



UNITED STATES
NUCLEAR REGULATORY COMMISSION

REGION III
601 WARRENVILLE ROAD
LISLE, ILLINOIS 60532-4351

June 12, 1998

Mr. John F. Franz, Jr.
Vice President, Nuclear
IES Utilities, Inc.
200 First Street SE
P. O. Box 351
Cedar Rapids, IA 52406-0351

SUBJECT: MANAGEMENT MEETING SUMMARY - DUANE ARNOLD ENERGY CENTER

Dear Mr. Franz:

The NRC met with Duane Arnold Energy Center management on May 19, 1998. This management meeting was open to public observation. The purpose of the meeting was to discuss human performance circumstances and overall performance during the recent refueling outage. Your staff also discussed the corrective actions being taken and the results to date of the improvement efforts. Enclosed is the handout provided to the NRC during the meeting.

In accordance with Section 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be placed in NRC's Public Document Room.

Sincerely,

Geoffrey E. Grant
Geoffrey E. Grant, Director
Division of Reactor Projects

Docket No.: 50-331
License No.: DPR-49

Enclosure: Meeting Handout

See Attached Distribution

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/s/ Geoffrey E. Grant

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Chief Operating Officer
G. Van Middlesworth
Plant Manager
K. Peveler, Manager
Regulatory Performance
Chairperson, Iowa Utilities Board

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Chairperson, Iowa Utilities Board

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Enclosure

Licensee Meeting Handout

Region III Management Meeting

May 19, 1998

Attendees:

John Franz - Vice President, Nuclear

Dave Wilson - Asst. Vice President, Nuclear

Gary VanMiddlesworth - Plant Manager

Ken Peveler - Regulatory Performance Manager

Dean Curtland - Operations Manager

Bob Hite - Radiation Protection Manager

Bob Murrell - Regulatory Communications Supervisor

Joe Ickes - Reactor Operator

Region III Management Meeting

May 19, 1998

AGENDA:

- Introduction - John Franz
- Unique Outage Challenges - Dave Wilson
- Industrial Safety - Gary VanMiddlesworth
- Human Performance Circumstances - Gary VanMiddlesworth/Dean Curtland
- Outage Overview - Gary VanMiddlesworth

Introduction

John Franz

DAEC Philosophy

“Capturing the mind”

Unique Outage Challenges

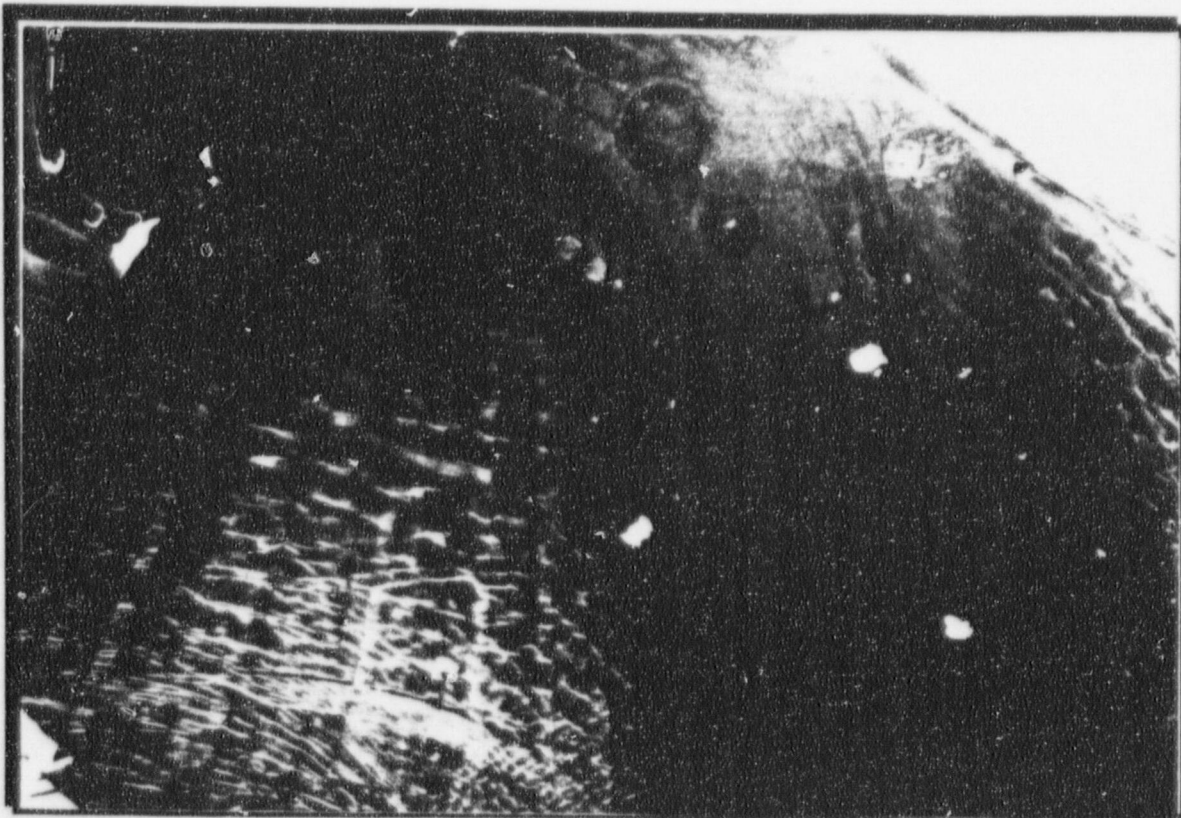
- New wet lift equipment
- Noble metal fuel bundle disassembly/inspection
- ECCS suction strainer installation
- Main Generator Stator rewind

Unique Outage Challenges

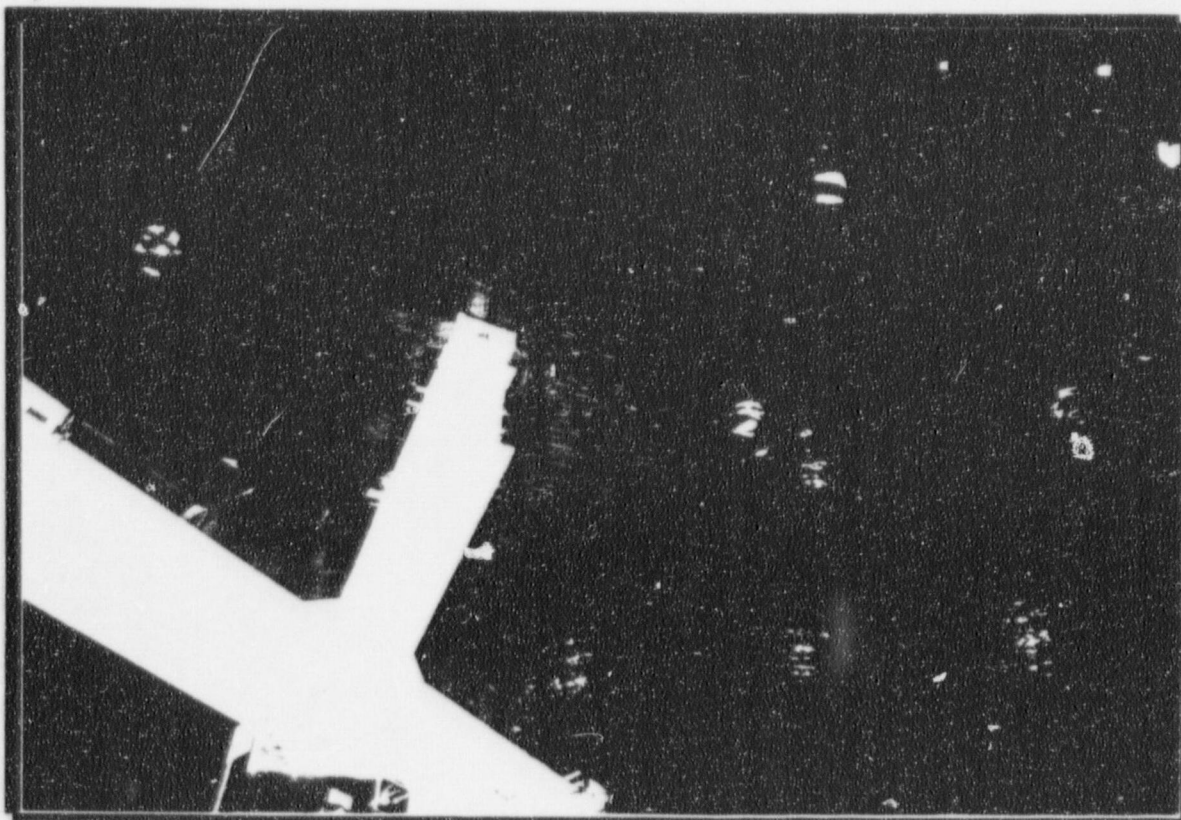
New Wet Lift Equipment - Refueling

- New equipment
 - Strongback for Dryer and Separator
 - Steamline plugs
 - Pole handling
- Man-REM savings

2

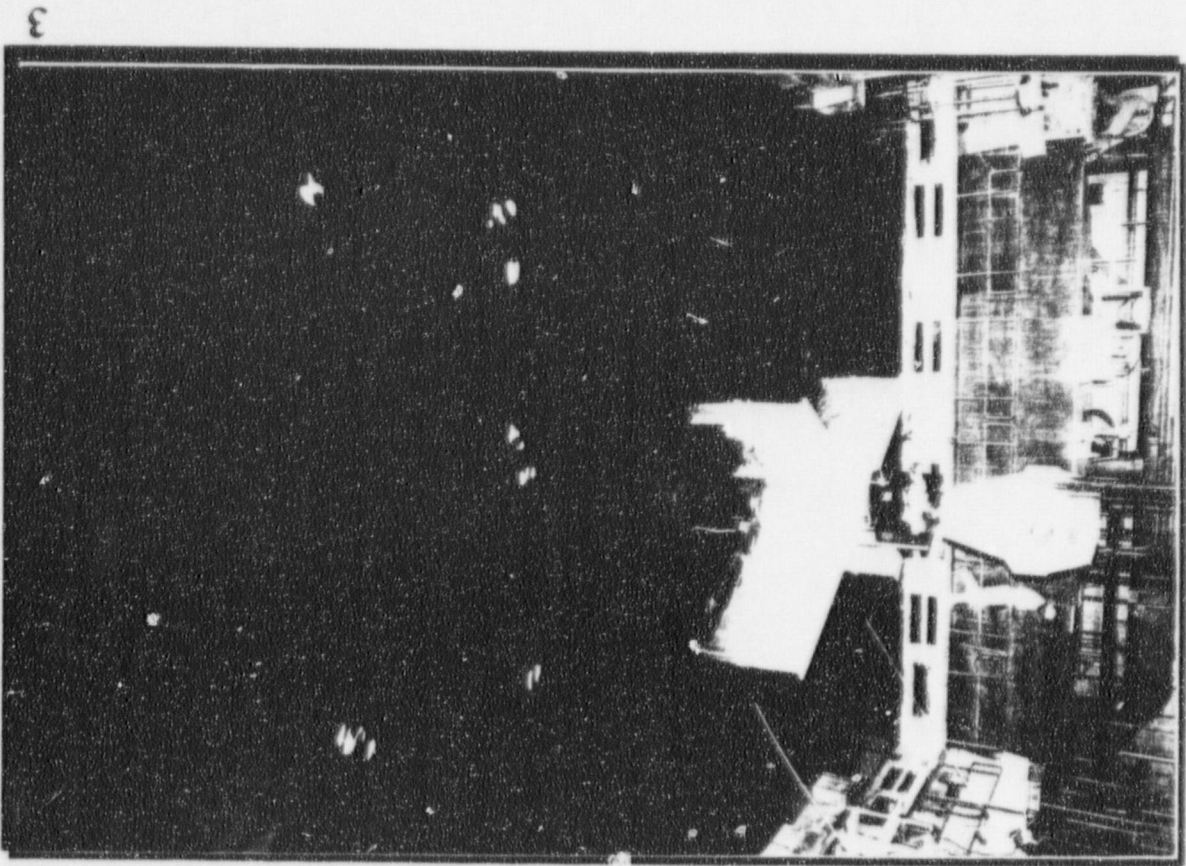
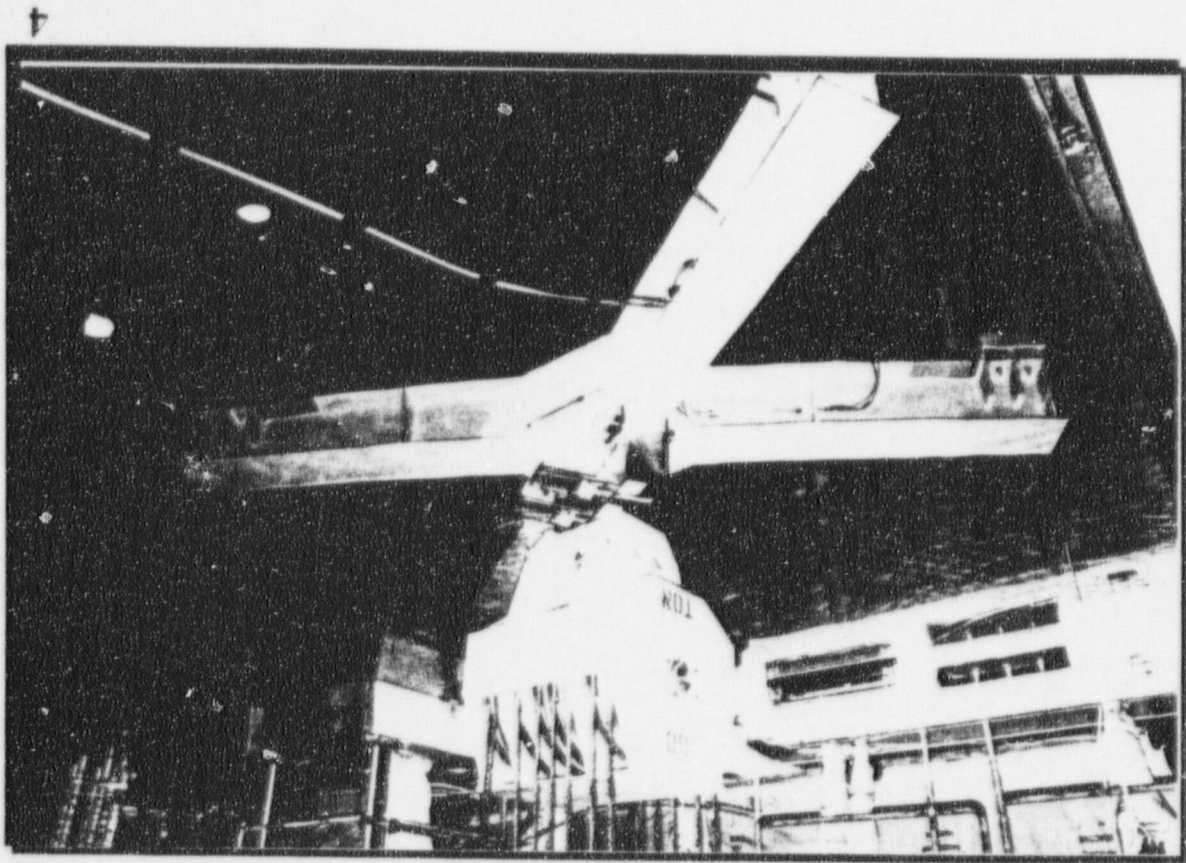


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NEW WET-LIFT EQUIPMENT

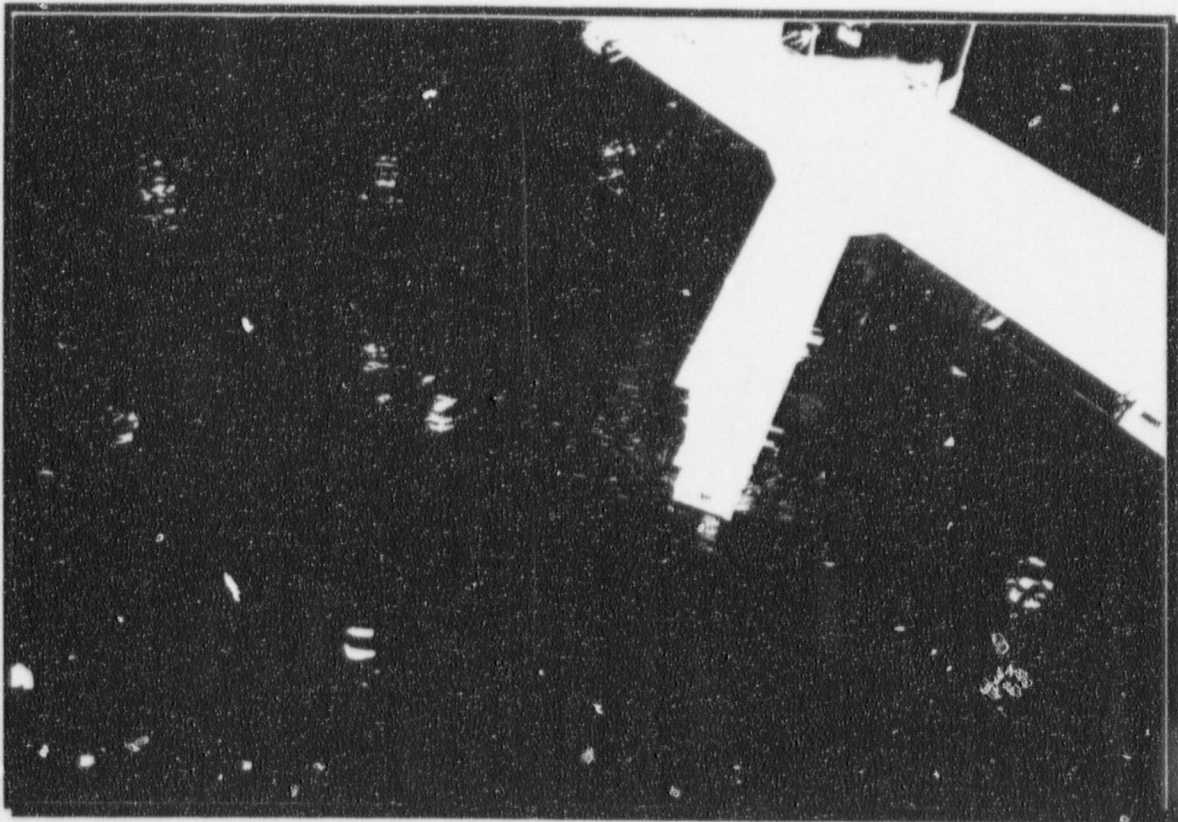
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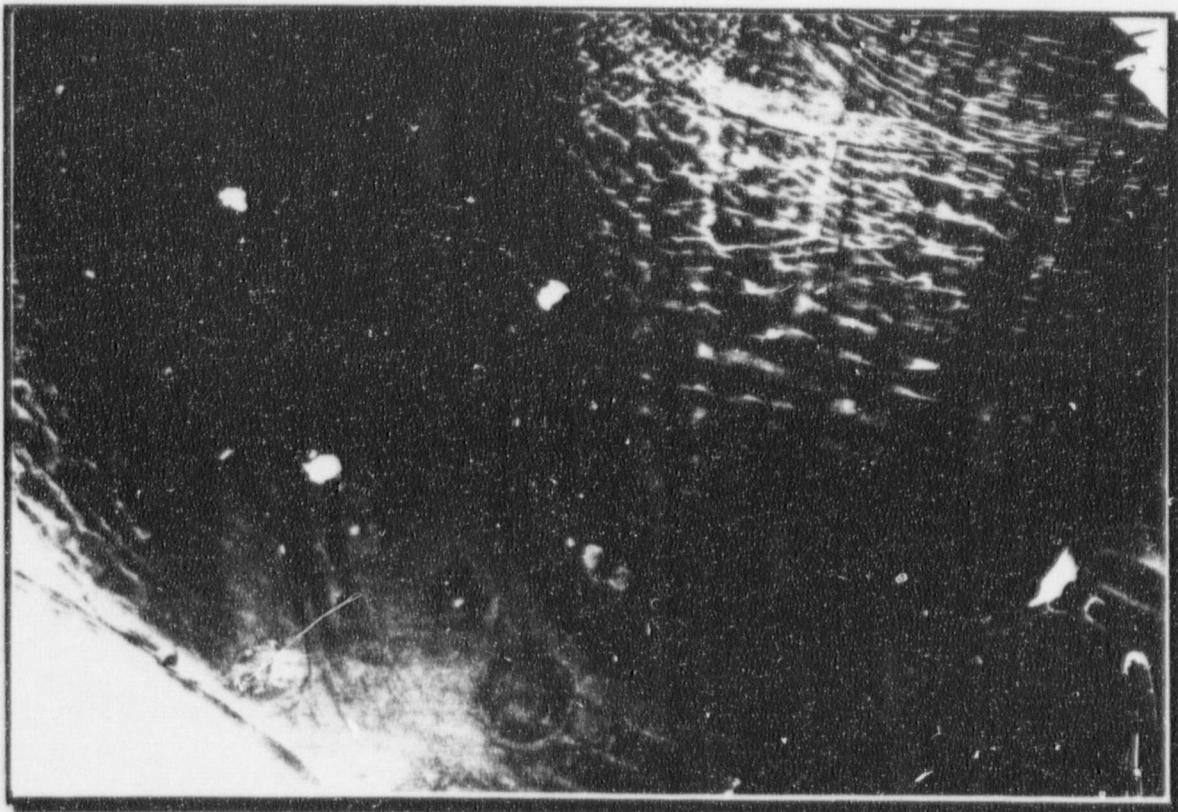
NEW WET-LIFT EQUIPMENT

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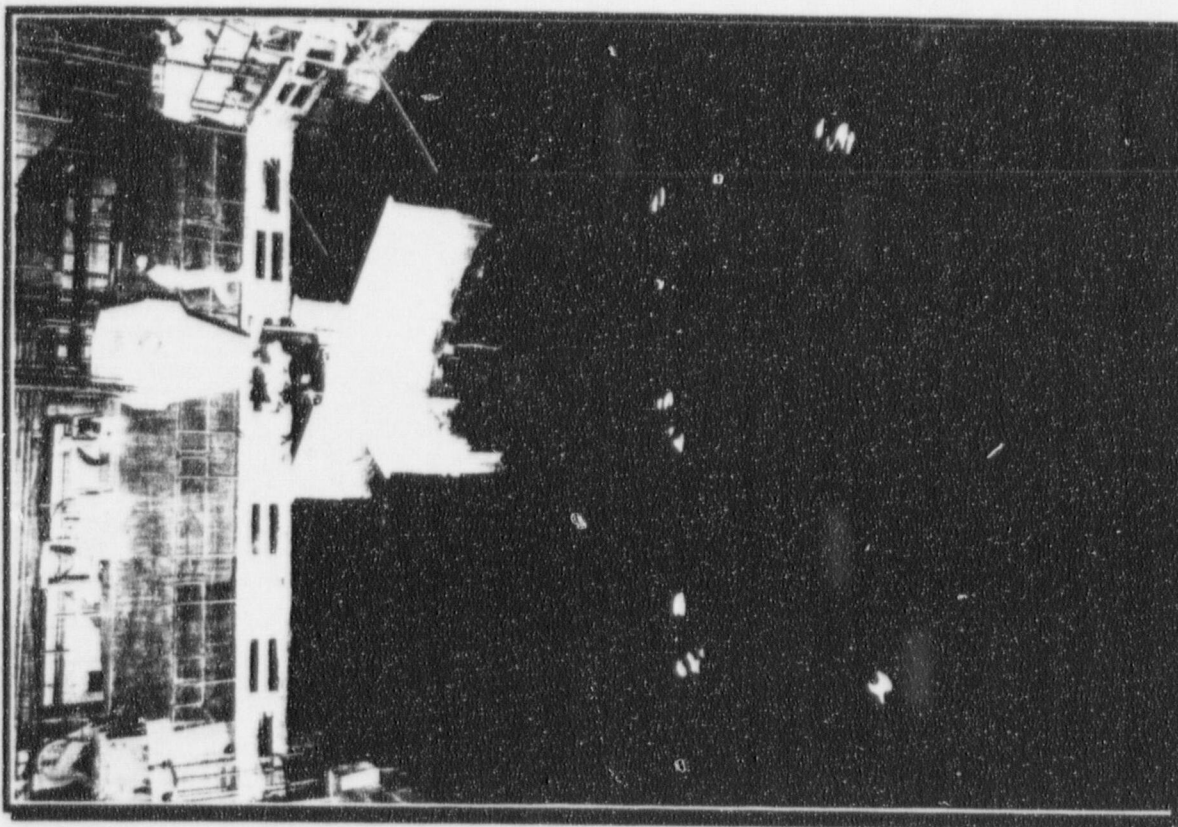
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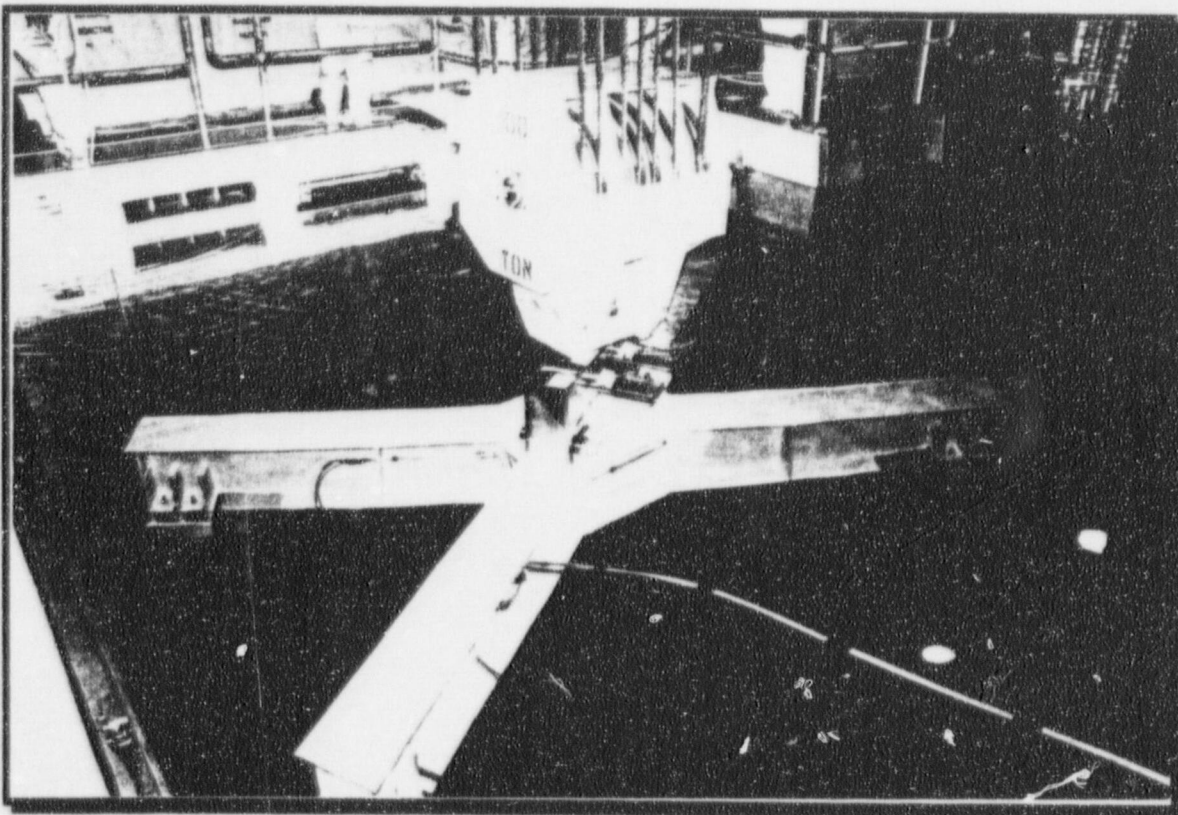
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NEW WET-LIFT EQUIPMENT

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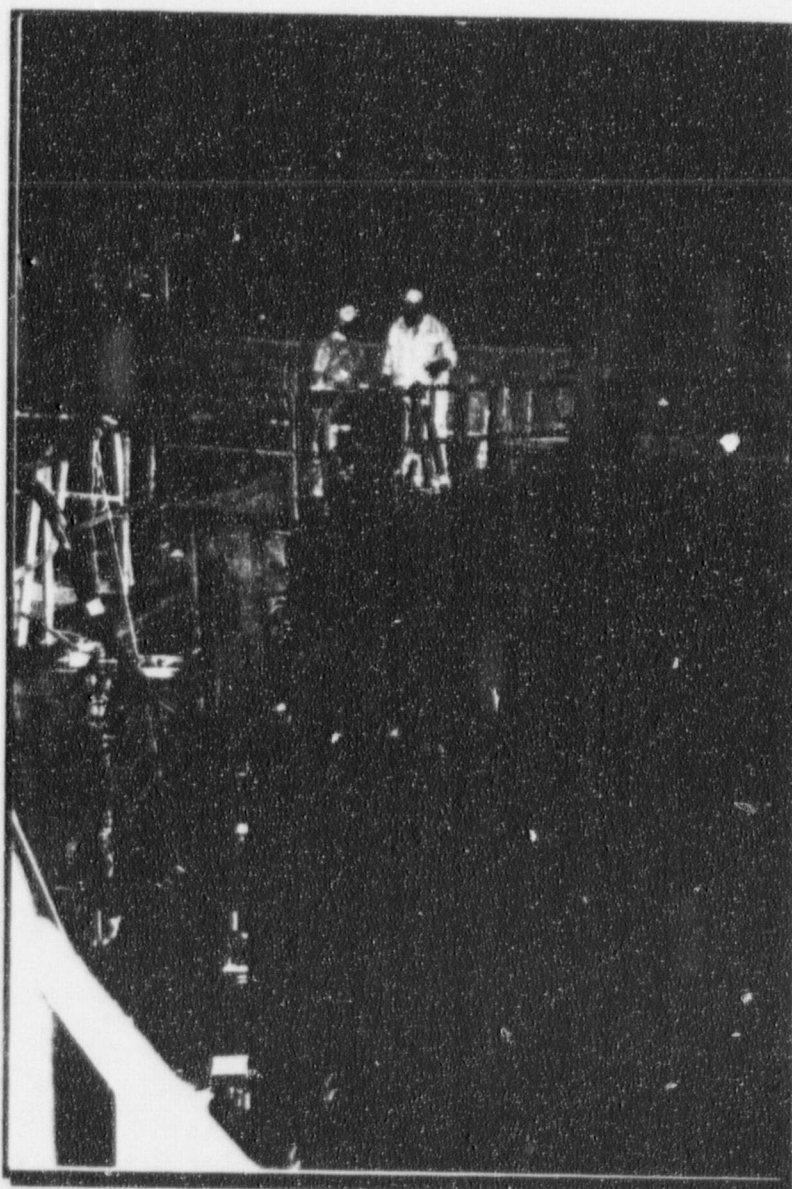


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NEW WET-LIFT EQUIPMENT



Unique Outage Challenges

Noble Metal (NMCA) Project Fuel Bundle Disassembly/Inspection

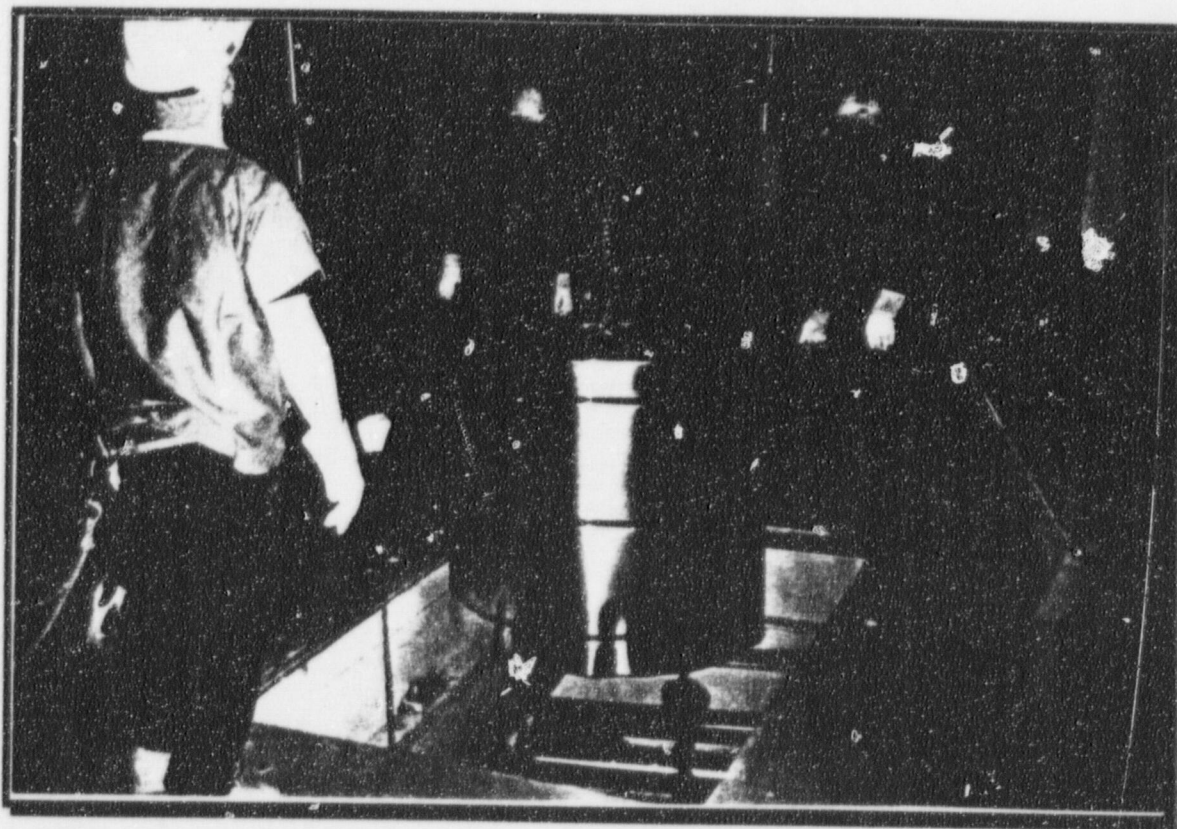
- NMCA process performed in RFO 14
- RFO 15 - 3 exposed bundles partially disassembled/inspected. 2 fuel pins and 2 spacers removed for shipment to GE
- 2 spent LPRM strings cut-up for shipment to GE
- Inspections revealed nothing unusual

Unique Outage Challenges

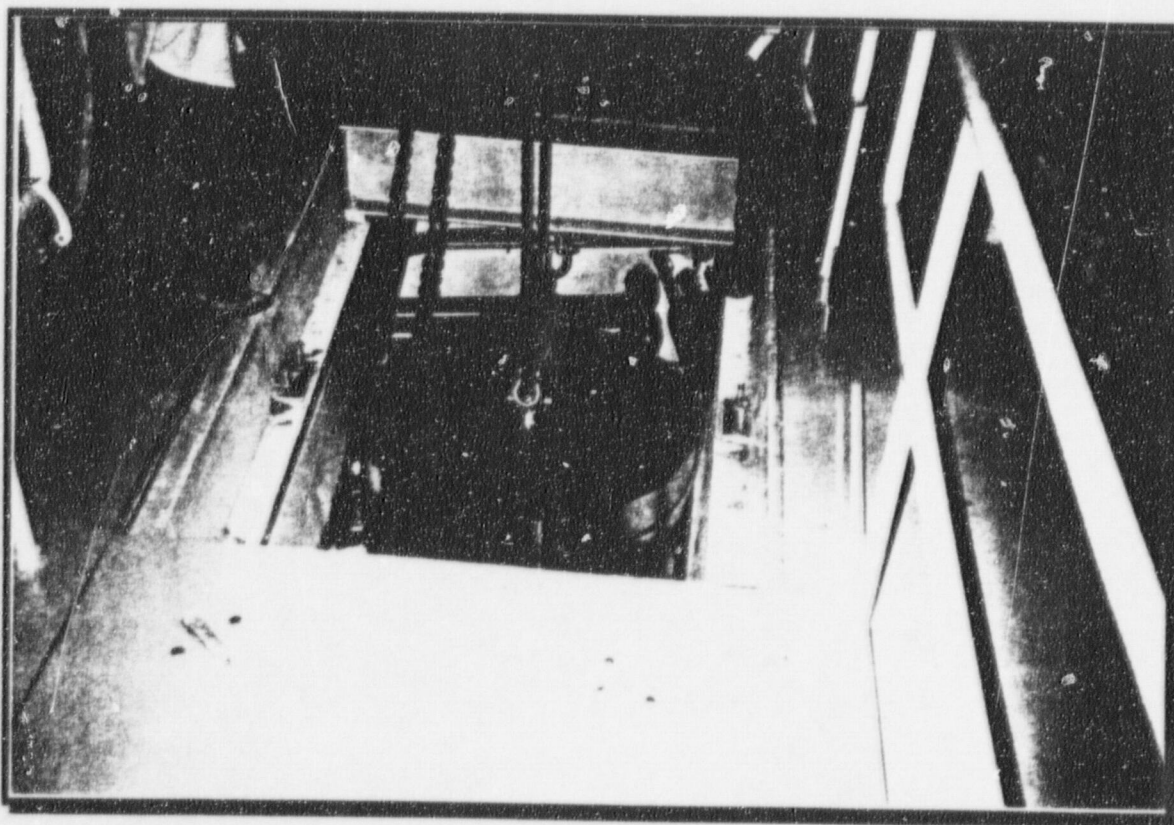
ECCS Suction Strainer Installation

- 2 RHR and 2 Core Spray Strainers
- Pre-outage activities
- Torus cleaning and coating inspection/repairs in parallel

TORUS SUCTION STRAINERS

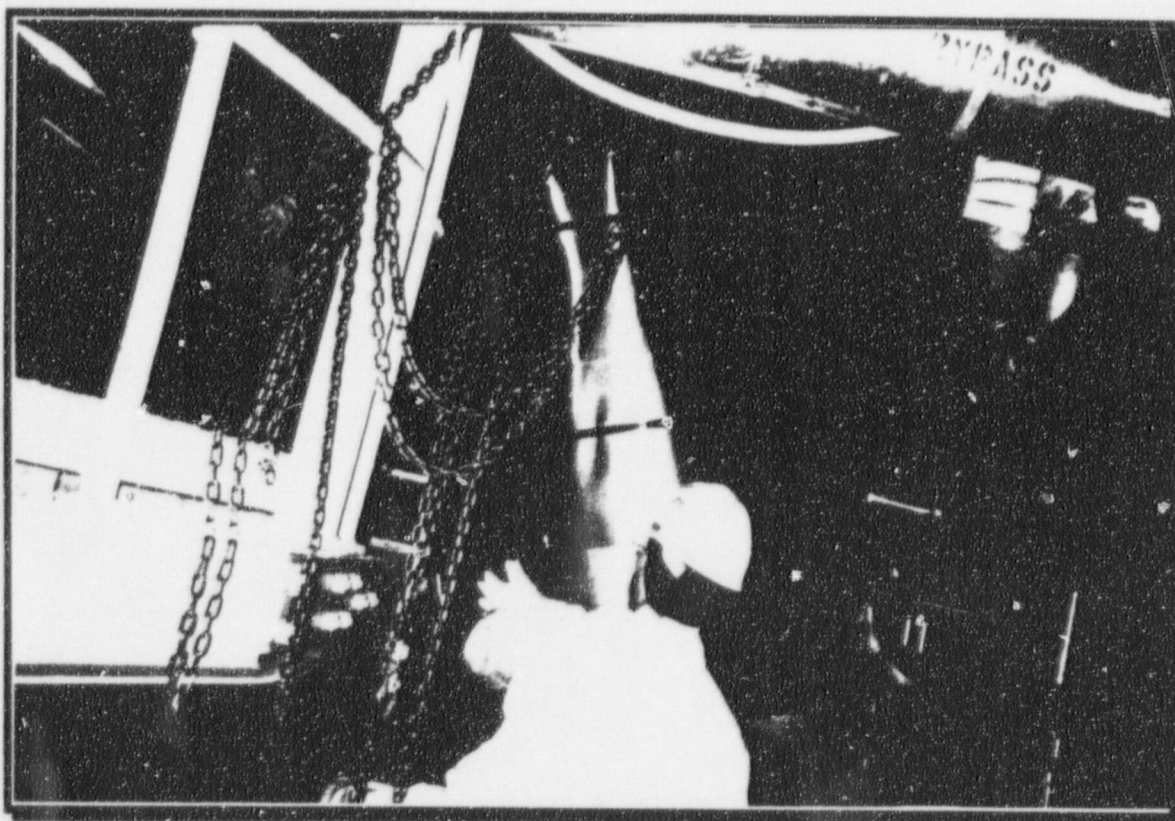


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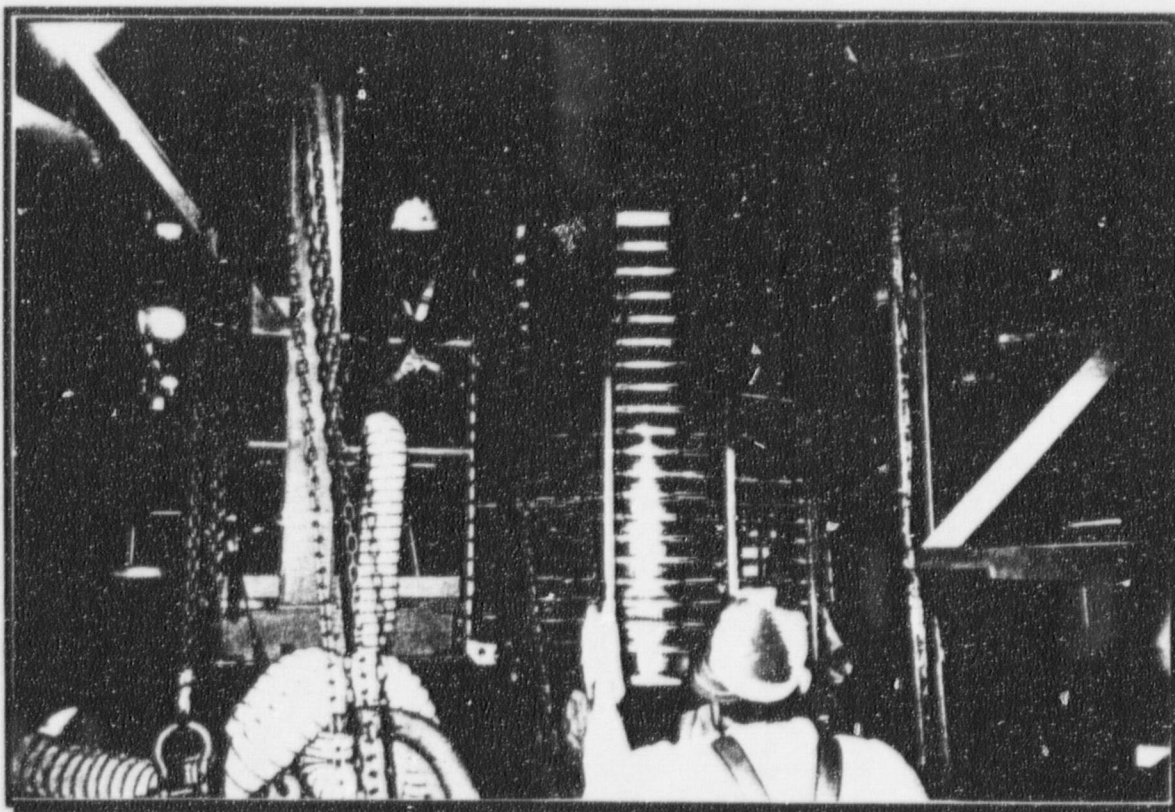


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TORUS SUCTION STRAINERS



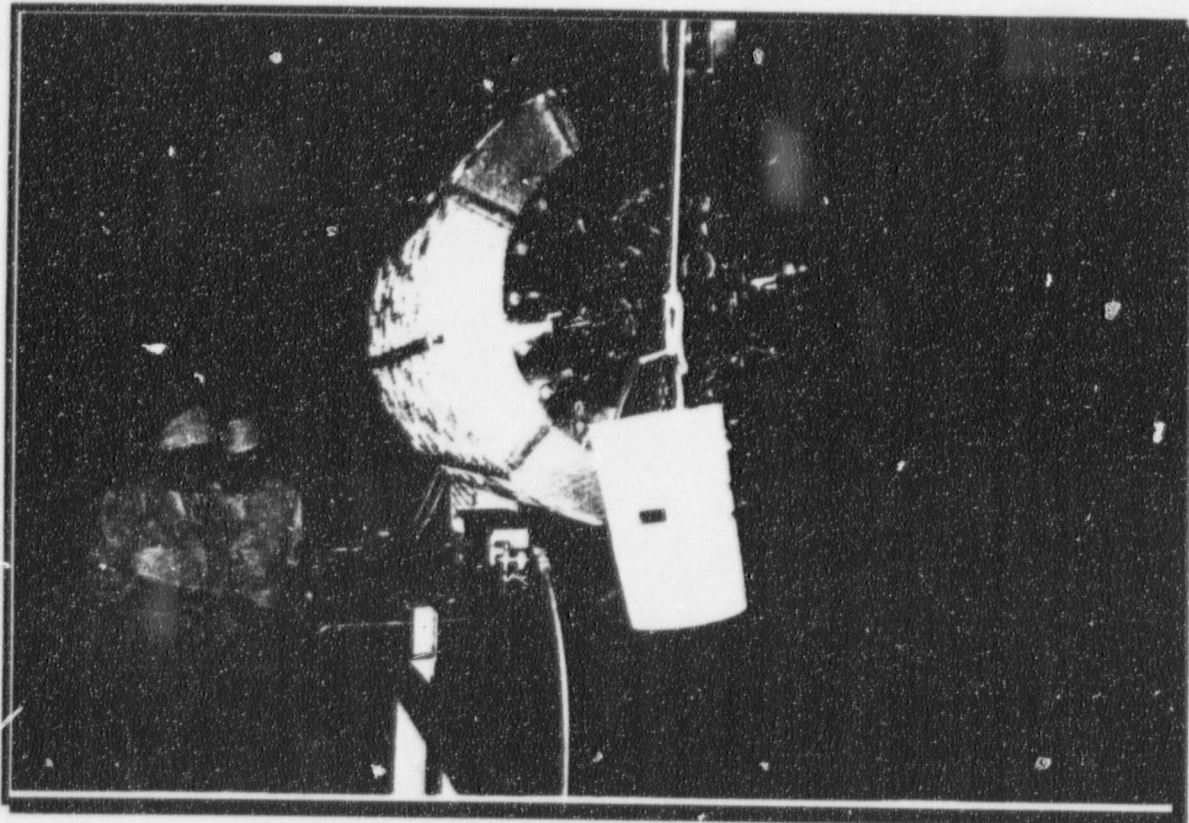
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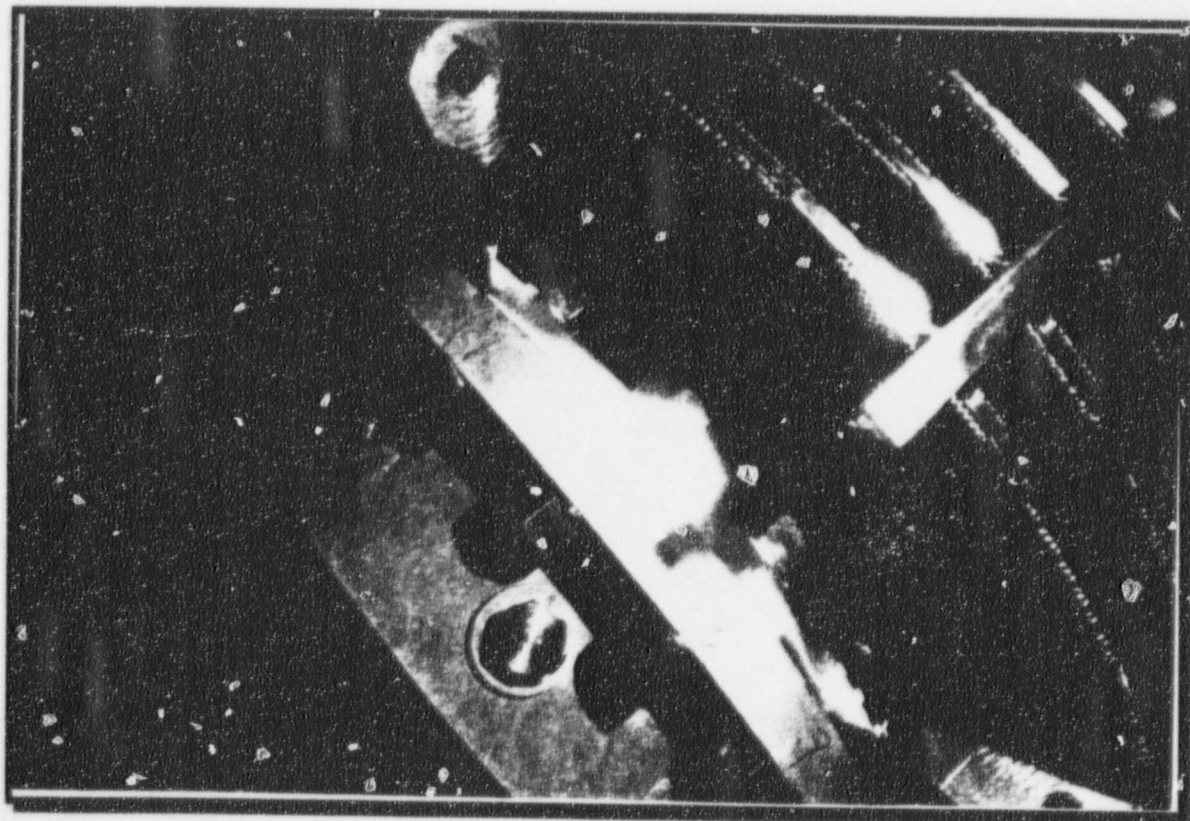
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TORUS SUCTION STRAINERS

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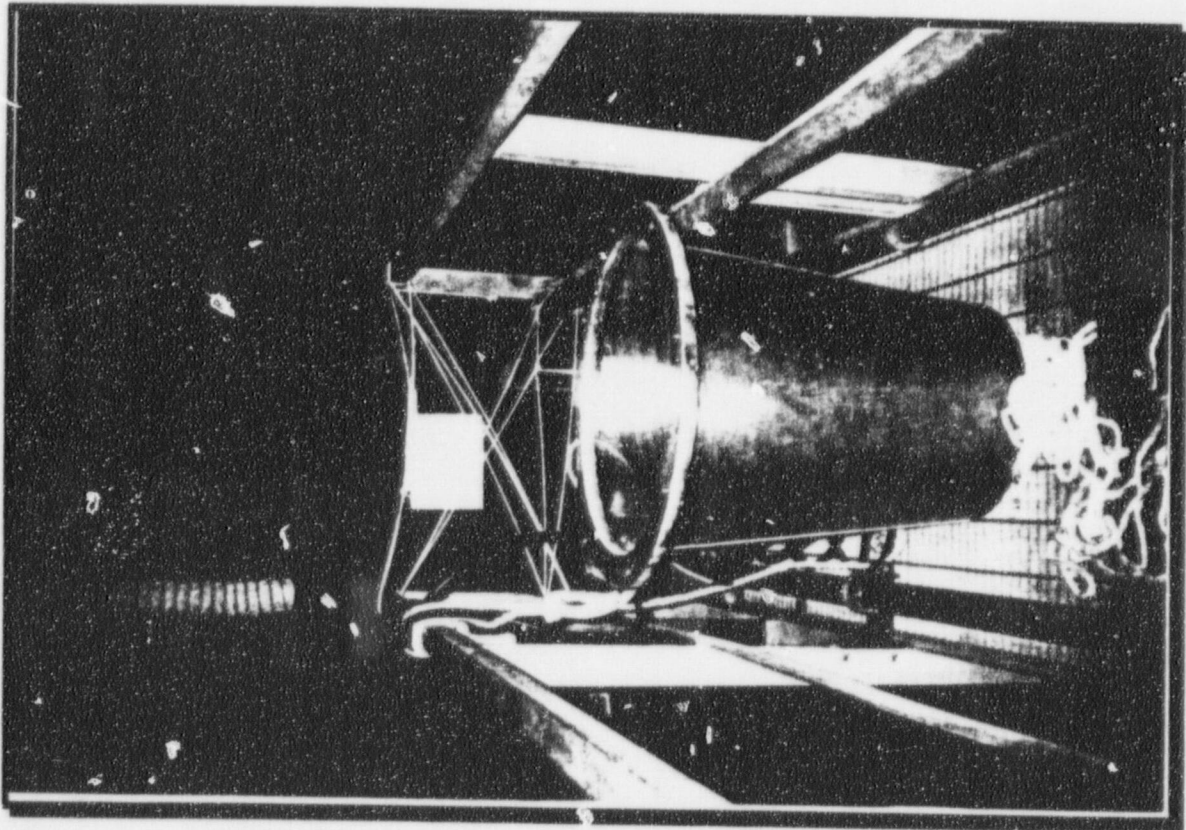
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TORUS SUCTION STRAINERS

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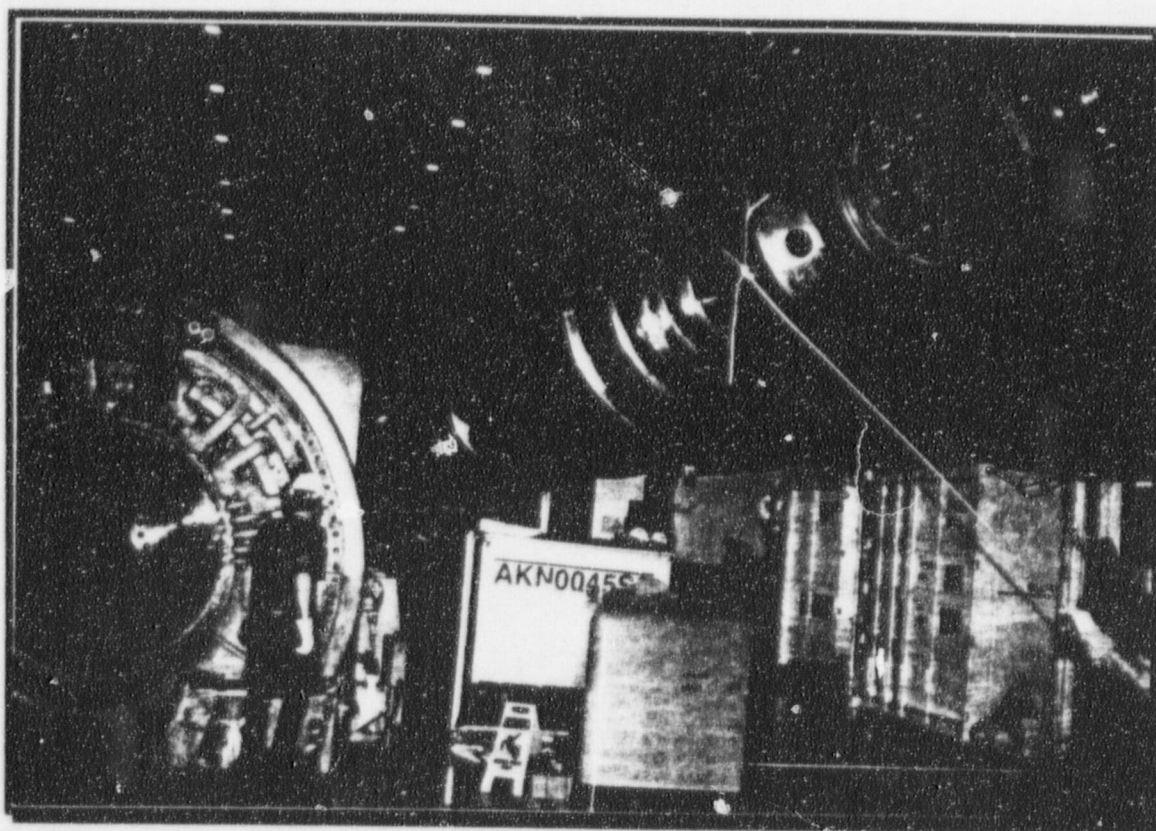
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Unique Outage Challenges

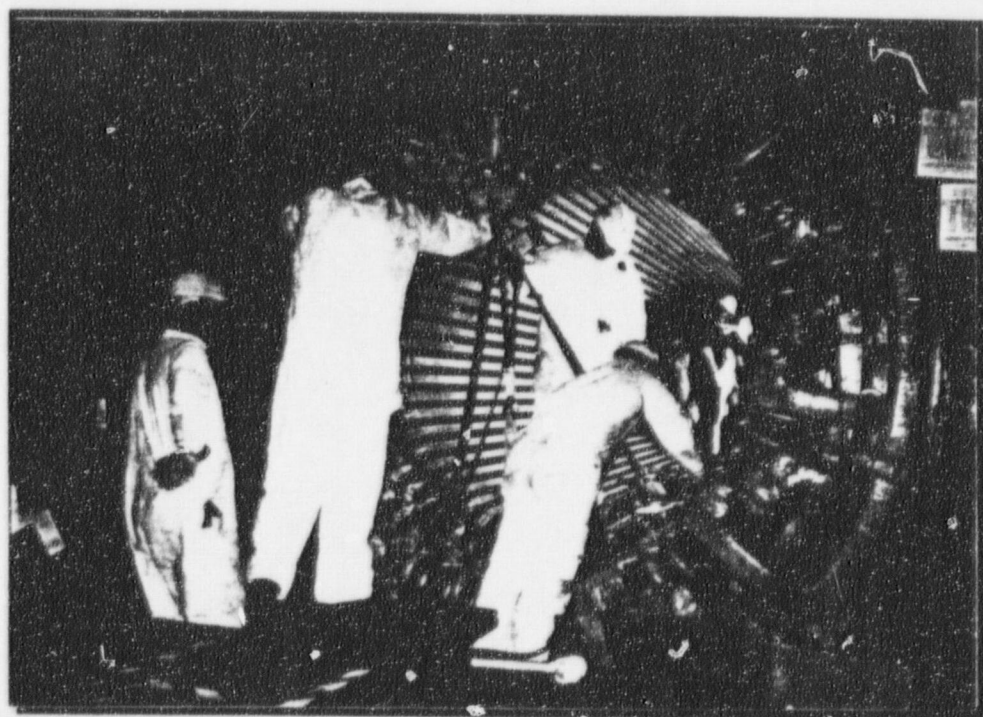
Main Generator Stator Rewind:

- Reasons necessary
- Scope of work
- Challenges
- No significant problems

GENERATOR REWIND



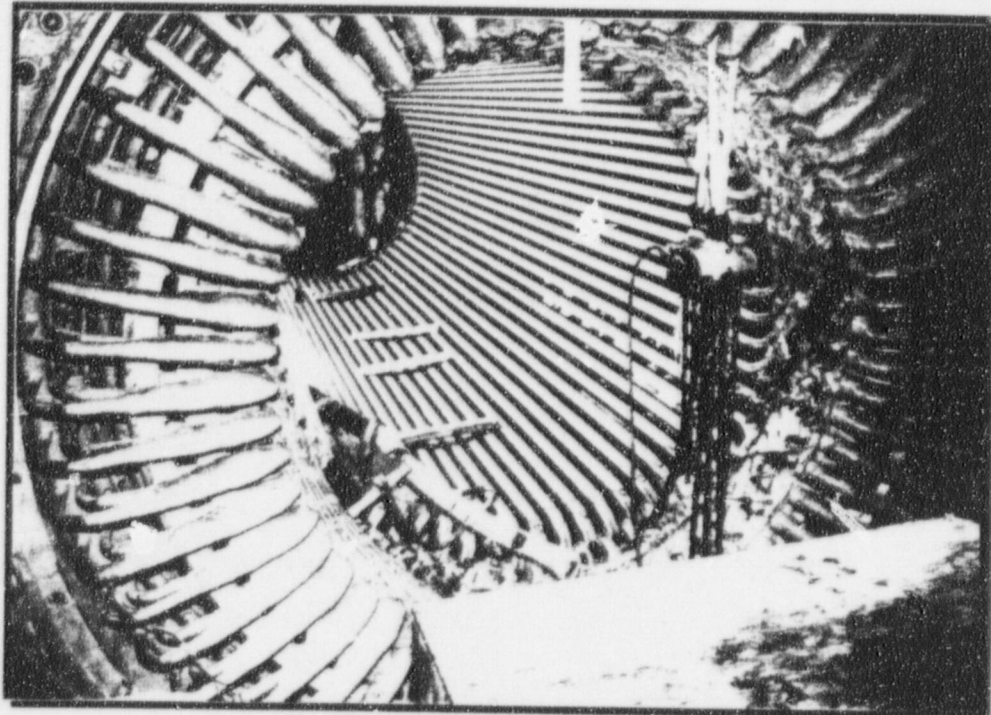
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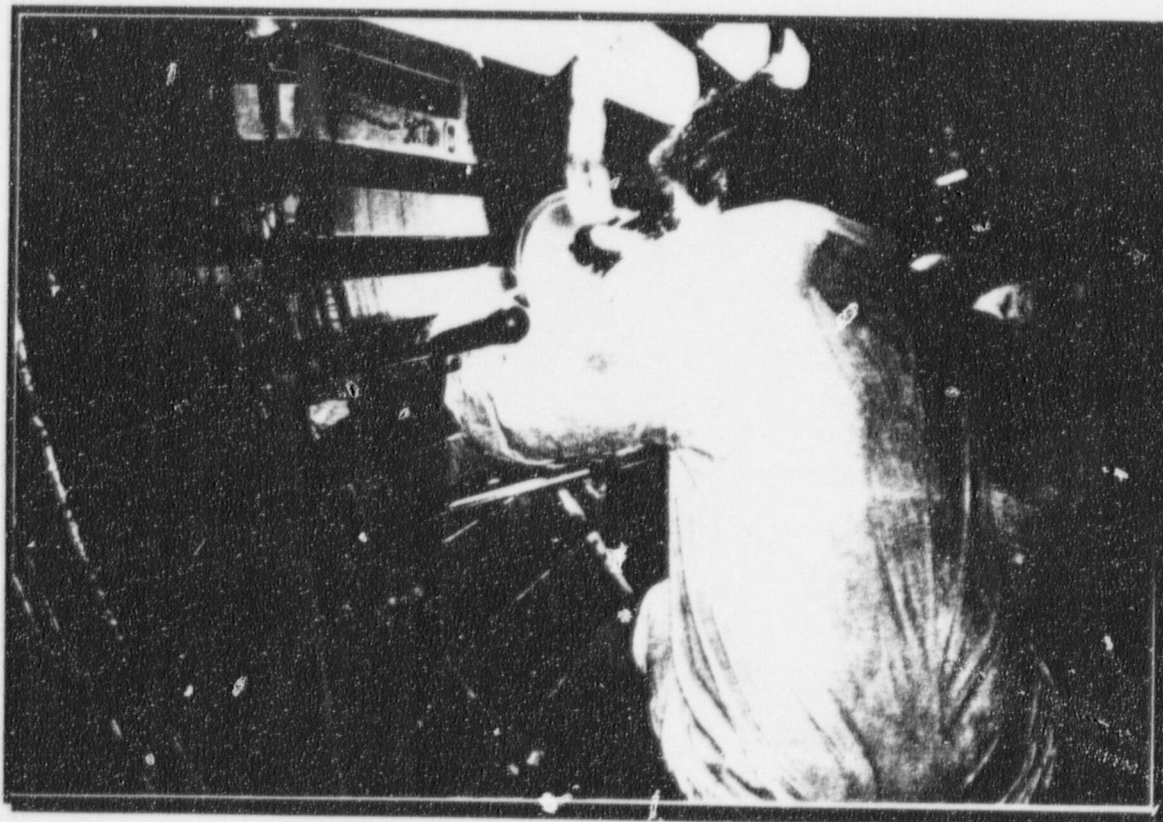
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GENERATOR REWIND

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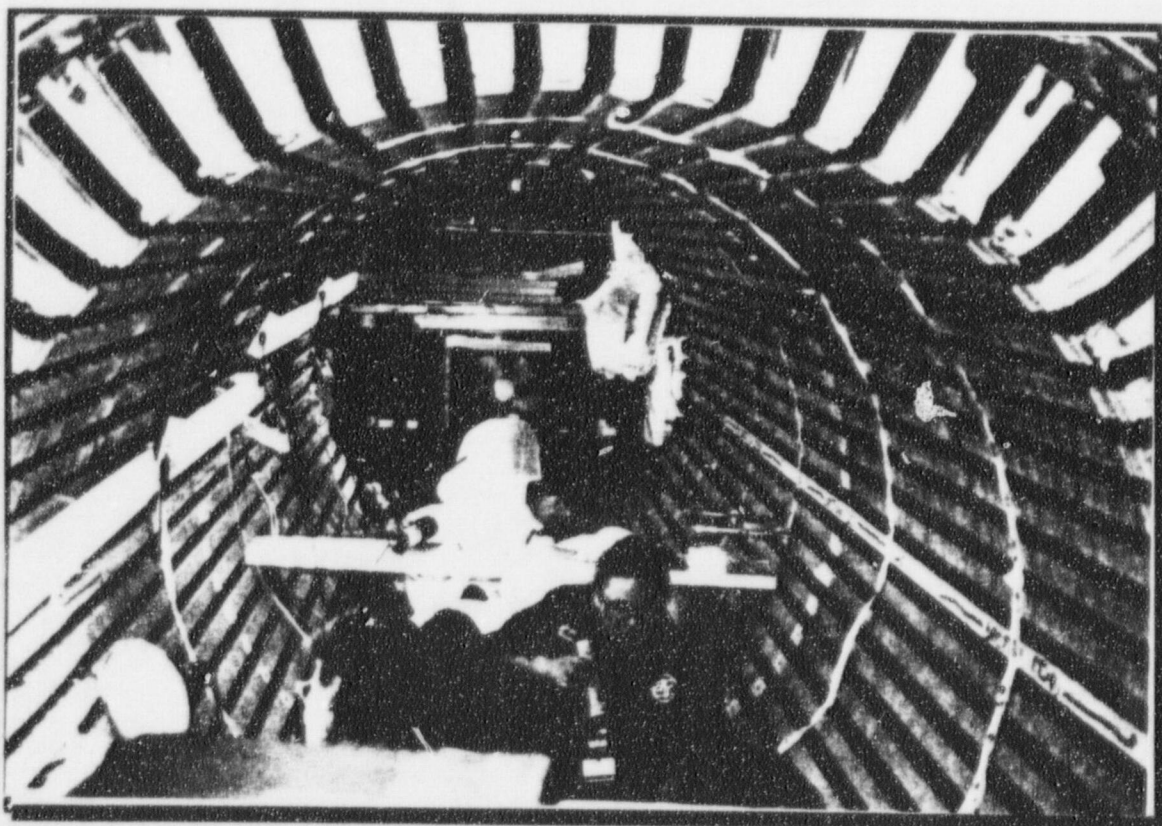


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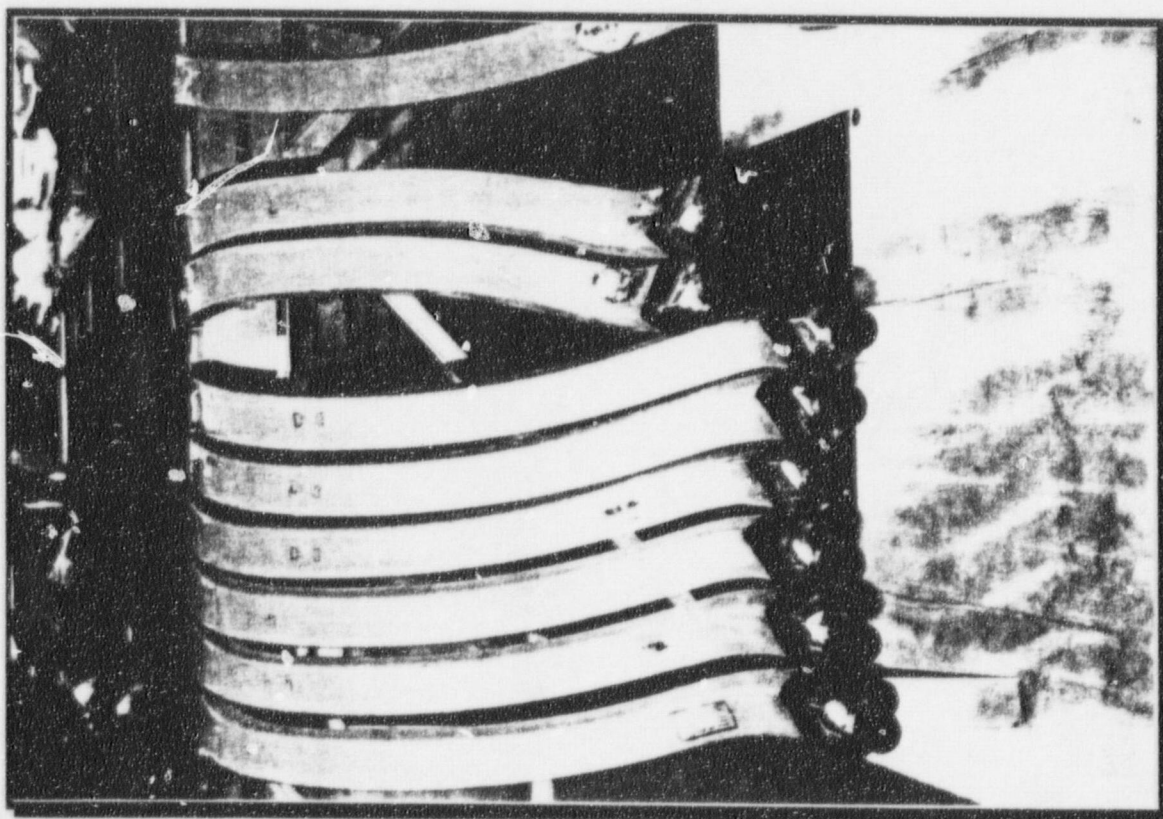


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GENERATOR REWIND

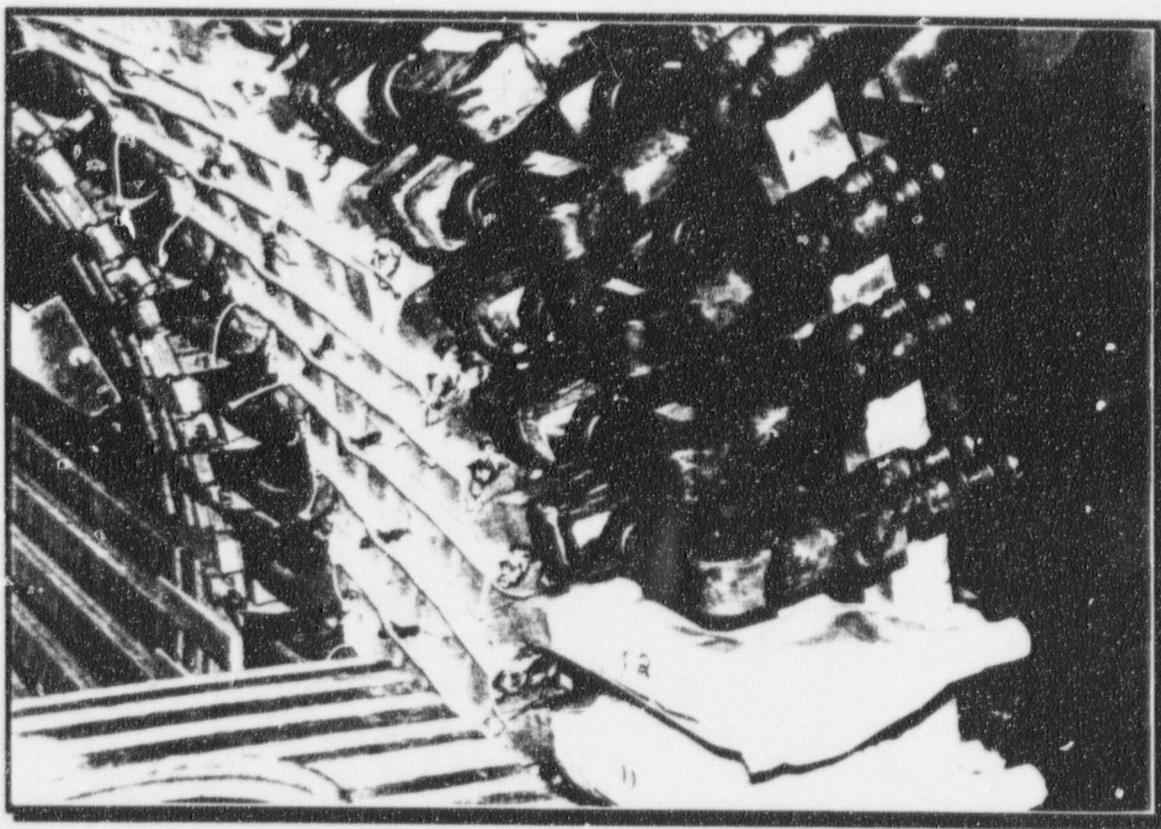


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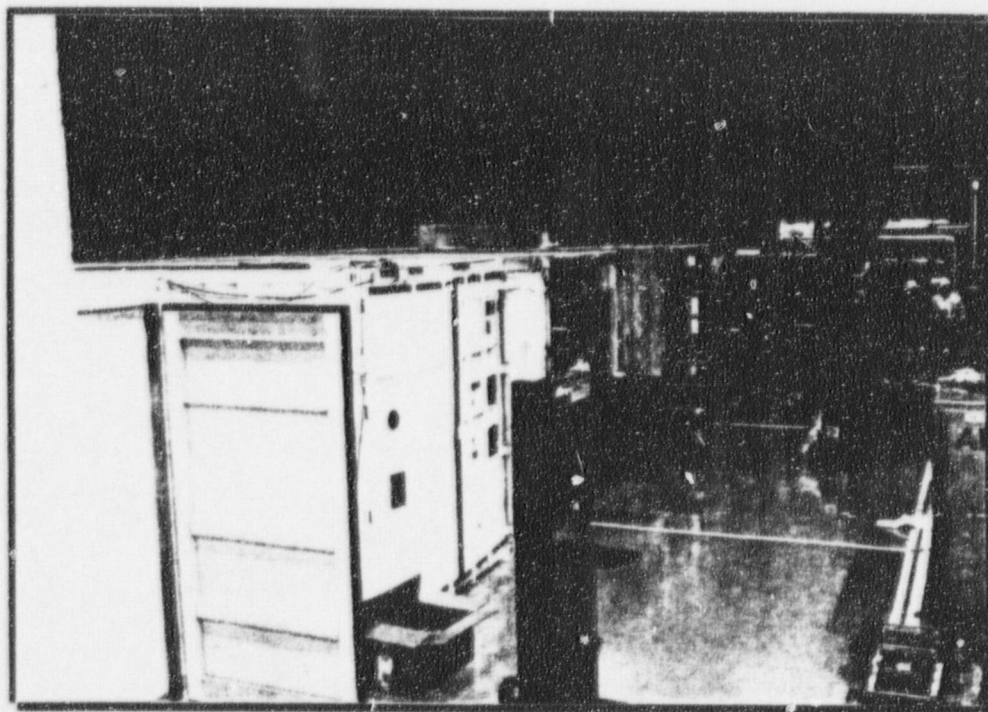


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GENERATOR REWIND

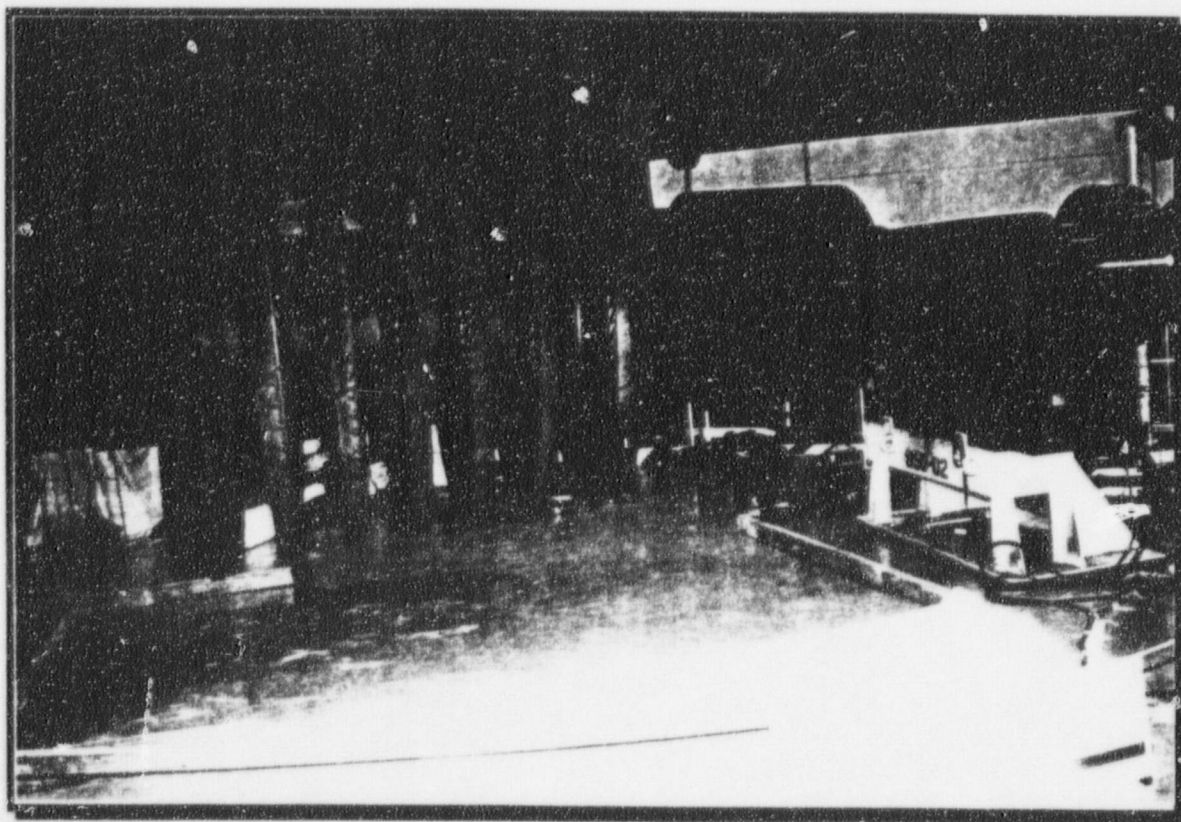


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GENERATOR REWIND



Industrial Safety

Constant Focus on Safety:

- GET
- Videos
- Safety Representative activities
- Outage incentives
- Safety meetings
- Preventive measures

Industrial Safety

Significant Events:

- Electrician near miss
- Rigging injury

Industrial Safety

Comparison of RFOs:

- First Aid Cases
- Dr. Cases
- Loss Time Accidents

Industrial Safety

Conclusions:

- Spaced repetition
- Understanding of consequences of unsafe activities

Human Performance Circumstances

Background:

- HPC meaning
- RCA's
- Fact Finding Meetings
- Actions taken prior to RFO 15

Human Performance Circumstances

Common themes as a result of analysis:

- Inattention to detail
- Procedural issues
- Less than adequate communications
- Coordination of activities/ESFs

Human Performance Circumstances

Generic Corrective Actions:

- Fact Finding Meetings
- Communications
- STP coordination meeting changes
- Supervisory oversight increased
- Stand-down
- Pre-emptive stand-down

Outage Overview

Accomplishments:

- Pre-outage Performance - Better
- Shutdown - Error free
- Refueling Activities - Excellent
- Outage Dose - Continues to improve
- Tagging errors - None
- Turbine Job - Went well

Outage Overview

Accomplishments (Cont.):

- Suction Strainers - Project went well
- LLRT - Results excellent
- FME - Overall good
- Double Verification Errors - None
- Overall Human Performance
 - Not cost or schedule driven
- Good Catches