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JAFP-01-0262

U.S. Nuclear Regulatory Commission
ATT: Document Control Desk
Mail Stop O-P1-17
Washington, DC 20555-0001

Subject: James A. FitzPatrick Nuclear Power Plant
NRC Docket No. 50-333
Status Report on Tooling Development
Alternatives in Accordance with 10CFR50.55a(a)(3)(i) and
Relief from ASME Section XI Code Regarding
Inspection of RPV Vertical Shell Welds – (Relief Request No. 18)

References:

1. USNRC letter to NYPA, dated February 29, 2000, regarding "Relief Requests Nos. 18 and 19 – For Augmented Inspection of the Axial Shell Welds and for Inspection of the Vessel Shell-to-Flange Weld in the Reactor Vessel of the FitzPatrick (TAC No. MA6270)."

2. NYPA letter to USNRC, dated August 5, 1999, (JPN-99-026) "Proposed Alternatives in accordance with 10CFR50.55a(a)(3)(i) and Relief From ASME Section XI Code Regarding Inspection of RPV Vertical Shell and Shell to Flange Welds."

Dear Sir:

Attached is a report outlining the status of "new generation" tooling under development for performing augmented inspections of the axial shell welds on the James A. FitzPatrick nuclear power plant reactor pressure vessel (RPV). The NRC staff requested this report in their SER (Safety Evaluation Report, Reference 1) supporting Relief Request No. 18 for the FitzPatrick (Reference 2).

Entergy Nuclear Operations, Inc. (ENO) plans to use this (or similar) tooling at FitzPatrick during future inspections. ENO is planning to use the outside diameter (OD) inspection tooling during refueling outage 15 (RO15) currently scheduled for October of 2002. Inside diameter (ID) inspection tooling will be available for use during the following (RO16) outage.

Two Kids Codes
IE10
A047

ENO makes no new commitments in this letter. If you have any questions, please contact Mr. Andrew Halliday at 315-349-6055.

Very truly yours,

T. A. Sullivan
Vice President, Operations - JAF

cc: Next page.

Attachments:

1. Status Report on Tooling Development - Alternatives in Accordance with 10CFR50.55a(a)(3)(i) and Relief From ASME Section XI Code Regarding Inspection of RPV Vertical Shell Welds (Relief Request No. 18)

cc: Regional Administrator, Region I
U.S. Nuclear Regulatory Commission
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U. S. Nuclear Regulatory Commission
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Alternatives in Accordance with 10CFR50.55a(a)(3)(i) and Relief From ASME Section XI Code Regarding Inspection of RPV Vertical Shell Welds (Relief Request No. 18)

Entergy Nuclear Operations, Inc.
James A. FitzPatrick Nuclear Power Plant
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1.0 INTRODUCTION

In cooperation with the nuclear industry, Entergy Nuclear Operation, Inc. (ENO) is developing volumetric examination methods to permit access to more than 90 percent of the vertical RPV shell welds in the belt-line region. This report outlines the status of "new generation" tooling under development for performing augmented inspections of axial reactor pressure vessel shell welds at ENO's James A. FitzPatrick nuclear power plant. ENO expects to be able to use the OD (outside diameter) tooling described in this report for reactor vessel weld inspections currently scheduled for October 2002 (RO15). The inside diameter (ID) inspection equipment described here is scheduled to be ready for use during subsequent refueling outages.

The NRC staff requested this report in their safety evaluation (Reference 1), supporting relief request No. 18 for FitzPatrick (Reference 2).

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2.0 BACKGROUND

In August of 1999, the New York Power Authority (NYPA, the FitzPatrick licensee at the time) submitted inservice inspection relief request No. 18 (Reference 2) for reactor pressure vessel (RPV) shell weld examinations. Relief request No. 18 asked for additional time to review and evaluate alternatives that could provide greater vertical weld examination coverage. Relief request 18 was prepared and submitted because complete (essentially 100 percent) inspection of vertical reactor vessel welds was not possible without disassembling or removing internal interferences, removal of the permanent bio-shield wall or modification of the inspection equipment.

In February of 2000 (Reference 1), the NRC staff approved relief request No. 18 together with a safety evaluation supporting the staff's conclusions. The safety evaluation concluded that NYPA provided an acceptable demonstration that its alternative examinations would provide assurance of structural integrity and therefore an acceptable level of quality and safety. In the safety evaluation, the NRC staff also asked that a status report summarizing the advancements in the inspection equipment being considered for the year 2004 inspections, be submitted by January 2002.

These new tools will help improve ENO's ability to inspect FitzPatrick's vertical RPV welds. ENO expectation is that these new tools will increase the percentage of "inspectable" RPV shell welds in the belt-line region from about 33% - 52% to greater than 90%. While these, or similar, tools may be used in the inspection of other commercial RPVs it is important to point out that some of these tools were developed specifically for the inspection of the FitzPatrick reactor vessel by ENO, NYPA or their contractors.

In March 2000 NYPA (previous owner of the FitzPatrick) awarded a contract to a major domestic vendor to perform RPV shell weld volumetric UT examination of axial vertical welds at FitzPatrick. This vendor was selected out of a total of four vendors because this vendor demonstrated willingness to develop new state-of-the-art tooling that would maximize UT scanning of welds at areas where conventional tooling could not access the welds due to interferences and obstructions.

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3.0 A NEW GENERATION OF SCANNING TOOLS

These new scanner tools are smaller, thinner, and lighter. They use phased array ultrasonic technique, shear wave methods to maximize scanning coverage. More importantly, they employ flexible delivery systems to improve their ability to access the belt-line region. Similar tooling has been successfully used in the aeronautics industry.

Some of the features of this new tooling are listed below.

Table 1
Features of "New Generation" FitzPatrick Reactor Pressure Vessel
Vertical Weld Inspection Tooling

- Standard UT transducers and/or phase array, with a flexible delivery mast, magnetic wheels and a telescopic arm for greater side reach.
- Unique lightweight/thinner scanner which can be carried by one person, remotely controlled, but only requiring a delivery connector for specific applications.
- A low profile flexible scanner used for aircraft fuselage and wing inspections (for OD use)
- A low profile phased array probe wand that could be used in the access panel region from the vessel
- OD, to increase belt-line coverage beyond areas previously not able to be accessed by present tooling methods used for RPV inspections (clearance less than 1" between vessel OD and insulation).
- A remotely operated manipulator presently used in PWR reactor vessels.
- A retrofitted suction cup scanner presently used for core shroud weld inspections.

Examinations are planned to be conducted from both sides of the RPV wall; from inside diameter (ID) and from outside diameter (OD). This requires development and use of appropriate tooling and methods.

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4.0 OUTSIDE DIAMETER INSPECTION EQUIPMENT

The OD (outside diameter) scanner tooling (with phased array) is essentially complete. Some refinements are planned as a result of the mechanical fit-up test performed at FitzPatrick during refueling outage 14 (October 2000) and final integration from the "Performance Demonstration Initiative" (PDI) scheduled for early 2002.

The scanner is a magnetic wheeled device designed to deploy a low profile ultrasonic scanning head under the RPV OD insulation to the vertical welds. The scanner is remotely controlled through a multi-channel imaging system. The scanning head will deploy two phased array steerable ultrasonic transducers at one time. The scanner will have four independently controlled servomotor drive axes. The scanning head thickness is 3/4 inch. The actual gap between the reactor pressure vessel (RPV) OD wall and the insulation ID is only 7/8 inch. This allows only 1/8 inch clearance for the scanning head to access the weld area behind the insulation.

4.1 FACTORY ACCEPTANCE TEST

A satisfactory tooling factory acceptance/demonstration fit-up test was conducted at the vendor's facility on September 26, 2000. The test included tooling scanner deployment on both, on a FitzPatrick simulated biological shield wall-opening configuration and on an open mock-up.

Photographs of the factory acceptance/demonstration test are attached.

Table 2
Factory Acceptance/Demonstration Photographs

Photograph No.	Description
1.	Computer Set-Up For Data Acquisition
2.	"Go/No-Go" Gauge
3.	Bladders
4.	FitzPatrick Mockup - Recirculation Inlet Nozzle
5.	Scanner Installed on Open Mockup
6.	Scanner on FitzPatrick Mockup
7.	Scanner on FitzPatrick Mockup - Partial Insertion
8.	Scanner on FitzPatrick Mockup - Partial Insertion

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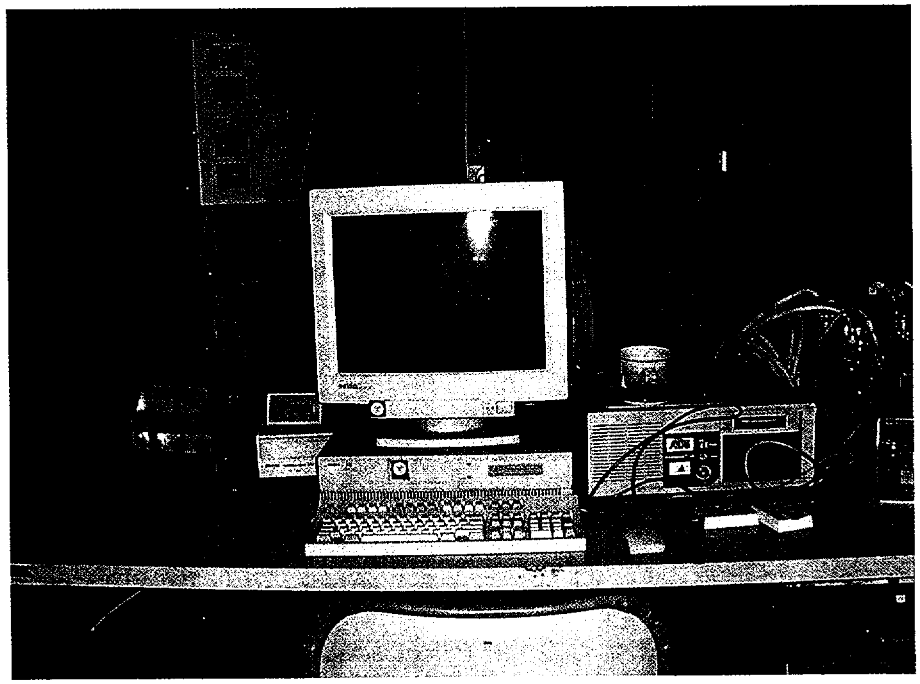

Photo 1 - Computer Set-Up for Data Acquisition

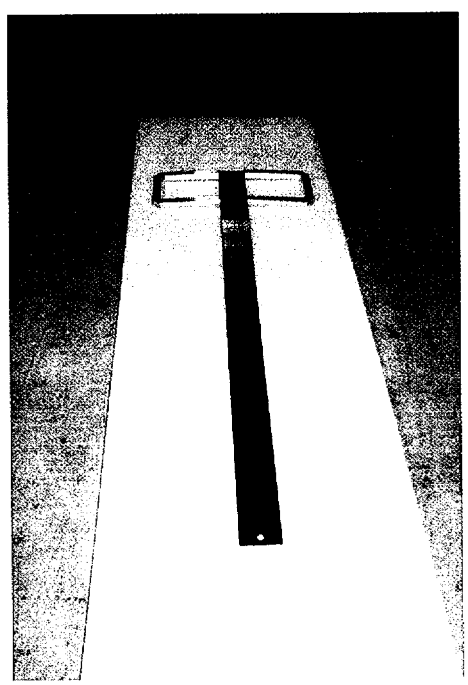

Photo 2 -"Go/No-Go" Gauge

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Photo 3 - Bladders

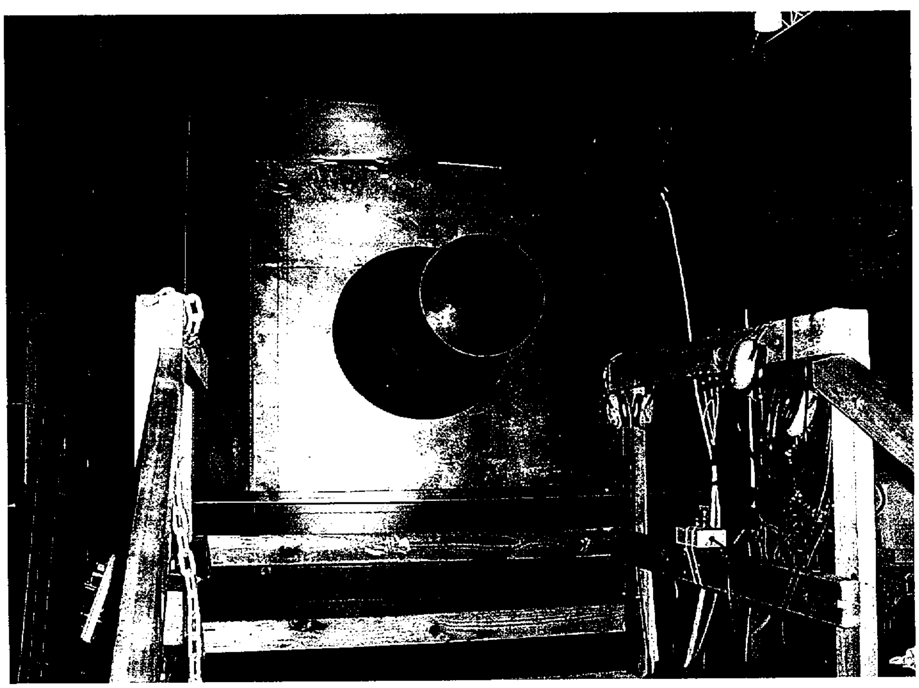

Photo 4 - FitzPatrick Mockup - Recirculation Inlet Nozzle

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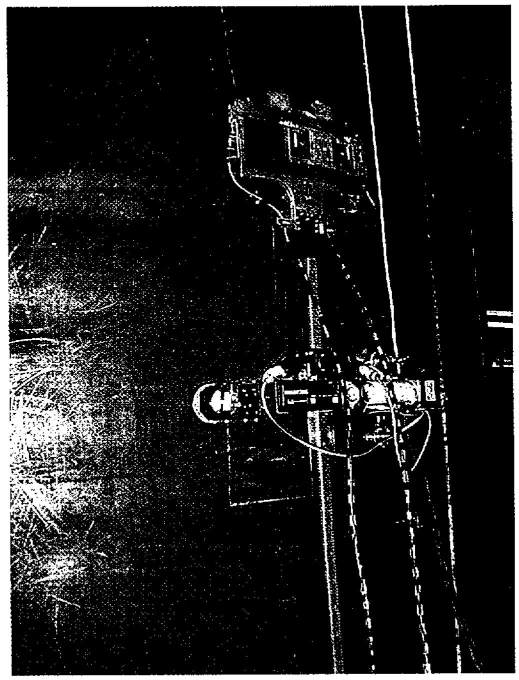

Photo 5 -Scanner Installed on Open Mockup

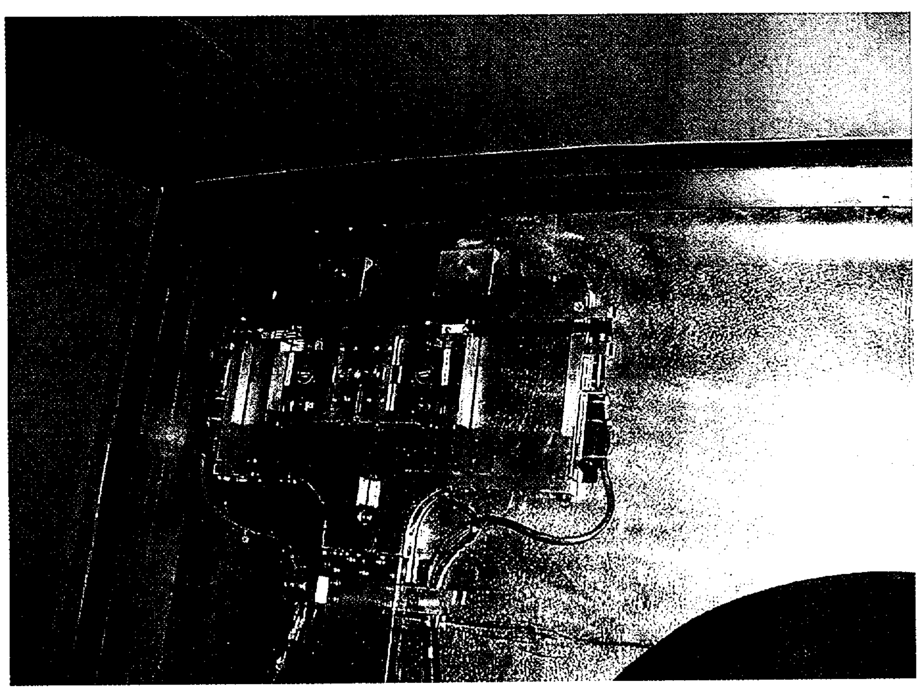

Photo 6 - Scanner on FitzPatrick Mockup

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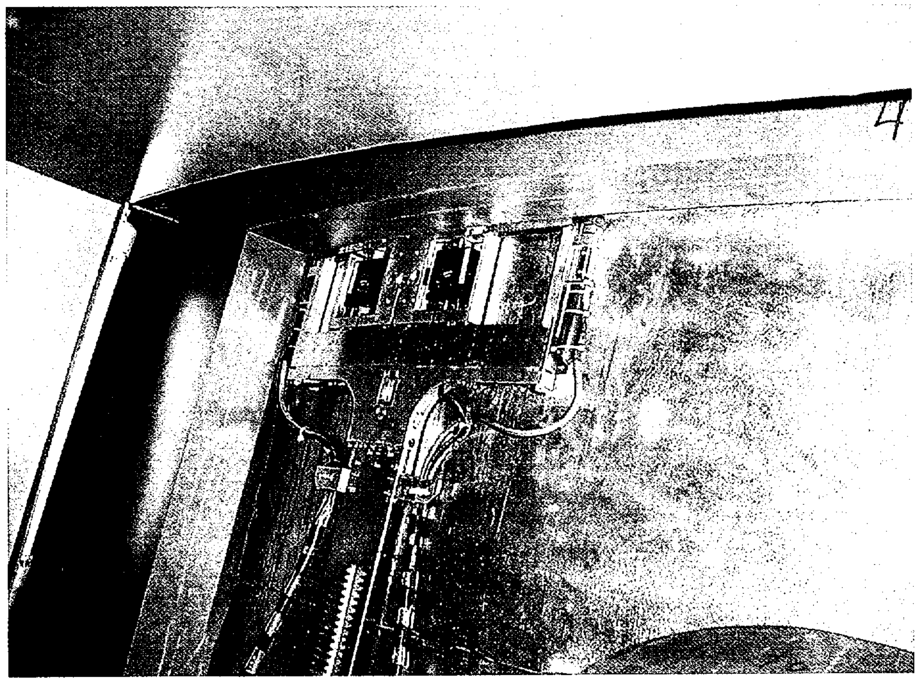

Photo 7 -Scanner on FitzPatrick Mockup - Partial Insertion

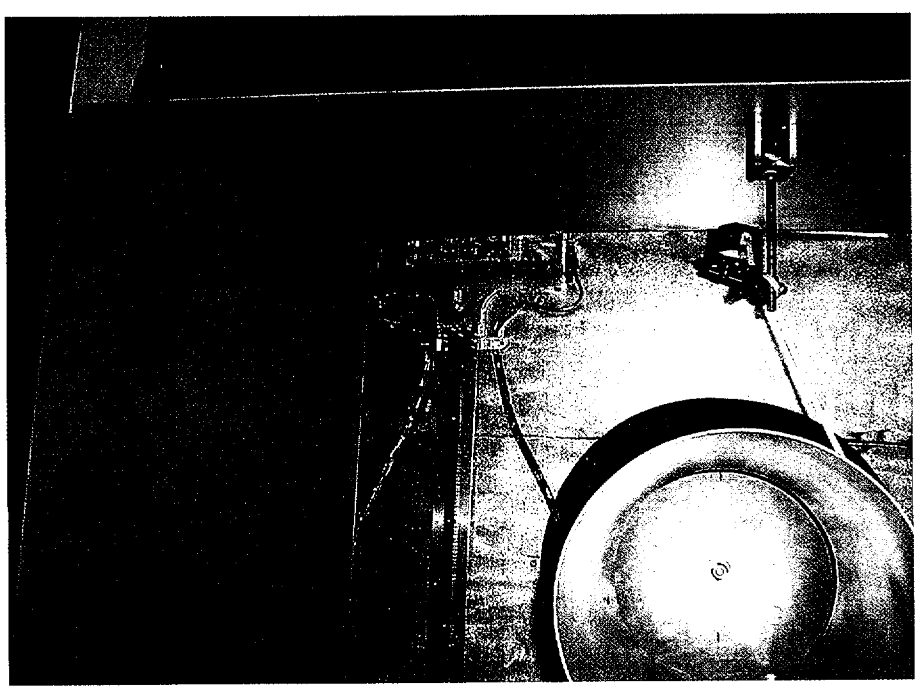

Photo 8 - Scanner on FitzPatrick Mockup - Partial Insertion

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4.2 MECHANICAL FIT-UP TEST

A mechanical fit-up and operational test was successfully performed at FitzPatrick with the OD vessel scanner tooling during refueling outage (RO)14, in October 2000 (Reference 3 and 4).

Biological shield wall openings N2A (recirculation inlet nozzle) and W-5 (RPV weld access) were opened to allow access to respective RPV shell welds. The scanner tooling was tested for fit and remote operability through the N2A opening. A "go/no go" gauge confirmed the need of a temporary structural change in the RPV insulation support bracket to allow tooling accessibility further into belt line area welds. The support bracket encircles the vessel and it is located above the recirculation inlet/outlet nozzle blocking tooling access. Access can be gained by cutting two structural steel insulation support bracket sections. The steel joints will be structurally repaired subsequent to completion of scanning operations.

The engineering package to support the structural change, has already been completed and signed-off. Mock-up tests will be performed prior to implementing the actual engineering package.

Inflatable "bladders" were installed between the RPV wall and its insulation, to expand the gap for scanning head access.

Access during the mechanical fit-up test was limited by high dose rates. Measured dose rates at the N2A recirculation window opening were 500-600 millirem/hr, and 5000 millirem/hr at W-5 opening located higher, within the belt-line region.

Lesson-learned from the fit-up test will be used to keep personnel radiation exposure rates ALARA and to improve scanner access. Photographs of the fit-up test at FitzPatrick during RO14 are listed in Table 3.

Table 3
Fit-up Test Photographs

Photograph No.	Description
9.	Opening N2A - Recirculation Inlet Nozzle
10.	Opening N2A - Close-up at RPV Wall
11.	Rough Positioning Indicator at Opening N2A (View 1)
12.	Rough Positioning Indicator at Opening N2A (View 2)
13.	Opening N2E - Recirculation Inlet Nozzle (View 1)
14.	Opening N2E - Recirculation Inlet Nozzle (View 2)
15.	Opening W-5 - Weld Close-up at RPV Wall
16.	RPV Wall and Insulation Support Bracket at Opening N2A

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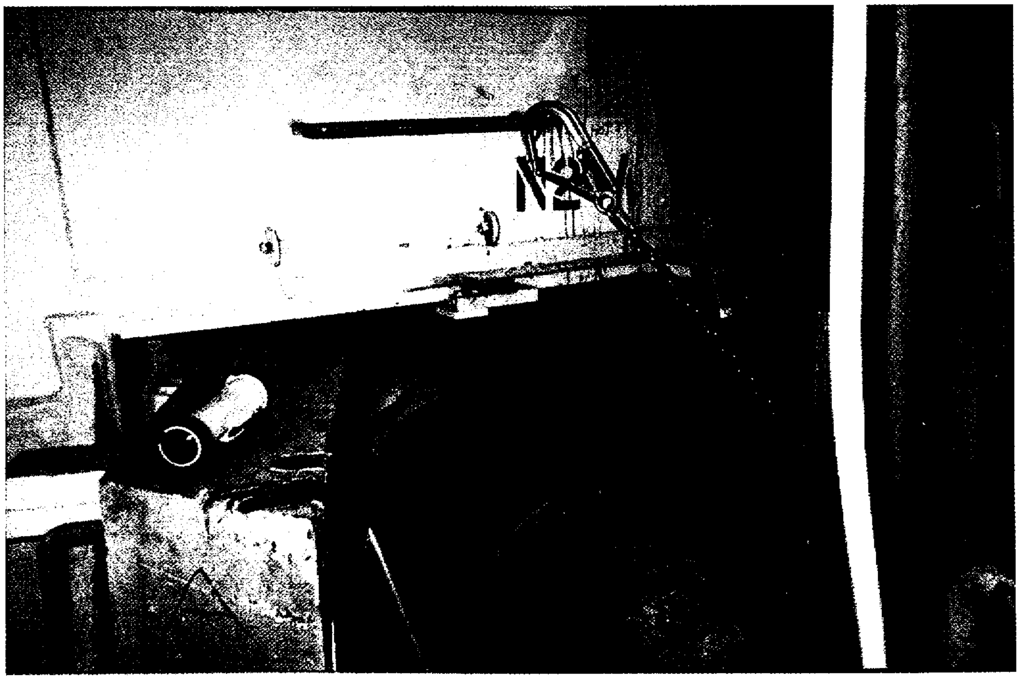

Photo 9 - Opening N2A - Recirculation Inlet Nozzle

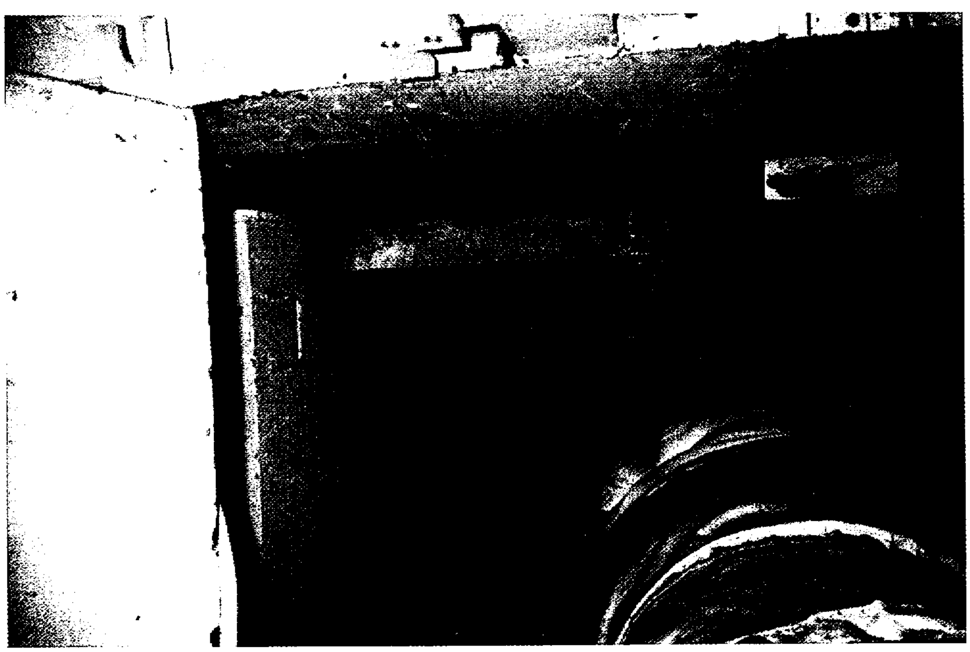

Photo 10 - Opening N2A - Close-up at RPV Wall

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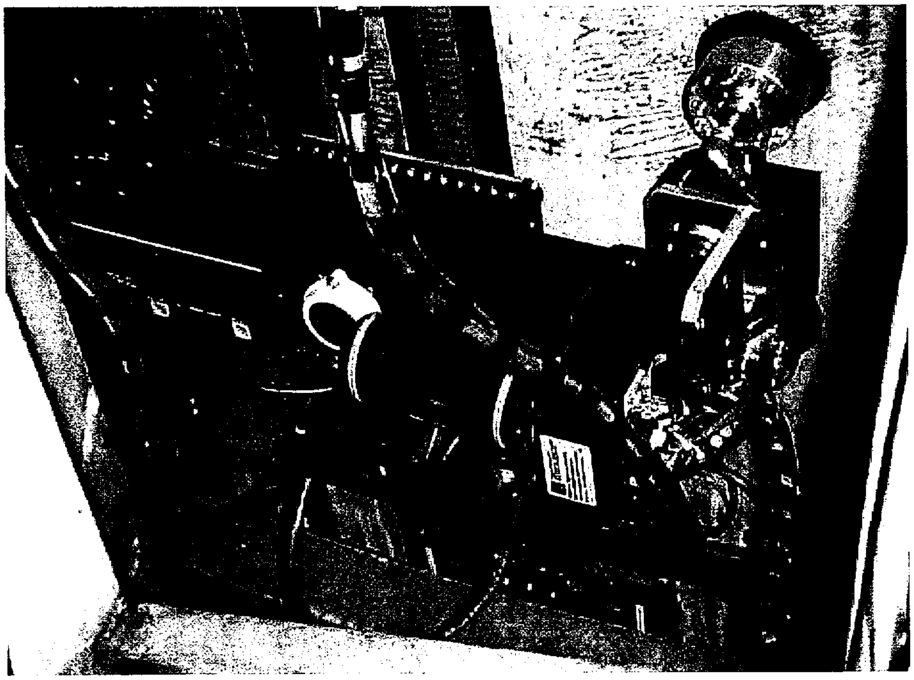

Photo 11 - Rough Positioning Indicator at Opening N2A (View 1)

Photo 12 - Rough Positioning Indicator at Opening N2A (View 2)

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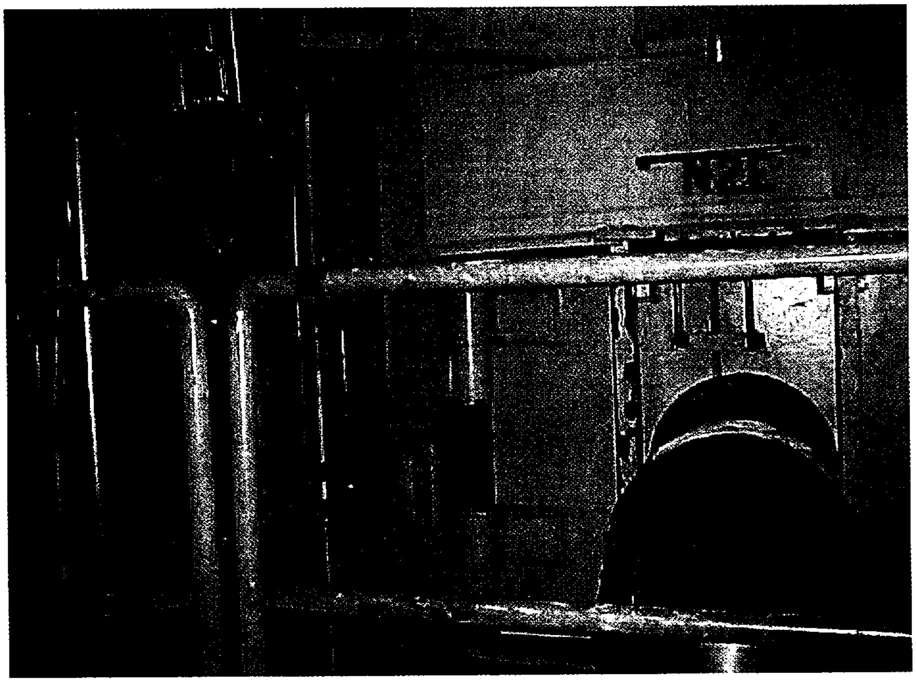

Photo 13 - Opening N2E - Recirculation Inlet Nozzle (View 1)

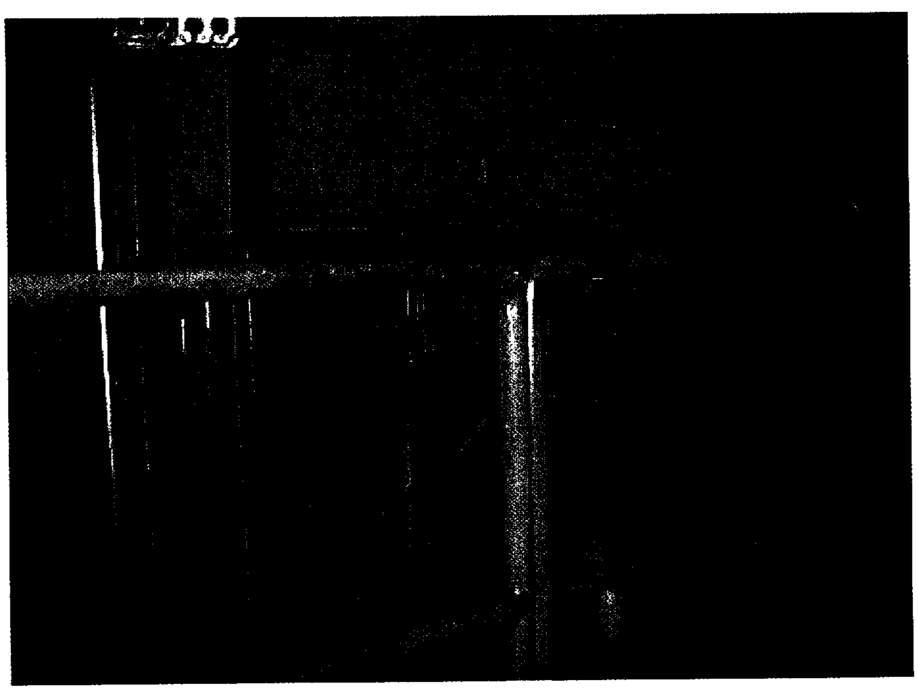

Photo 14 - Opening N2E - Recirculation Inlet Nozzle (View 2)

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Photo 15 - Opening W-5 - Weld Close-up at RPV Wall

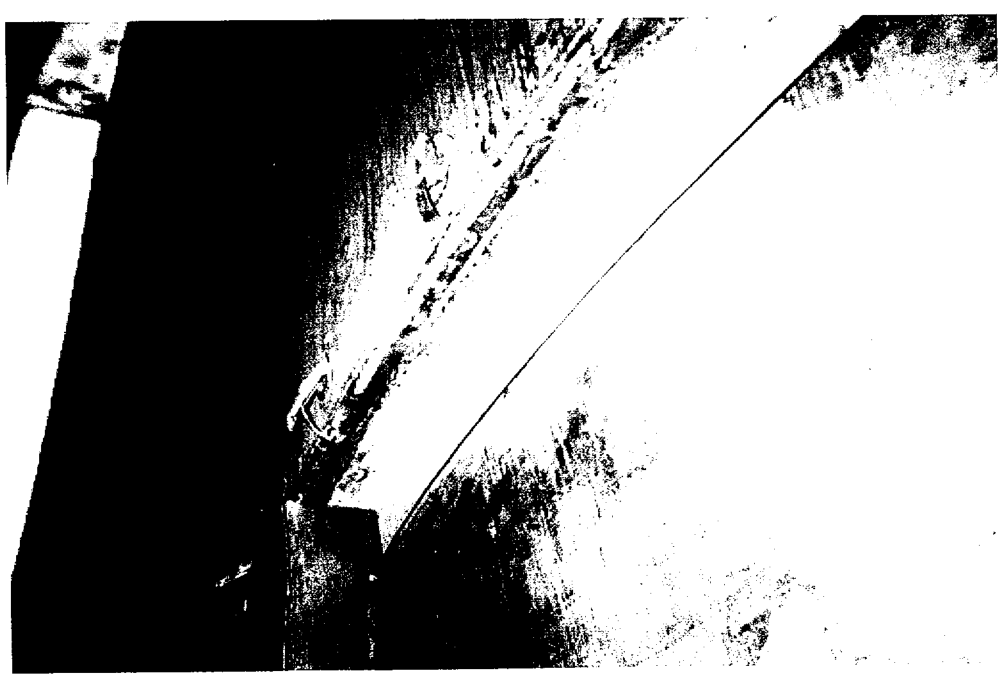

Photo 16 - RPV Wall and Insulation Support Bracket at Opening N2A
Note: 0.25 - 0.5 inch gap between RPV wall and vertical leg of insulation support bracket.

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4.3 ACCESS MODIFICATION

The fit-up test confirmed the need of a temporary structural change in the RPV insulation support bracket to allow tooling accessibility further into belt-line area welds. The engineering package to support the structural change, has already been completed (References 5 and 6).

Access will be gained through two openings located at the belt-line region, and three openings at the recirculatation nozzle level to allow vertical weld scanning directly above, within and below these openings, as applicable. Known constraints include a continuous shelf angle located directly above the recirculation nozzle openings, and high dose rates. The shelf angle (5 inch x 3-1/2 inch x 3/8 inch) supports the RPV wall insulation -- but as presently configured, restricts tooling access for scanning, thus requiring cuts at four locations to partially move out two sections of the shelf angle to facilitate the inspection. The cut shelf angles will be structurally restored after weld-scanning work is successfully complete.

Mock-up tests are planned to be performed for cutting and restoring of the RPV insulation shelf angle to ensure that precautionary measures to be taken are adequately addressed.

4.4 PDI CERTIFICATION

PDI certification testing for OD tooling is currently scheduled for early 2002.

4.5 INSPECTION SCHEDULE

Present plans for RO15 (fall 2002) include an examination from the OD side of those weld sections not able to be scanned from the ID due to known access restrictions. But OD access is also limited to the constraints of biological shield wall openings, a permanent insulation support structure, and high dose rates. Dose rates will need to be lowered ALARA to maximize the OD scanning. Partial de-fueling is being considered.

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5.0 INSIDE DIAMETER INSPECTION EQUIPTMENT

Assessment of new vendor proposed ID access tooling is underway. This new tooling incorporates existing technology from PWR reactor and steam generator examination venues, adapted to the BWR vessel components. The tooling was used at one domestic BWR reactor late in 2001. The lessons learned from this experience will be most valuable for assessing the necessary changes in tooling that will be required to access tight areas of the FitzPatrick RPV.

This proposed tooling "is the most recent generation of in-service examination tooling" (Reference 7). The system is designed to provide the most comprehensive and complete examination of the core shroud and RPV. The design permits parallel internal operations such as fuel movement, visual examination and other maintenance activites.

The delivery system is modular, such that the system may operate within the restrictions imposed by the heavy load requirement of commercial power plants. The system consists of a trolley that rides on a guide ring that has been temporarily mounted and aligned on the shroud flange, a vertical mast for access to the welds, and robotic tooling for manipulating search unit modules. The trolley is computer controlled and can move 360 degrees around the ring without extraction of the tool. Additionally, the table that mounts to the trolley has the ability to move in the radial direction to allow access to the shroud and vessel both under and above the core spray piping and feedwater spargers. Once the ring, trolley and table are installed onto the shroud flange, the refuel bridge becomes available to perform other tasks and will not be required until the scanning arm is changed or the tool is removed from the RPV.

5.1 INTERNAL EXAMINATION

The reactor vessel shell welds will be examined by using a combination of internal and external tooling. This portion of the report describes the techniques and tooling under consideration for the internal examination.

There are two distinct geometric regions within the Boiling Water Reactor (BWR) design; the region above the core shroud flange which allows open access to the welds and the annulus formed by the reactor vessel and core shroud, where access is limited. The tooling provided addresses both these regions with custom tooling.

A three dimensional representation of the tooling to be used for reactor vessel examinations in the annulus region is provided in Figure 1.

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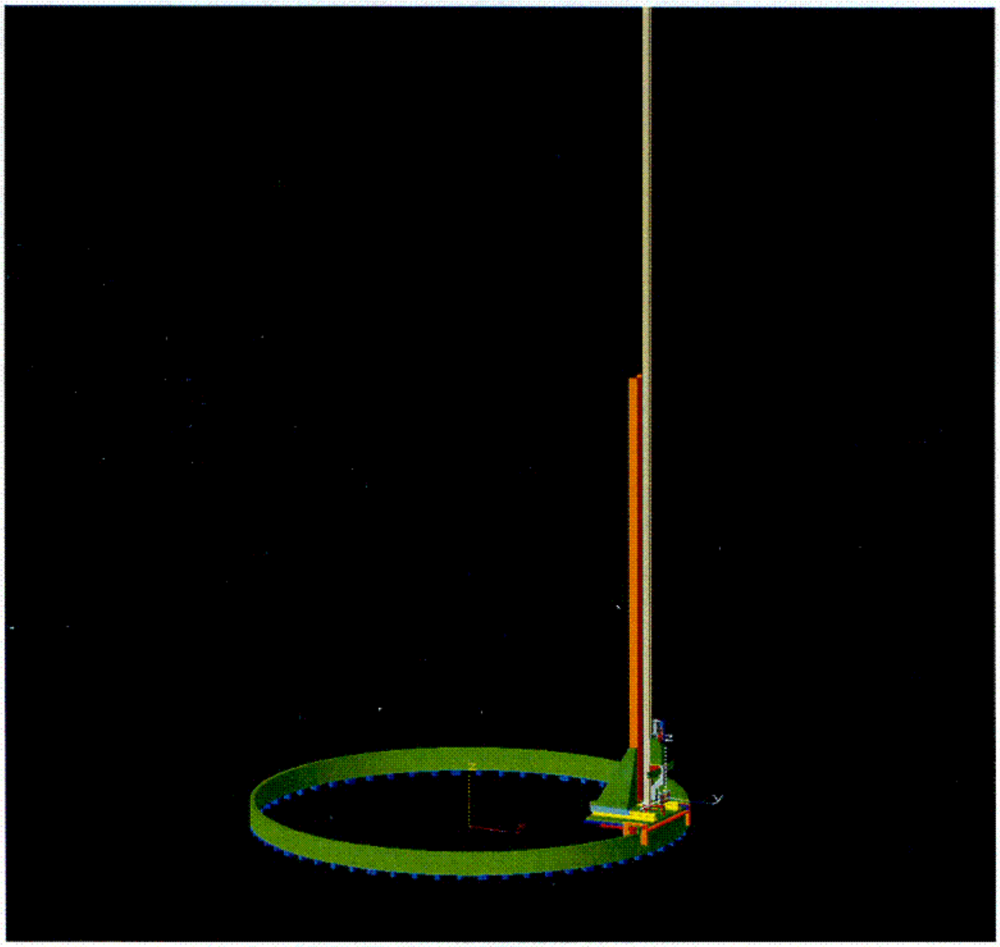

Figure 1

The tooling is basically a RTZ base with a scanning end effector attached. (RTZ is an acronym for radial motion, circumferential motion and elevation motion.) The Theta drive is composed of a track which sets on the core shroud flange upon which a trolley rides. The ring is oriented to the vessel with two alignment pins that insert into the steam separator alignment holes. The trolley is geared to the track with an internal rack gear to allow 360 degrees of motion. Separately mounted onto the trolley are the radial and elevation drives. The radial drive provides 12 inches of motion relative to the trolley to allow for insertion and removal of the end effector from under the core spray and feedwater headers. The elevation drive is composed of a mast, whose length allows travel of the end effector down to the jet pump support plate and up to the reactor vessel flange. The mast stiffness is derived from four sources. First the mast itself is designed to limit mechanical deflection due to scanning loads to 40 mills when properly supported. The three other sources of stiffness are the bottom and top stabilizers and the trolley. The bottom stabilizer is permanently attached to the mast, it is equipped with three remotely operated air cylinders, one of which interfaces the ID of the vessel and the other two, in a telescopic motion the OD of the shroud. The top stabilizer is a "hoop" which is remotely attached to the top of the mast with poles. The hoop is raised and lowered with the mast and

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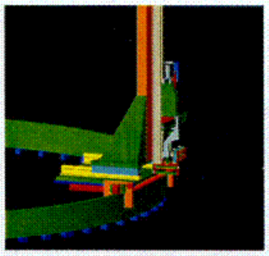
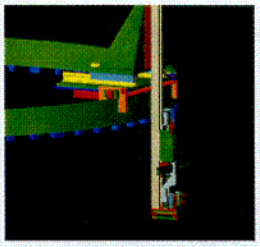
radially position over the studs by the Radial drive. The top and bottom stabilizers and the trolley provide two-point support for the mast, leading to the mast stiffness needed to support the scanning.

The end effector is composed of four degrees of freedom, one for scanning, one for indexing, one for transducer loading and the last for sled orientation. The two axes required for scanning and indexing are servomotor powered and the other two are air powered. The end effector interfaces to the front of the mast and moves independent of mast motion. The second powered axis moves the transducer sleds along a curved track. The transducer sleds are loaded against the vessel ID with an air cylinder, which not only provides the needed contact force, but also an air ride forgiveness. The sleds themselves are attached to a rotary cylinder to provide the 90 degrees of motion needed to perform either the parallel or perpendicular scanning orientation.

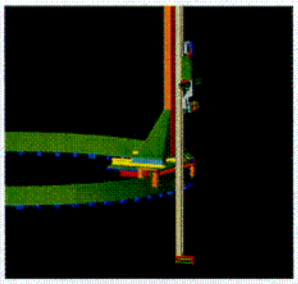
The three-dimensional tooling motions are shown in Figure 2.



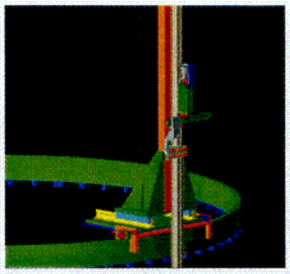
Radial Motion



Elevation Motion



EE Motion Along Mast



Sled Motion Along Rail

Figure 2

The tooling for examination of the reactor vessel weld above the core shroud is shown in Figure 3. The three dimensional representation shows the both the upper and lower scanning tooling. Note the only difference between the upper and lower scanning end effectors is the extension of the transducer sleds away from the body of the end effector.

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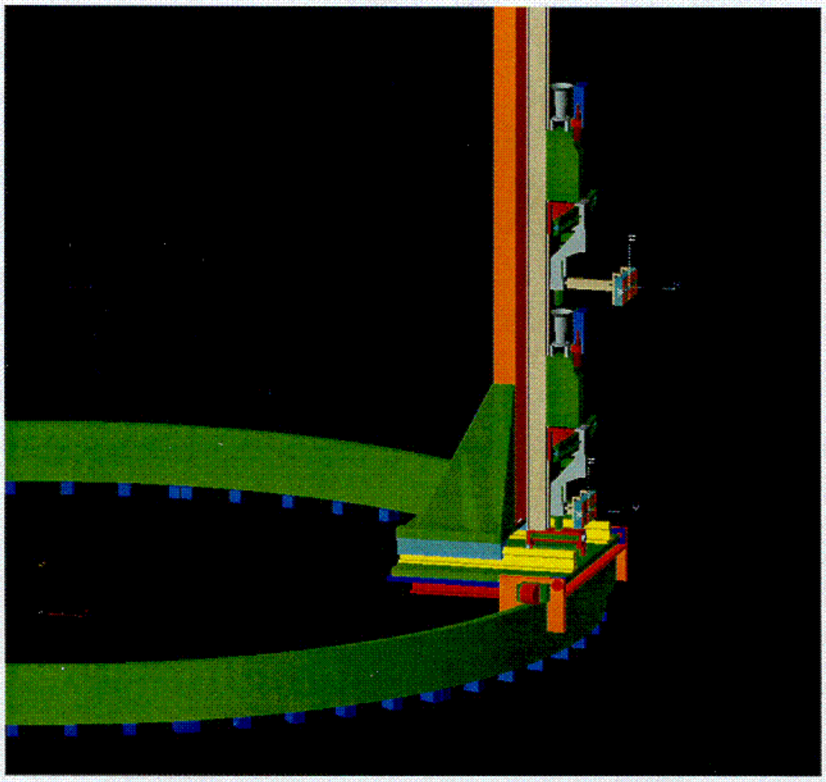

Figure 3

The end effector is fitted with a long handle pole attachment at the top to allow removal for reconfigurations without having to remove the RTZ drives.

An overview of the Fitzpatrick reactor vessel welds with the inspection fixture installed is provided in Figure 4. As shown there are four shell courses, each 150 inches long, each course constructed of three 120 degrees segments.

The first course includes the flange to shell welds and three vertical welds located circumferentially at 30, 150 and 270 degrees vessel. The inspection of these welds is accomplished by utilizing the end effector configured with the transducers offset by seven inches from the main body of the end effector. This will allow the front of the mast and motor drive unit on the end effector to clear the ID of the feed and core spray headers. The inspection will require the mast to be extended fully upward, allowing engagement of the upper mast stabilizer to the studs. The obstructions to 100% inspection in the flange to shell and upper course vertical welds include the guide bars and steam separator support lugs. The inspection of these welds will cover better than 90% of full volume.

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The second course includes three vertical welds, one at 60 degrees, one at 180 degrees and the third at 300 degrees vessel. The obstructions to full inspection at the 60 and 300 degree locations are the feed and core spray headers.

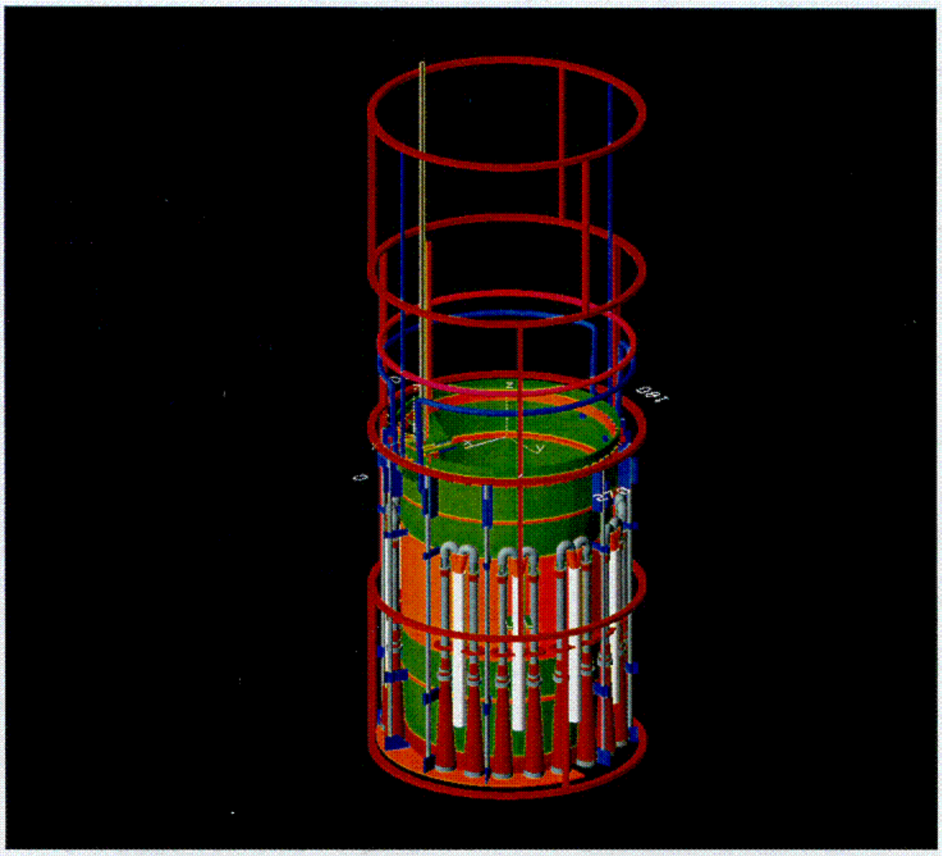

Figure 4

The tooling will operate with the mast inboard of the headers and with an extension on the transducer sleds allowing a very close vertical, top and bottom approach to the headers. See Figure 5. The inspection length for these welds is expected to be 119 inches of the total 150 inches.

C04

Status Report on Tooling Development
Proposed Alternatives in Accordance with 10CFR50.55a(a)(3)(i) and Relief From ASME Section XI Code Regarding Inspection of RPV Vertical Shell Welds (Relief Request No. 18)

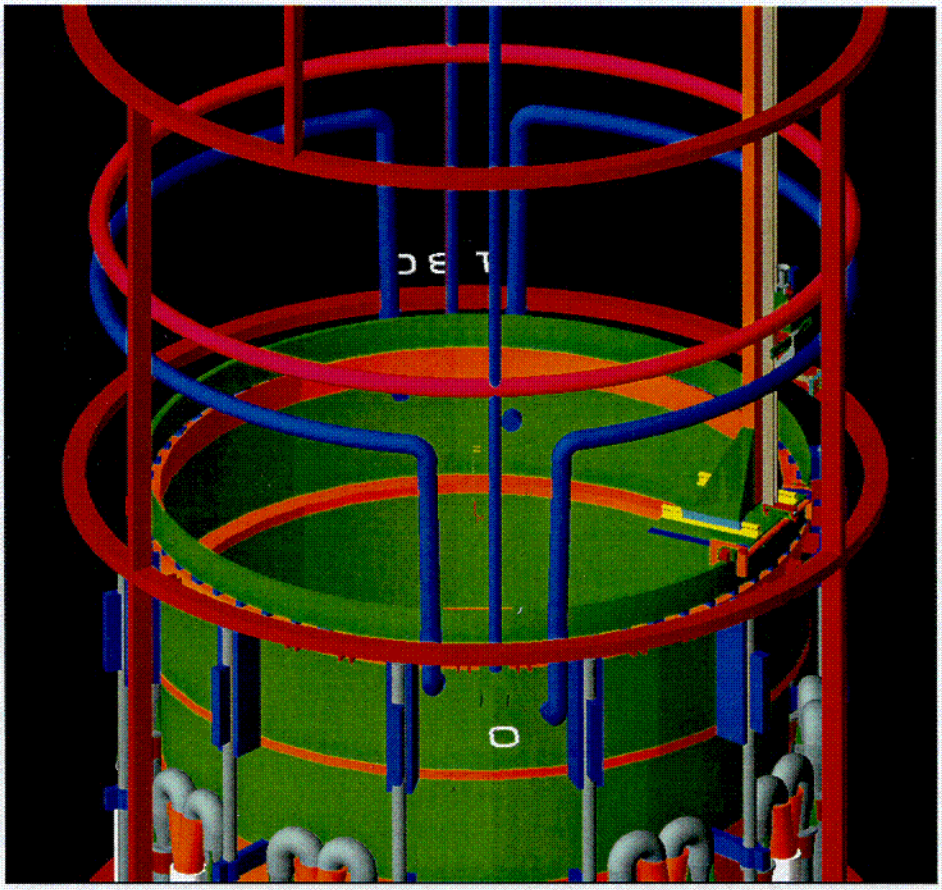

Figure 5 - Internal Diameter Inspection Tooling

The third vertical weld in the second course is located at 180 degrees vessel. The obstructions to the inspection for this weld include; the core spray and feed headers, the guide bar and the core spray down-comers. See Figure 6. The upper inspection configuration of the end effector will be used, with two modifications to allow access and inspection. These are; the curved rail will be shortened to four degrees vessel and the three transducers will be located in a vertical plane and offset to allow travel in the 1.5 inch annulus created by the guide bar and vessel ID. The circumferential travel required for full volumetric inspection coverage is +/- 3 degrees vessel about the centerline of the weld. The circumferential clearance provided by core spray down-comers and guide bar is four degrees. The inspection will utilize the single sided PDI qualification technique for this weld. Since the sleds are offset from the center of sled rotation, four configuration changes of the end effector are required in order to inspect this weld. These are; parallel offset left and right, and perpendicular offset left and right. The transducer vendor has agreed to reduce the height of the standard shell inspection transducer from 1.5 inches to 1.2 inches to allow access between the guide bar and vessel.

C05

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Proposed Alternatives in Accordance with 10CFR50.55a(a)(3)(i) and Relief From ASME Section XI Code Regarding Inspection of RPV Vertical Shell Welds (Relief Request No. 18)

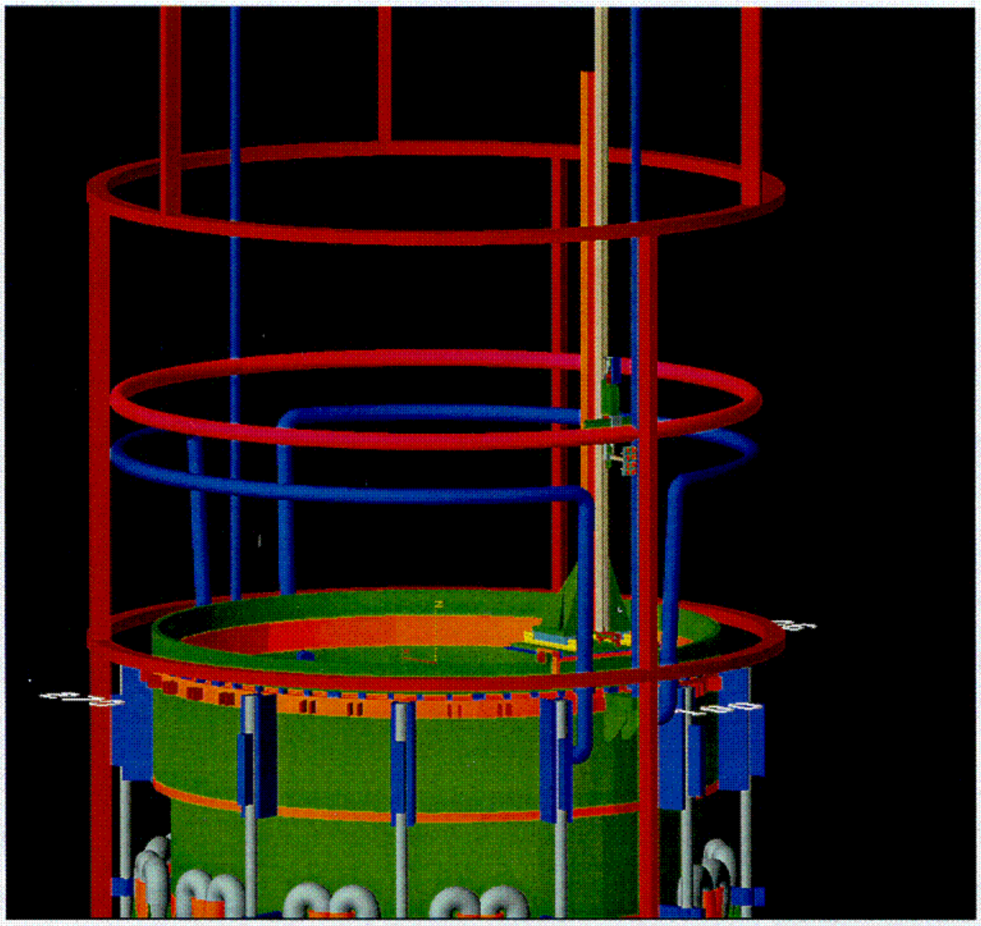

Figure 6

The third course includes three vertical welds located at 60, 180 and 300 degrees vessel. They are in the same circumferential location as those in the second course. The weld at 60 degrees vessel will be inspected down to the top of the jet pumps. The annulus inspection end effector is configured for this inspection. See Figure 7.

C06

Status Report on Tooling Development
Proposed Alternatives in Accordance with 10CFR50.55a(a)(3)(i) and Relief From ASME Section XI Code Regarding Inspection of RPV Vertical Shell Welds (Relief Request No. 18)

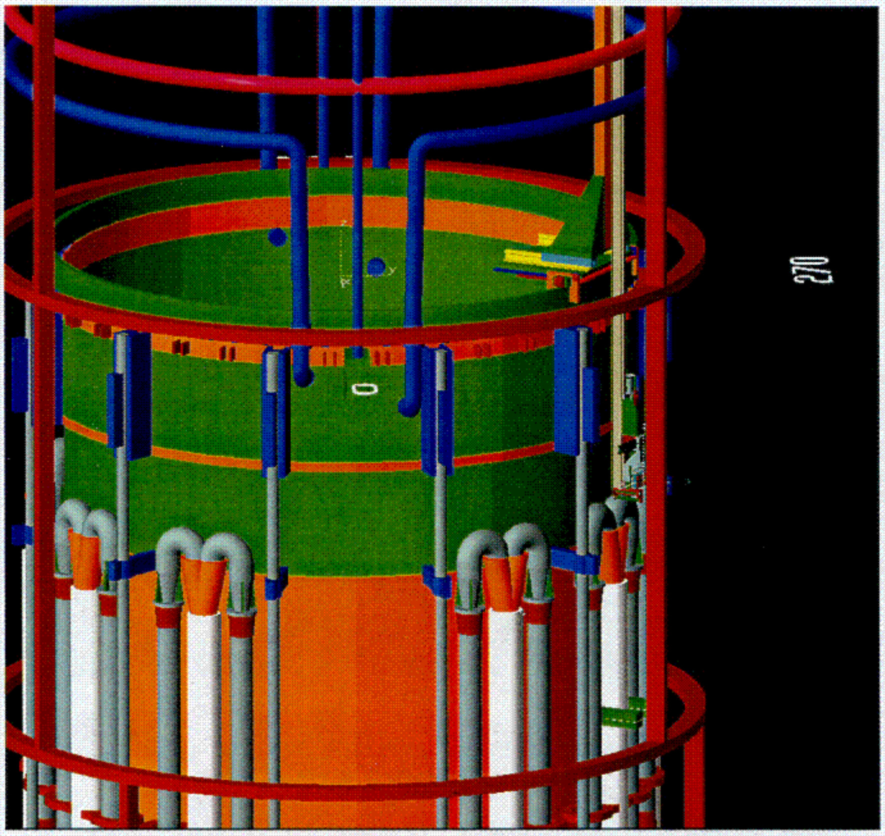

Figure 7 - Internal Diameter Inspection Tooling

As seen above the mast is inserted to the top of the rams head on the jet pumps, where the lower stabilizer is expanded. The inspection will provide 62 inches of full volumetric coverage.

Inspection of the weld at 180 degrees, in the third course, will also be performed with the annulus inspection end effector. The end effector will be reconfigured to include the four-degree travel rail, with the standard transducer sleds. The rail will be offset left and right to achieve full coverage. The scanning will be performed using the single sided inspection technique, with the mast inserted in either side of the guide bar. (See Figure 8) The obstructions to full coverage include the guide bar attachment bracket, and core spray down-comers. The total coverage is anticipated at 130 inches.

C07

Status Report on Tooling Development
Proposed Alternatives in Accordance with 10CFR50.55a(a)(3)(i) and Relief From ASME Section XI Code Regarding Inspection of RPV Vertical Shell Welds (Relief Request No. 18)

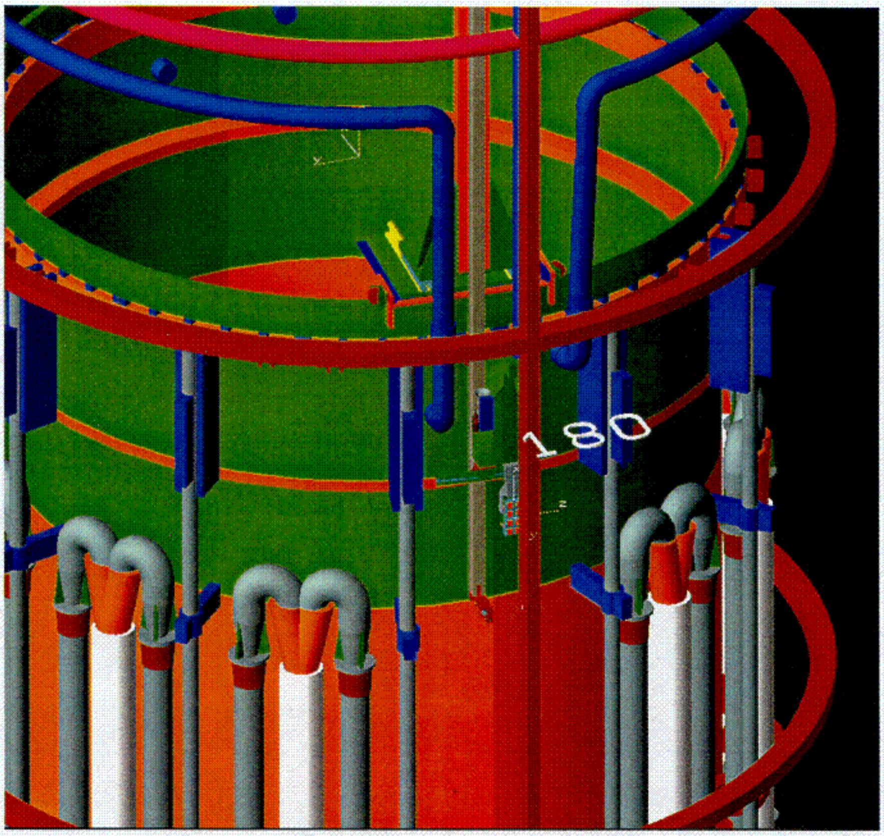

Figure 8

The last inspections anticipated for the ID tooling, includes the welds at 300 degrees in the third course and that at 280 degrees in the fourth course. These welds will be inspected with the annulus end effector by inserting the mast between jet pumps 14 and 15 down to just above the jet pump instrumentation penetration. The curved rail will be offset right and left to provide these inspections. See Figure 9.

C08

**Status Report on Tooling Development
Proposed Alternatives in Accordance with 10CFR50.55a(a)(3)(i) and
Relief From ASME Section XI Code Regarding Inspection of RPV
Vertical Shell Welds (Relief Request No. 18)**

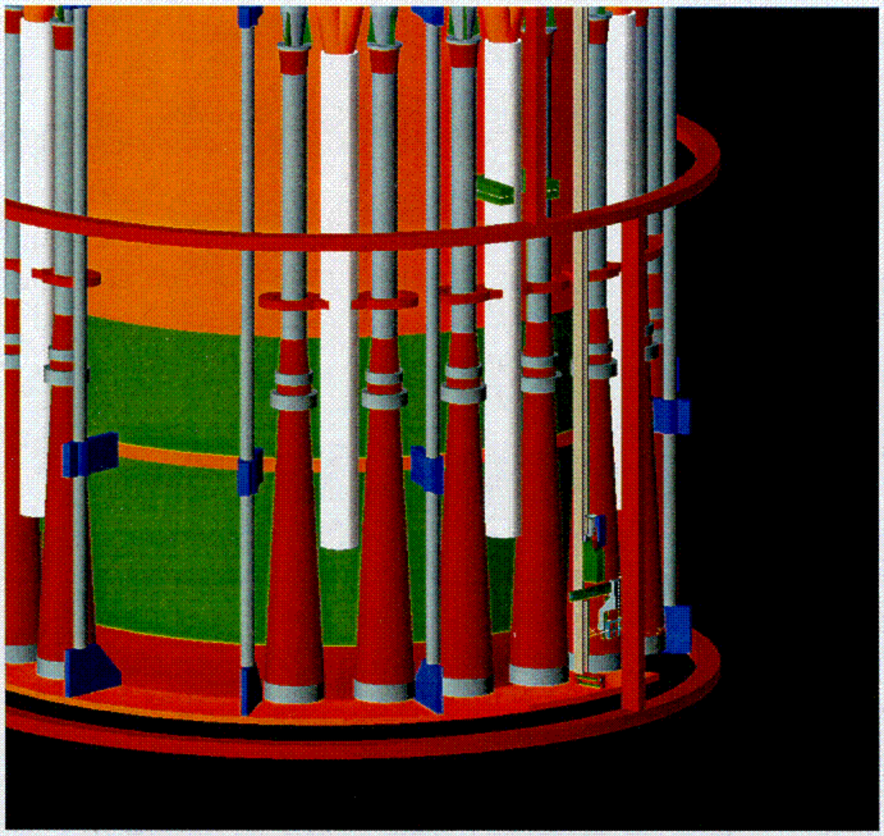

Figure 9

The restrictions to full coverage for these welds include the jet pump down-comer restraints, jet pump restraints, the jet pump instrumentation lines and the surveillance brackets. The anticipated coverage at the 280-degree weld on the fourth course is 110 inches and 130 inches for the weld at 300 degrees on the third course.

Inspection of the two remaining welds at 40 and 160 degrees in the fourth course will be by OD access during RO15 (fall 2002).

5.2 INSPECTION SCHEDULE

The tooling was used at one domestic BWR reactor late in 2001. The lessons learned from this experience will be most valuable for assessing the necessary changes in tooling that will be required to access tight areas of the FitzPatrick RPV. Plans are to use this tooling configured to FitzPatrick specific needs during RO16 (2004).

Necessary PDI qualifications, a factory acceptance test, a scan plan, and procedures will be performed and approved prior to RO16.

C09

Status Report on Tooling Development
Proposed Alternatives in Accordance with 10CFR50.55a(a)(3)(i) and Relief From ASME Section XI Code Regarding Inspection of RPV Vertical Shell Welds (Relief Request No. 18)

6.0 REFERENCES

1. NRC letter to NYPA, dated February 29, 2000, regarding "Relief Requests Nos. 18 and 19 – For Augmented Inspection of the Axial Shell Welds and for Inspection of the Vessel Shell-to-Flange Weld in the Reactor Vessel of the FitzPatrick (TAC No. MA6270)."

2. NYPA letter to NRC, dated August 5, 1999, (JPN-99-026), regarding "Proposed Alternatives in Accordance with 10CFR50.55a(a)(3)(i) and Relief From ASME Section XI Code Regarding Inspection of RPV Vertical Shell Weld and Shell to Flange Welds."

3. ENO Procedure RPV-OD-1, "Guidelines for Set-Up and Operation of FitzPatrick Reactor Pressure Vessel Longseam Scanner," Rev. 00, dated September 20, 2000.

4. Westinghouse Electric Co/CE Nuclear Power LLC Summary Report, IR-NDE-004, "FitzPatrick OD Vessel Scanner Mechanical Fit Up," dated November 7, 2000.

5. Equivalent Change No. JE-01-099, "RPV Insulation Support Bracket," Rev. 0, dated September 4, 2001.

6. ENO calculation, JAF-CALC-NBS-04311, "Reconfigure RPV Insulation Support Due to Cut-Out for Shell Weld Inspection," dated July 30, 2001.

7. WestDyne letter, dated June 22, 2001, regarding "Ultrasonic Examination of the FitzPatrick Reactor Vessel."