly adversely affecting their operability. Disassembly of a properly functioning guide support is thus not judged to be prudent. In addition, due to the extensive effort required, disassembly and reassembly of the main steam line guide supports would likely extend the duration of the outage and result in unnecessary radiation exposure.

For Item B10.10 - Reactor recirculation piping attachment: The variable support for the associated Reactor Recirculation system pipe is a load-carrying support. In order to remove this support, a temporary support would be required to be installed. The variable support is located 13 feet above the floor elevation and is in a high radiation area. Several man-hours would have to be expended to erect scaffolding, remove insulation, install a temporary support and transfer the piping load prior to removing the variable support. Further effort would then be required for system restoration. The total dose that would be incurred is estimated to be five (5) man-rem. Examining 65 percent of the weld area (to facilitate examination of the obstructed weld area for the attachment/lug on the associated reactor recirculation line) should be sufficient to establish the integrity of the lug weld without significantly reducing the safety margin provided by such verification.

For Item B10.20 - Shock suppresser lugs on RR Pump B: The ASME published Code Case N-509, "Alternative Rules for the Selection and Examination of Class 1, 2, and 3 Integrally Welded Attachments Section XI, Division 1", on November 25, 1992. This Code Case requires examination of a sample of 10% of the welded attachments on pumps in lieu of 100% examination. IP has performed examination of all the welded attachments on RR Pump A (which is essentially identical to RR Pump B). This is equivalent to a 50% sample of the Reactor Recirculation System. Utilizing Code Case N-509 will reduce the undue burden on IP without reducing the safety margin provided by verification of weld integrity.

IMPLEMENTATION SCHEDULE

The requested relief and proposed use of an alternate examination approach are for the first ten-year interval at CPS.

TABLE 1
CODE CATEGORY B-K-1
EXAMINATION COVERAGE

<u>Weld Number</u>	<u>System Description</u>	<u>Estimated Percentage of Area Examined Due To Component Support (s) Interference</u>
IMS-A-7PR-WA	Main Steam	25
IMS-B-8PR-WA	Main Steam	*
IMS-C-8PR-WA	Main Steam	27
IMS-D-7PR-WA	Main Steam	27
IRR-A-PR-1-WA	Reactor Recirculation	65

- * This item is scheduled for examination during the next refueling outage. IP expects the percentage of area examined to be 25 to 27 percent.

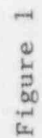


Figure 1

ILLINOIS POWER COMPANY
Clinton Power Station

ASME Section XI Relief Request

RELIEF REQUEST 4009 (Revision 0)

SYSTEM/ COMPONENT(s) FOR WHICH RELIEF
IS REQUESTED

F023A, 1B33-F060A, 1B33-F067A, 1E12-F008, 1E12-F010, 1E12-F039A, 1E12-F041A, 1E21-F007, 1E22-F036 and 1G33-F102

CODE REQUIREMENT

Examination Category B-L-2 & B-M-2, Item B12.20 & B12.50, Code Class 1: 1 Pump, Reactor Recirculation Pump A (1B33-C001A) or Reactor Recirculation Pump B (1B33-C001B), and 11 Valves, 1B21-F011A, 1B33-1 valve body internal surfaces (Category B-M-2) during the

first ten-year inspection interval.

CODE REQUIREMENT FROM WHICH RELIEF IS
REQUESTED

Relief is requested from performing the Code-required visual (VT-3) examination of pump and valve internal surfaces on the items identified above.

BASIS FOR RELIEF

In order to perform the required visual (VT-3) examinations, Clinton Power Station personnel would have to disassemble the affected components. Hundreds of man-hours and several man-rem of exposure would be expended

for the erection/dismantling of scaffolding, removal/reinstallation of insulation, and disassembly/reassembly of the pump and valves only to perform these VT-3 examinations. Illinois Power Company (IP) has determined that the hardship involved in performing the VT-3 examinations is unwarranted and that it is imprudent to disassemble properly functioning pumps or valves just for the sake of such examinations.

ALTERNATE EXAMINATIONS

In lieu of the requirements of ASME Section XI, 1980 Edition through Winter 1981 Addenda, for Categories B-L-2 and B-M-2, IP proposes to utilize ASME Section XI, 1989 Edition, which has been incorporated into

10 CFR50.55a (b).

JUSTIFICATION FOR THE GRANTING OF
RELIEF

It is imprudent to disassemble properly functioning pumps or valves only to perform VT-3 visual examinations of internal surfaces, nor is it good ALARA practice to incur exposure of several man-rem only for such examinations.

The 1989 Edition of ASME Section XI reflects a change to the requirements for VT-3 examinations such that VT-3 internal-surface examinations of pumps and valves are only required when pumps and valves are being disassembled for maintenance. It would be an unnecessary burden on Illinois Power to disassemble/reassemble the identified pump and valves solely to comply with the 1980 Edition (through Winter 1981 Addenda) of ASME Section XI in light of the fact that the NRC has incorporated a newer (1989) Edition into 10CFR50.55a(b) which only requires the VT-3 visual examinations to be performed when the pumps or valves are being disassembled for maintenance. Revision of the Code and its acceptance by the NRC and the industry confirms that performance of VT-3 examinations during pump or valve disassembly for maintenance is sufficient for examining internal surfaces for component integrity relative to disassembling

components just to perform such examinations. Considering the potential effects of unnecessary disassembly and the radiation exposure involved in performing such work and in performing the VT-3 examinations themselves on a periodic basis, there does not appear to be any overall safety benefit to be gained by performing VT-3 examinations in accordance with the Edition of the Code to which IP is currently committed (for the first ten-year interval).

IMPLEMENTATION SCHEDULE

Relief is requested for the first ten-year interval at CPS.

ILLINOIS POWER COMPANY
Clinton Power Station

ASME Section XI Relief Request

RELIEF REQUEST 4010 (Revision 0)

SYSTEM/ COMPONENT(s) FOR WHICH RELIEF
IS REQUESTED

V2B and RPV-V2C.

Examination Category B-A, Item B1.11 and B1.12 Code Class 1, Reactor Pressure Vessel (RPV) circumferential welds RPV-C1 and RPV-C2, and vertical welds RPV-V1A, RPV-V1B, RPV-V2A, RPV-

CODE REQUIREMENT

during the first ten-year inspection interval as defined by Figure IWB-2500-1 and IWB-2500-2.

ASME Section XI, 1980 Edition through Winter 1981 Addenda, Table IWB-2500-1, Examination Category B-A, Item B1.11 & B1.12, requires 100% volumetric examinations of RPV circumferential and vertical welds

CODE REQUIREMENT FROM WHICH RELIEF IS
REQUESTED

Relief is requested from performing the Code-required volumetric examination of the RPV circumferential and vertical welds identified above.

BASIS FOR RELIEF

exposure of 20 man-rem to perform the required inspections. In addition, IP estimates the cost of performing examinations of these welds to be approximately \$400,000.

The subject welds are located behind the biological shield wall (surrounding the RPV) where the radiation levels are extremely high. Even after nozzle flushing, Illinois Power Company (IP) estimates a personnel

On September 28, 1995, the BWR Vessel and Internals Project (BWRVIP) submitted a topical report to the NRC, entitled "BWR Vessel and Internals Project, BWR Reactor Pressure Vessel Shell Weld Inspection Recommendations (BWRVIP-05)", EPRI TR-105697, which recommends alternative examination criteria for Category B-A, Item B1.11 and B1.12 welds. The conclusions and recommendations in this report are consistent with IP's request for relief to reduce the scope of required examinations for the applicable welds.

ALTERNATE EXAMINATIONS

IP proposes to adopt an inspection program of reduced scope for the number of RPV circumferential and vertical welds to be examined, in accordance with the recommendations of EPRI TR-105697.

JUSTIFICATION FOR THE GRANTING OF
RELIEF

Clinton Power Station (CPS) has four (4) circumferential welds per Item No. B1.11 (RPV-C1 through RPV-C4) and 11 vertical welds per Item No. B1.12 (RPV-V1A through RPV-V4C). During plant construction, as required by ASME Section III, all of these welds were examined by surface and radiographic examination methods, and accepted as free of any manufacturing flaws. As part of the Preservice Examination Plan, CPS also performed ultrasonic examination on these welds, and they were accepted for placing the RPV in service. Further, a hydrostatic test at over 1500 psi was satisfactorily performed in accordance with ASME Section

III requirements. With respect to assembly of the RPV itself, the vessel was built under rigorous requirements for fabrication and examination, and post-weld heat treatment during fabrication assured that shell weld and cladding residual stresses were minimized. These controls and actions, along with all of the above-noted surface, radiographic, and ultrasonic examinations, greatly reduced the likelihood of large flaws existing in the shell weld, especially at the vessel surfaces, and thus contributed to providing assurance of RPV integrity.

During the first ten-year inspection interval (i.e., during refueling outages RF-2 and RF-4), the following welds were ultrasonically examined and accepted for continued operation:

Circumferential Welds per Item No. B1.11

RPV-C3
RPV-C4

Vertical Welds per Item No. B1.12

RPV-V3A, V3B, V3C
RPV-V4A, V4B, V4C

The above welds comprise 50% of the circumferential welds for Item B1.11 and almost 55% of the vertical welds for Item B1.12. The examinations performed for these welds (as well as the ultrasonic examinations performed as part of Preservice Inspection Plan) were performed in accordance with Reg Guide 1.150. In addition, other welds or portions of other welds on the RPV were examined by ultrasonic method during RF-2 and RF-4 and accepted for continued service. These include 50% of the shell-to-flange weld, over 60% of the top-head-to-flange weld, some top-head welds, portions of the bottom-head-to-support-skirt weld, and several nozzle-to-shell welds.

A combination of BWR operating characteristics and good material properties makes CPS inherently flaw tolerant during operation. The operating characteristics of a BWR like CPS preclude extreme brittle fracture combinations of pressure and temperature (due to saturated conditions for operating BWRs), such that the periodic RPV pressure test is the most limiting condition. These favorable operating characteristics are acknowledged in EPRI TR-105697. Further, the EPRI report discusses a survey of vessel inspection information that was conducted for BWRs. The following results were reported:

For the 24 BWRs included in the survey, a cumulative total RPV weld length of 14,565 ft is currently required to be examined. Of the total 14,565 ft of weld, 4770 ft has undergone full Code examination. Another 487 ft of weld has undergone partial Code examination. The total length of weld examined to date therefore equals 5257 ft, or 36% of the total possible weld length. In the 5257 ft of weld examined to date, only 16 indications were found that did not meet the acceptance criteria of ASME Section XI, IWB-3500. All 16 of these indications were subsurface flaws that were shown to be acceptable by meeting the criteria of IWB-3600.

It is clear from the survey results that a substantial amount of examination has been performed to verify the integrity of BWR Vessels, and that only a negligible number of indications have been detected as a result. Per EPRI TR-105697, it has been concluded that the Code-required volumetric inspection scope for BWR RPV shell welds (Category B-A, Item Numbers B1.11 & B1.12) during each ten-year interval may be replaced with the following volumetric inspection requirements, without a significant impact on BWR integrity:

1. Inspect 50% of longitudinal seam welds (Category B-A, Item No. B1.12) in the reactor vessel shell. This requirement maybe satisfied by inspecting 50% of the total weld length of this category of weld, using any combination of the total number of welds or percentage of each weld inspected to achieve this overall percentage.
2. Inspect 0% of the circumferential seam welds (Category B-A, Item No. B1.11) in the reactor vessel shell.
3. Inspection procedures used for these examinations shall be qualified such that flaws relevant to vessel integrity shall be reliably detected and sized. Personnel implementing these procedures shall be qualified in the use of these procedures.

Attached Table 1, which is based on Table 9-1 in EPRI TR-105697, identifies the calculated probabilities of RPV failures and leakage per 40 vessel years due to postulated crack development and growth under each of the two evaluated inspection programs, i.e., the Code-required program versus the BWRVIP/EPRI-recommended program. Based on the resultant RPV failure probability of $1.151 \times 10^{-7}/40$ vessel years (for longitudinal and circumferential welds) as obtained for the BWRVIP/EPRI proposed inspection program, the RPV failure probability under the proposed program would still be more than two orders of magnitude less than the NRC safety goal for reactor vessel failure of 1×10^{-6} per vessel year or 4×10^{-5} in 40 vessel years.

As previously noted, IP has ultrasonically examined 50% of the RPV circumferential welds and almost 55% of the RPV longitudinal welds, based on examinations completed during RF-2 and RF-4. This is significantly more than the number of welds required per EPRI TR-105697 wherein an examination of 0% and 50% of the circumferential and longitudinal welds, respectively, was shown to still support the safety goal for failure probability of the RPV. Considering the estimated cost of examining the remaining welds, both in dollars and in person-rem, the hardship or cost of performing the additional inspections is not justified relative to the marginal safety benefit estimated to be gained by doing the additional inspections.

IMPLEMENTATION SCHEDULE

Relief is requested for the first ten-year interval at CPS.

TABLE 1
EFFECT OF ISI PROGRAM PROPOSED PER EPRI TR-105697

	Probability of Failure Per 40 Vessel Years		Probability of Leakage Per 40 Vessel Years	
	Code Requirements ¹	Proposed Program ²	Code Requirements ¹	Proposed Program ²
Long. Welds (Irradiated)	5.68×10^{-8}	1.15×10^{-7}	1.45×10^{-6}	1.34×10^{-5}
Long. Welds (Unirradiated)	1.07×10^{-10}	1.13×10^{-10}	5.01×10^{-6}	2.39×10^{-5}
Circumferential Welds (All)	1.26×10^{-40}	1.10×10^{-40}	1.94×10^{-22}	2.12×10^{-22}
Totals	5.69×10^{-8}	1.151×10^{-7}	6.46×10^{-6}	3.73×10^{-5}

1. 90% Inspection of all Longitudinal and Circumferential Welds

2. 50% Inspection of Longitudinal Welds; No Inspection of Circumferential Welds

ILLINOIS POWER COMPANY
Clinton Power Station

ASME Section XI Relief Request

RELIEF REQUEST 4011 (Revision 0)

SYSTEM/ COMPONENT FOR WHICH RELIEF IS
REQUESTED

Examination Category C-A, Item C1.20, Code Class 2 - head-to-vessel weld on Residual Heat Removal (RHR) Heat Exchanger A, weld number HEA-1.

CODE REQUIREMENT

ASME Section XI, 1980 Edition through Winter 1981 Addenda, requires ultrasonic examination of the head-to-vessel weld on RHR Heat Exchanger A during the first ten-year interval.

CODE REQUIREMENTS FROM WHICH RELIEF
IS REQUESTED

Relief is requested from performing ultrasonic examination of approximately 3% of the examination volume since only approximately 87% of the required examination volume can be examined by ultrasonic examination.

BASIS FOR RELIEF

Four permanently welded/installed lifting lugs interfere with the ultrasonic examination. To perform examination of the entire volume, the lifting lugs would have to be removed by grinding. A drawing of a representative lifting

lug is attached as Figure 1.

ALTERNATE EXAMINATION

Perform the ultrasonic examination of the accessible area to the maximum extent feasible without removing the permanently installed lifting lugs.

JUSTIFICATION FOR THE GRANTING OF
RELIEF

ASME Code Case N-460 has been incorporated into Regulatory Guide 1.147, Rev. 11 dated October, 1994. This Code Case allows a reduction of the examination area of up to 10%. Another 3% reduction in the examination area for

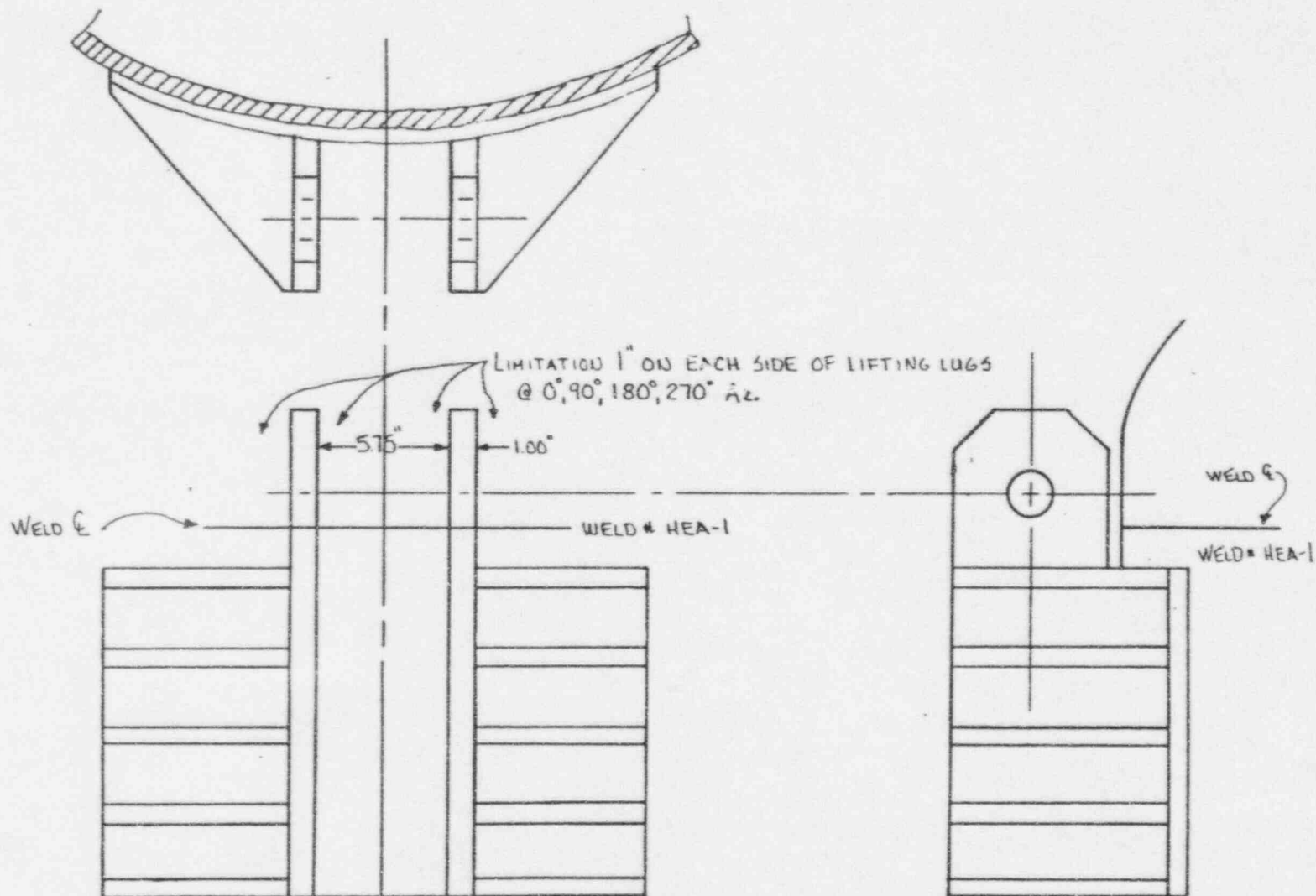
this weld would not significantly impact the effectiveness of the examination and should thus not compromise safety. To examine the required 3% additional examination area, Clinton Power Station (CPS) personnel would have to remove the four lugs by grinding. This would require erecting very large scaffolding all around the heat exchanger and removing an extensive amount of insulation. Further, this RHR heat exchanger is located in a high radiation area. All of this effort to support and perform examination of the additional weld area would thus require Illinois Power Company to expend many unnecessary man-hours and incur a significant amount of exposure (estimated to be 3-4 man-rem).

IMPLEMENTATION SCHEDULE

Relief is requested for the first ten-year interval at CPS

RHR "A"
HEAT EXCHANGER

Q @ 0°, 90°, 180°, 270° Az.



BY:

Paul Valdez

LEVEL:

II

DATE:

1/3/89

PAGE

N/A

OF N/A

Figure 1

ILLINOIS POWER COMPANY
Clinton Power Station

ASME Section XI Relief Request

RELIEF REQUEST 4012 (Revision 0)

SYSTEM/ COMPONENT FOR WHICH RELIEF IS
REQUESTED

Examination Category C-C, Item C3.30 - Integral attachments on Class 2 pump casing, i.e., on the Reactor Core Isolation Cooling (RCIC) pump, weld number RCIC-1A(1-4).

CODE REQUIREMENT

ASME Section XI, 1980 Edition through Winter 1981 Addenda, requires surface examination of integral attachments during the first ten-year interval.

CODE REQUIREMENTS FROM WHICH RELIEF
IS REQUESTED

Relief is requested from performing surface examination of the integral attachment welds for approximately 6% of the examination area since only 84% of the examination area can be examined by surface examination method.

BASIS FOR RELIEF

There are four identical lugs (integral attachments) welded to the RCIC pump casing which are utilized to mount the pump to its pedestal. Once the pump is installed, the lower side of the weld (on each of the four lugs) is not accessible

for examination. In order to perform the examination on the lower side, the pump itself would have to be removed from the pedestal. Attached Figure 1 is a drawing and photograph indicating the positions of the pump lugs on the RCIC pump casing. Figure 2 shows what was examined for each of the lug welds for the surface examinations performed to date.

ALTERNATE EXAMINATIONS

Perform the surface examination of the accessible area to the maximum extent feasible without removing the pump from its pedestal.

JUSTIFICATION FOR THE GRANTING OF
RELIEF

To gain access to the lower side of the lugs, the pump would have to be removed from the pedestal. Apart from performing the examination itself, this would require disconnecting the piping from the pump, re-installing the

pump back on the pedestal, reconnecting the piping, and verifying that everything is installed properly and meets design requirements. This process would require Illinois Power Company (IP) to expend several man-hours and would result in unnecessary radiation exposure (estimated to be approximately 2 man-rem). NRC has incorporated Code Case N-460, "Alternative Examination Coverage for Class 1 and 2 welds", into Regulatory Guide 1.147, Rev. 11 dated October, 1994. This Code Case allows a reduction in the examination coverage up to 10%. In the case of this weld, RCIC-1A (1-4), IP cannot perform 16% of the examination area due to an interference with the pedestal. A reduction of another 6% in the examination coverage will not significantly reduce the margin of safety provided by performing the surface examination for verifying weld integrity.

IMPLEMENTATION SCHEDULE

Relief is requested for the first ten-year interval at Clinton Power Station.

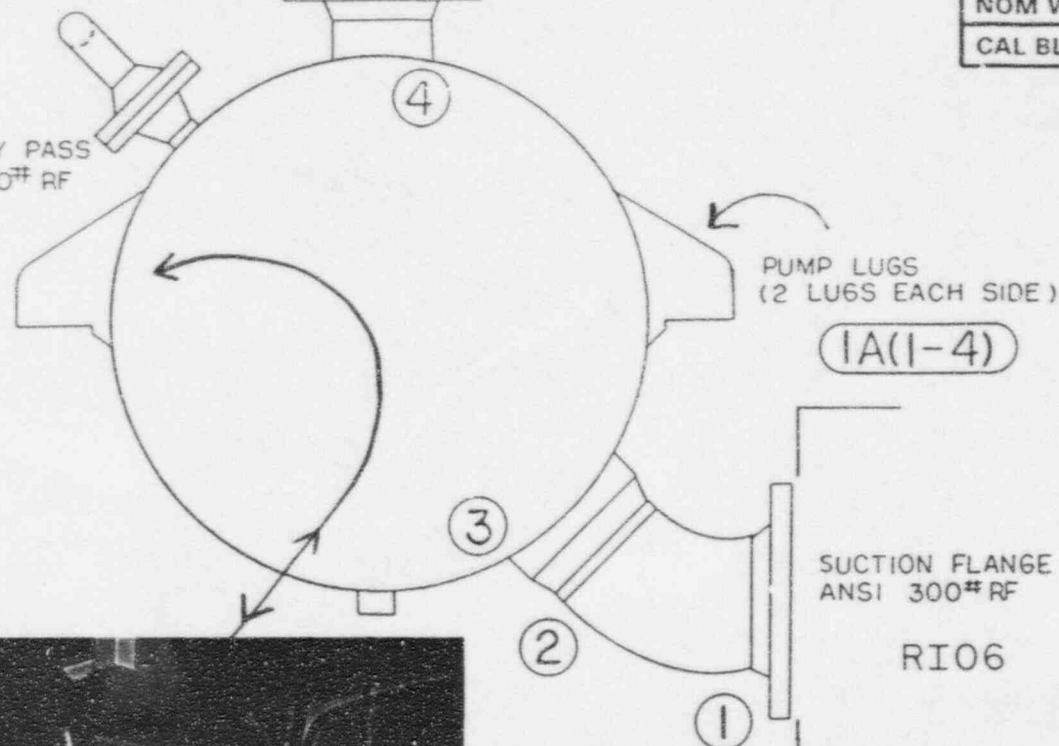
ACCESS INFORMATION

RI08

FIG. RI-08-3

DISCHARGE FLANGE
ANSI 900# SG

SCI60 BY PASS
1 1/4" -1500# RF



SUCTION FLANGE
ANSI 300# RF

RI06

THIS DRAWING HAS BEEN REDRAWN
FROM FORMER DRAWING NUMBER

B-78

FIGURE NO.: RI-08-5

REVISION NO.: 0 DATED: 2-3-92

P&ID NO.:

REFERENCE DWG. NO.:

Figure 1

SIZE:

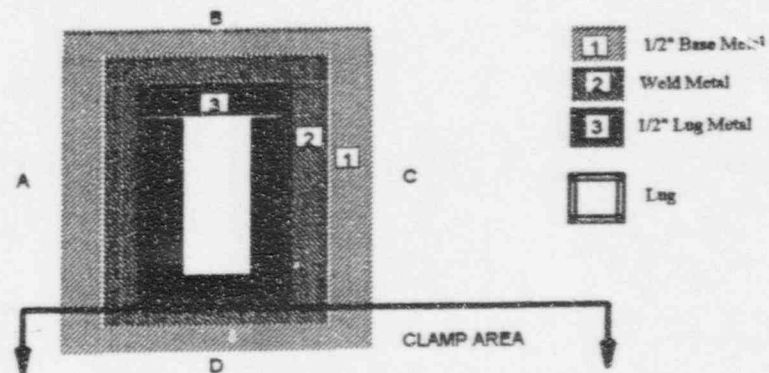
SCH.:

MAT.:

ASTM SPEC:

NOM WALL:

CAL BLK:



TOTAL EXAMINABLE AREA

	LENGTH		WIDTH		
A1	9.5	x	0.5	=	4.75
A2	8.5	x	0.5	=	4.25
A3	7.5	x	0.5	=	3.75
			TOTAL		12.75

B1	23	x	0.5	=	11.5
B2	20	x	0.5	=	10
B3	17	x	0.5	=	8.5
			TOTAL		30

C1	9.5	x	0.5	=	4.75
C2	8.5	x	0.5	=	4.25
C3	7.5	x	0.5	=	3.75
			TOTAL		12.75

D1	8	x	0.5	=	4
D2	7	x	0.5	=	3.5
D3	6	x	0.5	=	3
			TOTAL		10.5

TOTAL AREA = A+B+C+D x 4 LUGS

TOTAL AREA = 264

TOTAL CODE COVERAGE = 64.09%

TOTAL AREA EXAMINED

	LENGTH		WIDTH		
A1	9.5	x	0.5	=	4.75
A2	8.5	x	0.5	=	4.25
A3	7.5	x	0.5	=	3.75
			TOTAL		12.75

B1	23	x	0.5	=	11.5
B2	20	x	0.5	=	10
B3	17	x	0.5	=	8.5
			TOTAL		30

C1	9.5	x	0.5	=	4.75
C2	8.5	x	0.5	=	4.25
C3	7.5	x	0.5	=	3.75
			TOTAL		12.75

D1	0	x	0.5	=	0
D2	0	x	0.5	=	0
D3	0	x	0.5	=	0
			TOTAL		0

TOTAL AREA = A+B+C+D x 4 LUGS

TOTAL AREA = 222

Figure 2

ILLINOIS POWER COMPANY
Clinton Power Station

ASME Section XI Relief Request

RELIEF REQUEST 4013 (Revision 0)

SYSTEM/ COMPONENT FOR WHICH RELIEF IS
REQUESTED

Examination Category C-G, Item C6.10 - Pump casing weld on Class 2 pump, i.e., on the "A" Residual Heat Removal (RHR) pump, weld number RHR-A-2.

CODE REQUIREMENT

ASME Section XI, 1980 Edition through Winter 1981 Addenda, requires surface examination of the pump casing welds during the first ten-year interval.

CODE REQUIREMENTS FROM WHICH RELIEF
IS REQUESTED

Relief is requested from performing surface examination of approximately 3% of the examination volume for this weld since only approximately 87% of the examination volume can be examined by surface examination method.

BASIS FOR RELIEF

A permanently installed instrument line interferes with the surface examination of this weld. To perform a full Code-required examination of this area, the instrument line would have to be cut out to gain access.

ALTERNATE EXAMINATION

Perform the surface examination of the accessible area to the maximum extent feasible without removing the permanently installed instrument line.

JUSTIFICATION FOR THE GRANTING OF
RELIEF

Code Case N-460 has been incorporated into Regulatory Guide 1.147, Rev. 11 dated October, 1994. This Code Case allows a reduction in the examination area of up to 10%. Another 3% reduction in the examination area

would not significantly reduce the effectiveness of the examination for verifying weld integrity. To examine the Code-required 3% additional examination area, Clinton Power Station (CPS) personnel would have to cut out the noted instrument line and weld it back. Further, the effort required would result in unnecessary radiation exposure to plant personnel. Relative to the little or negligible safety benefit gained by examining the obstructed weld area, removal and repair of the instrument line, along with the radiation exposure incurred, is not justified.

IMPLEMENTATION SCHEDULE

Relief is requested for the first ten-year interval at CPS.