

Officer, Brenda Jo. Shelton (T-5 F53), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, by telephone at 301-415-7233, or by Internet electronic mail to [INFOCOLLECTS@NRC.GOV](mailto:INFOCOLLECTS@NRC.GOV).

Dated at Rockville, Maryland, this 25th day of April 2006.

For the Nuclear Regulatory Commission,  
**Brenda Jo. Shelton,**  
*NRC Clearance Officer, Office of the Chief Information Officer.*  
 [FR Doc. E6-6633 Filed 5-1-06; 8:45 am]  
 BILLING CODE 7590-01-P

## NUCLEAR REGULATORY COMMISSION

[Docket No. 30-36974-ML; ASLBP No. 06-843-01-ML]

**Atomic Safety and Licensing Board; Before Administrative Judges: Thomas S. Moore, Chairman, Dr. Paul Abramson, Dr. Anthony J. Baratta; In the Matter of Pa'ina Hawaii, LLC (Material License Application); Notice of Hearing**

April 26, 2006.

This proceeding involves the application by Pa'ina Hawaii, LLC, submitted on June 27, 2005, for a possession and use materials license to build and operate a commercial pool-type industrial irradiator using a cobalt-60 source at the Honolulu International Airport.<sup>1</sup> In response to the August 2, 2005, Notice of Opportunity for Hearing published at 70 FR 44,396 (August 2, 2005), the Petitioner, Concerned Citizens of Honolulu, on October 3, 2005, timely filed a request for a hearing. Thereafter, on October 13, 2005, this Atomic Safety and Licensing Board was established by the Commission to preside over the proceeding. See 70 FR 60,858 (October 19, 2005).

On January 24, 2006, the Board issued LBP-06-04, 63 NRC 99 (2006), granting the hearing request of the Petitioner, Concerned Citizens of Honolulu, on the application of Pa'ina Hawaii, LLC. Due to the Petitioner's initial lack of access to sensitive non-public information contained in the Application, the January 24, 2006, memorandum and order, addressed only the Petitioner's standing and its two environmental contentions. Subsequently, on March 24, 2006, the Board addressed the Petitioner's safety related contentions and admitted three additional contentions. See LBP-06-12, 63 NRC \_\_\_\_\_ (March 24, 2006). Parties to

<sup>1</sup> See 70 FR 44,396 (Aug. 2, 2005).

the proceeding are Concerned Citizens of Honolulu, Pa'ina Hawaii, LLC, and the NRC Staff. The issues to be considered are the admitted contentions.

Please take notice that a hearing will be conducted in this proceeding. The hearing will be governed by the informal hearing procedures set forth in 10 CFR part 2, subpart L, 10 CFR 2.1200-1213. Except to the extent an early settlement or other circumstance renders them unnecessary, the Board may conduct an oral argument, may hold pre-hearing conferences, and may conduct an oral hearing. Unless otherwise ordered, the public is invited to attend any argument, pre-hearing conference, or oral hearing. Notices of these sessions will be published in the *Federal Register* and/or made available to the public at the NRC Public Document Room, located at One White Flint, 11555 Rockville Pike (first floor), Rockville, Maryland, and through the NRC Web site, <http://www.nrc.gov>.

In addition, pursuant to 10 CFR 2.315(a), any person not a party to the proceeding may submit a written limited appearance. Limited appearance statements, which are placed in the docket of the proceeding, provide members of the public with the opportunity to make the Board and the parties aware of their concerns about the matters at issue in the proceeding. Persons wishing to submit a written limited appearance statement should send it by mail to the Office of the Secretary, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, Attention: Rulemakings and Adjudications Staff. A copy of the statement should also be served by mail on the Chairman of this Atomic Safety and Licensing Board, Atomic Safety and Licensing Board Panel, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001. In its sole discretion and at a later date, the Board may entertain oral limited appearance statements at a suitable location or locations. Notice of any oral limited appearance sessions will be published in the *Federal Register* and/or made available to the public at the NRC Public Document Room and on the NRC Web site, <http://www.nrc.gov>.

Documents relating to this proceeding are available for public inspection at the NRC's Public Document Room or electronically from the publicly available records component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>. Persons who do not have access to ADAMS or who encounter problems in accessing the documents

located in ADAMS may contact the NRC Public Document Room reference staff by telephone at 1-800-397-4209 or 301-415-4737, or by e-mail to [pdr@nrc.gov](mailto:pdr@nrc.gov).

It is so ordered.

Dated: April 26, 2006 at Rockville, Maryland.

For the Atomic Safety and Licensing Board.<sup>2</sup>

**Thomas S. Moore,**  
*Chairman, Administrative Judge.*  
 [FR Doc. E6-6621 Filed 5-1-06; 8:45 am]  
 BILLING CODE 7590-01-P

## NUCLEAR REGULATORY COMMISSION

**Advisory Committee on Reactor Safeguards; Meeting of the Subcommittee on Plant License Renewal; Notice of Meeting**

The ACRS Subcommittee on Plant License Renewal will hold a meeting on May 30, 2006, Room T-2B3, 11545 Rockville Pike, Rockville, Maryland.

The entire meeting will be open to public attendance.

The agenda for the subject meeting shall be as follows:

**Tuesday, May 30, 2006—1:30 p.m.—5 p.m.**

The purpose of this meeting is to discuss the License Renewal Application for the Monticello Nuclear Generating Plant and the related Safety Evaluation Report (SER) with open items prepared by the NRR staff. The Subcommittee will hear presentations by and hold discussions with representatives of the NRC staff, Nuclear Management Company, LLC, and other interested persons regarding this matter. The Subcommittee will gather information, analyze relevant issues and facts, and formulate proposed positions and actions, as appropriate, for deliberation by the full Committee.

Members of the public desiring to provide oral statements and/or written comments should notify the Designated Federal Official, Mr. Cayetano Santos (telephone 301/415-7270) five days prior to the meeting, if possible, so that appropriate arrangements can be made. Electronic recordings will be permitted.

Further information regarding this meeting can be obtained by contacting the Designated Federal Official between 7:30 a.m. and 4:15 p.m. (ET). Persons planning to attend this meeting are urged to contact the above named

<sup>2</sup> Copies of this Order were sent this date by Internet e-mail transmission to counsel for the (1) Applicant Pa'ina Hawaii, LLC; (2) Intervenor Concerned Citizens of Honolulu; and (3) NRC Staff.

individual at least two working days prior to the meeting to be advised of any potential changes to the agenda.

Dated: April 25, 2006.

Michael R. Snodderly,

Acting Branch Chief, ACRS/ACNW.

[FR Doc. E6-6608 Filed 5-1-06; 8:45 am]

BILLING CODE 7590-01-P

## NUCLEAR REGULATORY COMMISSION

### Sunshine Act; Notice of Meetings

**AGENCY HOLDING THE MEETINGS:** Nuclear Regulatory Commission.

**DATES:** Weeks of May 1, 8, 15, 22, 29, June 5, 2006.

**PLACE:** Commissioner' Conference Room, 11555 Rockville Pike, Rockville, Maryland.

**STATUS:** Public and Closed.

**MATTERS TO BE CONSIDERED:**

#### Week of May 1, 2006

*Tuesday, May 2, 2006*

9:30 a.m. Briefing on Status of Emergency Planning Activities—Morning Session (Public Meeting) (Contact: Eric Leeds, 301-415-2334).

1 p.m. Briefing on Status of Emergency Planning Activities—Afternoon Session (Public Meeting).

These meetings will be webcast live at the Web address <http://www.nrc.gov>.

*Wednesday, May 3, 2006*

8:55 a.m. Affirmation Session (Public Meeting) (Tentative)  
a. Andrew Siemaszko, Docket No. IA-05-021, unpublished Licensing Board Order (March 2, 2006) (Tentative).

9 a.m. Briefing on Status of Risk-Informed, Performance-Based Reactor Regulation (Public Meeting) (Contact: Eileen McKenna, 301-415-2189).

This meeting will be webcast live at the Web address <http://www.nrc.gov>.

#### Week of May 8, 2006—Tentative

There are no meetings scheduled for the Week of May 8, 2006.

#### Week of May 15, 2006—Tentative

*Monday, May 15, 2006*

1 p.m. Briefing on Status of Implementation of Energy Policy Act of 2005 (Public Meeting) (Contact: Scott Moore, 301-415-7278).

This meeting will be webcast live at the Web address <http://www.nrc.gov>.

*Tuesday, May 16, 2006*

9:30 a.m. Briefing on Results of the Agency Action Review Meeting—

Reactors/Materials (Public Meeting) (Contact: Mark Tonacci, 301-415-4045).

This meeting will be webcast live at the Web address <http://www.nrc.gov>.

#### Week of May 22, 2006—Tentative

*Wednesday, May 24, 2006*

9:30 a.m. Discussion of Security Issues (closed—ex. 1).

1:30 p.m. All Employees Meeting (Public Meeting), Marriott Bethesda North Hotel, Salons D-H, 5701 Marinelli Road, Rockville, MD 20852.

#### Week of May 29, 2006—Tentative

*Wednesday, May 31, 2006*

Discussion of Security Issues (closed—ex. 1).

#### Week of June 5, 2006—Tentative

*Wednesday, June 7, 2006*

9:30 a.m. Discussion of Security Issues (closed—ex. 1 & 3).

\* \* \* \* \*

#### Additional Information

The Affirmation of Andrew Siemaszko, Docket No. IA-05-021, unpublished Licensing Board Order (Dec. 22, 2005) previously tentatively scheduled on May 3, 2006, has been postponed and will be rescheduled.

\* \* \* \* \*

The schedule for Commission meetings is subject to change on short notice. To verify the status of meetings call (recording)—(301) 415-1292. Contact person for more information: Michelle Schroll, (301) 415-1662.

\* \* \* \* \*

The NRC Commission Meeting Schedule can be found on the Internet at: <http://www.nrc.gov/what-we-do/policy-making/schedule.html>.

\* \* \* \* \*

The NRC provides reasonable accommodation to individuals with disabilities where appropriate. If you need a reasonable accommodation to participate in these public meetings, or need this meeting notice or the transcript or other information from the public meetings in another format (e.g. braille, large print), please notify the NRC's Disability Program Coordinator, Deborah Chan, at 301-415-7041, TDD: 301-415-2100, or by e-mail at [DLC@nrc.gov](mailto:DLC@nrc.gov). Determinations on requests for reasonable accommodation will be made on a case-by-case basis.

This notice is distributed by mail to several hundred subscribers; if you no longer wish to receive it, or would like to be added to the distribution, please contact the Office of the Secretary, Washington, DC 20555 (301-415-1969).

In addition, distribution of this meeting notice over the Internet system is available. If you are interested in receiving this Commission meeting schedule electronically, please send an electronic message to [dkw@nrc.gov](mailto:dkw@nrc.gov).

Dated: April 26, 2006.

R. Michelle Schroll,  
Office of the Secretary.

[FR Doc. 06-4164 Filed 4-28-06; 1:03 pm]

BILLING CODE 7590-01-M

## OFFICE OF PERSONNEL MANAGEMENT

### Excepted Service

**AGENCY:** Office of Personnel Management (OPM).

**ACTION:** Notice.

**SUMMARY:** This gives notice of OPM decisions granting authority to make appointments under Schedules A, B, and C in the excepted service as required by 5 CFR 6.6 and 213.103.

**FOR FURTHER INFORMATION CONTACT:** David Guilford, Center for Leadership and Executive Resources Policy, Division for Strategic Human Resources Policy, 202-606-1391.

**SUPPLEMENTARY INFORMATION:** Appearing in the listing below are the individual authorities established under Schedules A, B, and C between March 1, 2006, and March 31, 2006. Future notices will be published on the fourth Tuesday of each month, or as soon as possible thereafter. A consolidated listing of all authorities as of June 30 is published each year.

#### Schedule A

No Schedule A appointments were approved for March 2006.

#### Schedule B

No Schedule B appointments were approved for March 2006.

#### Schedule C

The following Schedule C appointments were approved during March 2006:

*Section 213.3303 Executive Office of the President*

*Office of National Drug Control Policy*

QQGS00043 Legislative Assistant to the Associate Director, Legislative Affairs. Effective March 22, 2006.

QQGS00040 Legislative Analyst to the Associate Director, Legislative Affairs. Effective March 23, 2006.

*Section 213.3304 Department of State*

DSGS61037 Foreign Affairs Officer to the Assistant Secretary for Western

**Advisory Committee on Reactor Safeguards  
Plant License Renewal Subcommittee Meeting  
Monticello Nuclear Generating Plant  
May 30, 2006  
Rockville, MD**

**-PROPOSED SCHEDULE-**

**Cognizant Staff Engineer:** Cayetano Santos Jr. [CXS3@NRC.GOV](mailto:CXS3@NRC.GOV) (301) 415-7270

Topics	Presenters	Time
Opening Remarks	M. Bonaca, ACRS	1:30 pm - 1:35 pm
Staff Introduction <i>J. Zimmerman</i>	<del>P. T. Kuo</del> , NRR	1:35 pm - 1:40 pm
Monticello License Renewal Application A. Description of Monticello B. Operating History C. Application Background D. Scoping Discussion E. Application of GALL F. Commitment Process	J. Grubb, P. Burke, and J. Pairitz, NMC	1:40 pm - <del>2:40 pm</del> <i>2:45</i>
SER Overview A. Scoping and Screening Results B. Onsite Inspection Results	D. Merzke, NRR P. Loughheed, Region III	<del>2:40 pm - 3:00 pm</del> <i>2:45 3:05</i>
Break	<i>3:05 pm</i>	<del>3:00 pm - 3:15 pm</del> <i>3:25 pm</i>
Aging Management Program Review and Audits	D. Merzke, NRR	<del>3:15 pm - 4:00 pm</del> <i>3:25 pm 3:35 pm</i>
Time-Limited Aging Analyses	D. Merzke, NRR <i>3:35 pm</i>	<del>4:00 pm - 4:30 pm</del> <i>3:45 pm</i>
Subcommittee Discussion	M. Bonaca, ACRS	<del>4:30 pm - 5:00 pm</del> <i>3:45 pm 4:00 pm</i>

**NOTE:**

- Presentation time should not exceed 50 percent of the total time allocated for a specific item. The remaining 50 percent of the time is reserved for discussion.
- 35 copies of the presentation materials to be provided.

ADVISORY COMMITTEE ON REACTOR SAFEGUARDS  
SUBCOMMITTEE MEETING ON PLANT LICENSE RENEWAL

May 30, 2006  
Date

NRC STAFF SIGN IN FOR ACRS MEETING

PLEASE PRINT

<u>NAME</u>	<u>NRC ORGANIZATION</u>
DANIEL MERZKE	NRR/DLR
Rodrigo De La Garza	NRR/DLR
J. H. Ravel	NRR/DSS
Donnie Ashley	NRR/DLR
RAJ GOEL	NRR/DLR
Jake Zimmerman	NRR/DLR
Jim Davis	NRR/DLR
DAVE WRONA	NRR/DLR
John P. Broschak	NMC/Palisades
John Fair	NRR/DE
Kiyoto Tanabe	NRR/DLR/RLRC, F.A.
HANS ASHAR	NRR/DE/EGCB
Adam Ziedonis	NRR/DSS/SBWB
Raul Hernandez	NRR/DSS/SBWB
JAMES MEDOFF	NRR/DLR
Jaclyn Storch	016
Jennifer A. Davis	NRR/DLR/REBB
Karhwa HSU	NRR/DLR/RLRC
Linh Tran	NRR/DLR/RLRB
DUC NGUYEN	NRR/DLR/RLRC



ADVISORY COMMITTEE ON REACTOR SAFEGUARDS  
SUBCOMMITTEE MEETING ON PLANT LICENSE RENEWAL

May 30, 2006  
Date

PLEASE PRINT

	<u>NAME</u>	<u>AFFILIATION</u>
1	<u>PAT BURKE</u>	<u>NMC - MONTICELLO</u>
2	<u>Joseph Pairitz</u>	<u>NMC - Monticello</u>
3	<u>Mike Aklesy</u>	<u>NMC - Monticello</u>
4	<u>Ray Dennis</u>	<u>NMC - Monticello</u>
5	<u>David Potter</u>	<u>NMC - Monticello</u>
6	<u>Sherry Bernhys</u>	<u>NMC - Hudson</u>
7	<u>John Grubb</u>	<u>NMC Monticello</u>
8	<u>RONALD G. SIEPEL</u>	<u>NMC - MONTICELLO</u>
9	<u>JAMES L. ROOTES</u>	<u>NMC - MONTICELLO</u>
10	<u>Steven J. Hammer</u>	<u>NMC - Monticello</u>
11	<u>DARREL G. TURNER</u>	<u>NMC - PALISADES</u>
12	<u>William Cobalt</u>	<u>NMC - PALISADES</u>
13	<u>John Kneeland</u>	<u>NMC - Palisades</u>
14	<u>MARK GIMOK</u>	<u>NMC - PALISADES</u>
15	<u>Bob VINCENT</u>	<u>NMC - PALISADES</u>
16	<u>Cliff Custer</u>	<u>FENOC - BEAVER VALLEY</u>
17	<u>Roger B. Rucker</u>	<u>FENOC - Beaver Valley</u>
18	<u>LARRY SEAMANS</u>	<u>NMC - PALISADES</u>
19	<u>Erach Patel</u>	<u>ATL</u>
20	<u>PETER WEN</u>	<u>NRC - PLRC</u>

ADVISORY COMMITTEE ON REACTOR SAFEGUARDS  
SUBCOMMITTEE MEETING ON PLANT LICENSE RENEWAL

May 30, 2006  
Date

PLEASE PRINT

	<u>NAME</u>	<u>AFFILIATION</u>
1	<u>Chalmer Myer</u>	<u>Southern Nuclear</u>
2	<u>Jim Nickivans</u>	<u>PNNL</u>
3	<u></u>	<u></u>
4	<u></u>	<u></u>
5	<u></u>	<u></u>
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# Monticello Nuclear Generating Plant

ACRS License Renewal Subcommittee Presentation

May 30, 2006







## **Sherry Barnham - Director of Plant Project Management**

- **Pat Burke - Manager of Projects**
- **Joe Pairitz - LR Project Manager/Mechanical Lead**
- **Ray Dennis - LR Civil/Structural Lead**
- **Ron Siepel - LR Electrical Lead**
- **Jim Rootes - LR Programs Lead**
- **Mike Aleksey - TLAA's**
- **Dave Potter - Engr. Supervisor of Inspections/Materials**
- **Steve Hammer - Principal Engineer**



# Agenda

- **Description of the Monticello Nuclear Generating Plant (MNGP)**
- **Operating History/Highlights**
- **Project/Application Background**
- **Application Review Methodology**
- **Application of GALL**
- **Industry Topics**
  - **Drywell Shell Corrosion**
  - **Shroud Cracking**
  - **Steam Dryer**
- **Commitment Process**

# Description of MNGP

- **Located in Monticello, Minnesota on the banks of the Mississippi River; 30 miles northwest of Minneapolis; Site includes ~2,100 acres of land**
- **Single Unit General Electric BWR-3 with Mark I Containment**
- **Licensed Thermal Power: 1775 MWth; Net electrical output: ~600 MWe**
- **Plant is owned by Northern States Power Company, a subsidiary of Xcel Energy**
- **Operated by Nuclear Management Company, LLC (NMC)**
- **Staff of ~420**

# Aerial View of MNGP



# Description of MNGP Current Plant Performance

- **Unit Capability Factor (3-Year Avg)** >93%
- **Latest INPO Perf. Indicator Index** 100%
- **Days since last scram from power** >1500
- **Days on-line** >400
- **NRC Performance Indicators** All Green
- **NRC inspection findings > green** 0

# Operating History/Highlights

- **Construction Permit issued by Atomic Energy Commission June, 1967**
- **Provisional Operating License DPR-22 issued for fuel loading and low power testing September, 1970**
- **Commercial Operation began June, 1971**
- **NRC issued full term operating license January, 1981**
- **Current License expires September, 2010**
- **License Renewal Application submitted to the NRC March 16, 2005**

# Operating History/Highlights

- **1984: Replaced all recirculation piping with low carbon stainless steel resistant to Intergranular Stress Corrosion Cracking (IGSCC)**
  - **Risers, supply headers, suction piping, and safe-ends replaced**
  - **Number of welds significantly reduced**
  - **Induction heating stress improvement and electro-polishing applied to new pipe**
- **1986: Core Spray safe-ends and piping replaced with IGSCC-resistant material**
- **1989: Moderate Hydrogen Water Chemistry (HWC-M) initiated**

# Operating History/Highlights

- **1997: Replaced Emergency Core Cooling System (ECCS) suction strainers in suppression pool (Torus)**
  - **Strainer design and surface area significantly improved**
- **1998: Power Uprate to 1775 MWth (6.3%) approved by NRC**
- **2005: Six SAMA's implemented; significant reduction in overall plant risk**
- **Future Life Cycle Management projects (e.g. replacement of FW heaters, recirc pump motors & rotating assemblies, SW pumps, transformers, generator rewind, etc.)**



# Project/Application Background

- **Core Team NMC Employees**
  - **4 with previous SRO or SRO certifications at MNGP**
  - **Experienced, multi-discipline MNGP personnel**
- **Supplemented by LR experienced on-site contractor support**
- **Team retained to support audits/inspections**
- **Contract with GE for RPV & Internals TLAAAs & AMRs**
- **Plant/Site personnel involved with AMR & AMP development**

# Project/Application Background

- **LR Team engaged in the industry**
  - **Working groups (NEI, BWROG, BWRVIP, etc.)**
  - **GALL Draft Rev 1 review and comments via NEI**
  - **Participated in Point Beach/Palisades NRC audits/inspections**
  - **Supported LR peer reviews (Brunswick, Browns Ferry, Oyster Creek)**
  - **Hosted peer review of MNGP LRA (7 external peers)**
  - **Reviewed industry RAIs (Nine Mile Point, Point Beach, Dresden/Quad and others) and applied lessons learned**

# Application Review Methodology

## ➤ Scoping

- **System and component functions identified**
- **System boundaries based on results of component-level scoping and are shown by boundary flags on drawings**
- **Multiple colors used on boundary drawings to differentiate scoping criteria**
- **Based on CLB, USAR, DBD's, drawings, walkdowns, plant equipment database, etc.**
- **Technical reports generated for Criterion 2 (NSAS) and regulated events to provide detailed guidance**
- **“Spaces approach” used for Criterion 2 scoping**

# Application Review Methodology

- **Aging Management Review**
  - **Aging effects with mechanisms provided**
  - **Materials and environments determined using plant data and walkdowns**
- **Aging Management Programs**
  - **36 Aging management programs**
  - **LRA includes GALL 10 elements for each AMP**

# Application of GALL

- **Reconciliation to GALL Revision 0 (April, 2001)**
  - **~75% consistency**
- **GALL Precedence Review to Draft GALL Revision 1 (January, 2005)**
  - **~95% consistency**
- **High consistency with GALL increased efficiency of NRC Staff review of LRA**

# Industry Topics

- **Drywell Shell Corrosion**
- **Shroud Cracking**
- **Steam Dryer**

# Industry Topics

## Drywell Shell Corrosion

### ➤ MNGP Design Features

- Three separate drain paths prevent water accumulation
- Sealed sheet metal barrier over the sand pocket area

### ➤ Proposed LR-ISG-2006-01

- Extensive GL 87-05 UT inspections on drywell shell
- Air gap and sand-pocket drain outlets visually inspected; top of sand-pocket area sealed
- Drywell shell is managed by the Primary Containment In-Service Inspection Program (IWE) which will be revised to specifically address the ISG

# Industry Topics

## Shroud Cracking

- **Inspection coverages have increased from ~50% up to a maximum of ~75%**
- **Percent indication of inspected region: H3~27%; H1~16%, all others less than 10%**
- **Inspection results and evaluations allow inspection frequency to remain at the maximum allowed 10 year interval for circumferential welds**
- **Three vertical welds inspected per BWRVIP; Inspection frequency established by inspection coverage**
- **Previously identified flaws exhibit no significant crack growth**
- **HWC-M has effectively contributed to mitigating crack growth**
- **Will continue to manage per BWRVIP**



# Industry Topics

## Steam Dryer

- In scope for LR
- “Square hood” dryer design
- 1998 inspection noted an indication in area of 324° jacking bolt tack weld; not structurally significant
- 2001 re-inspection found no additional indications and no change at the 324° location
- Comprehensive inspection in 2005
  - Inspection included areas of dryer failures at other sites; no indications found
  - Found acceptable indications on dryer shell behind three lifting lugs and on right side of guide rod channel (215°)
  - 2007 re-inspection to confirm continued acceptability
- Will continue to manage per BWRVIP

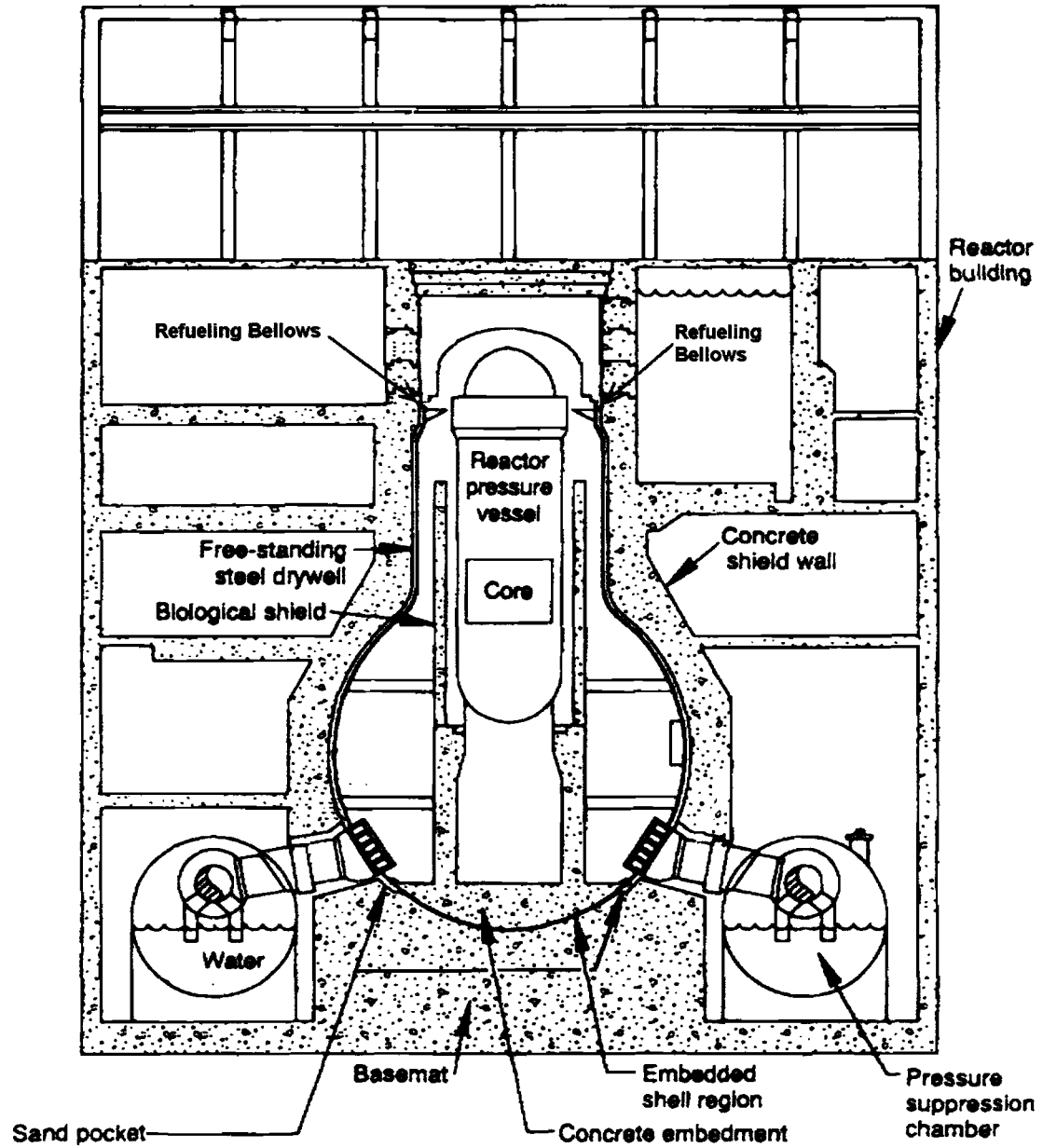
# Commitment Process

- **60 Commitments made to enhance aging management at MNGP**
- **Commitments are described in the MNGP License Renewal Updated Safety Analysis Report Supplement**
- **All commitments are entered in the MNGP Corrective Action Program**
  - **Assures an owner and a due date**

# Questions?

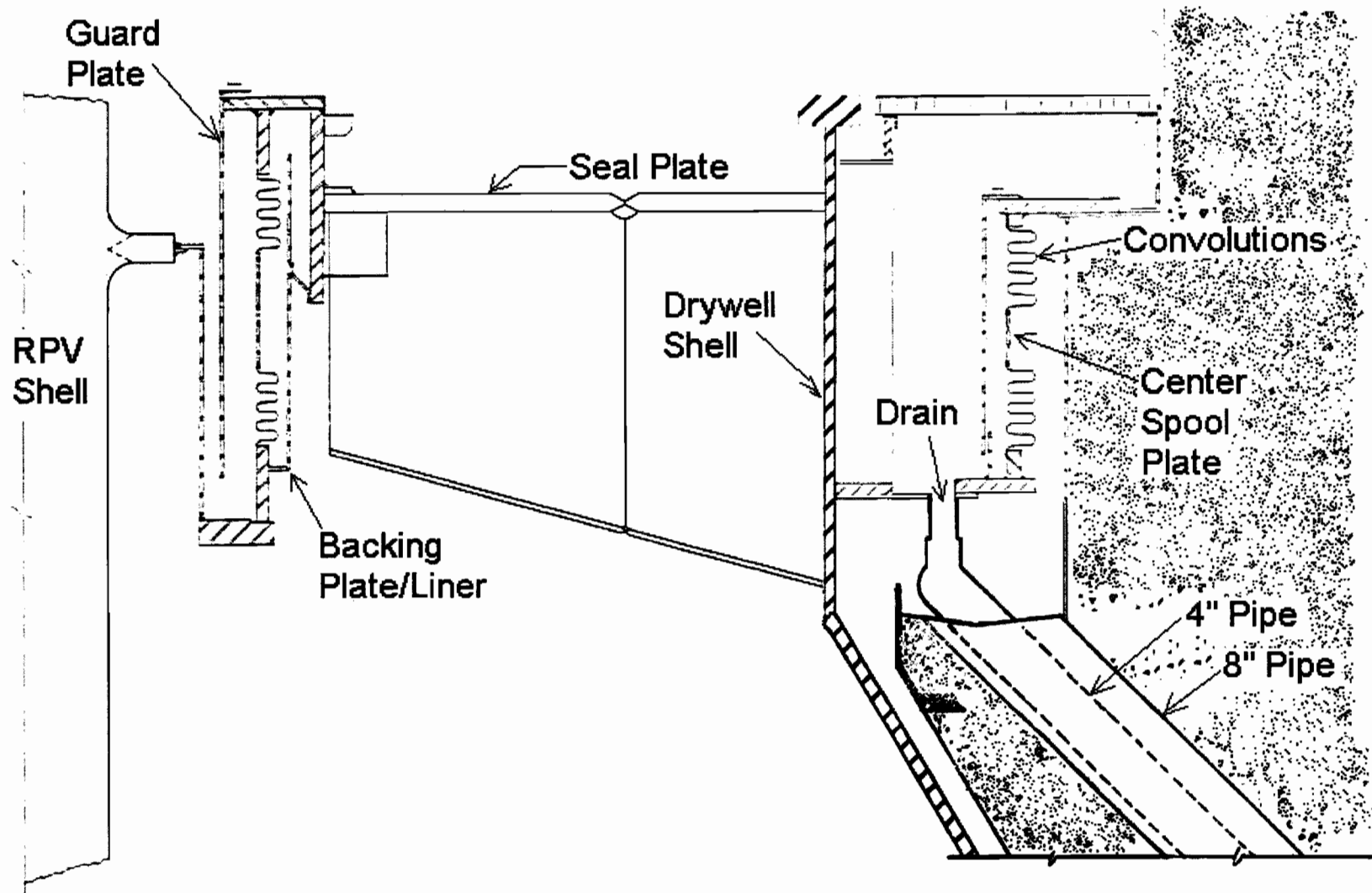


# MNGP Mark I Primary Containment

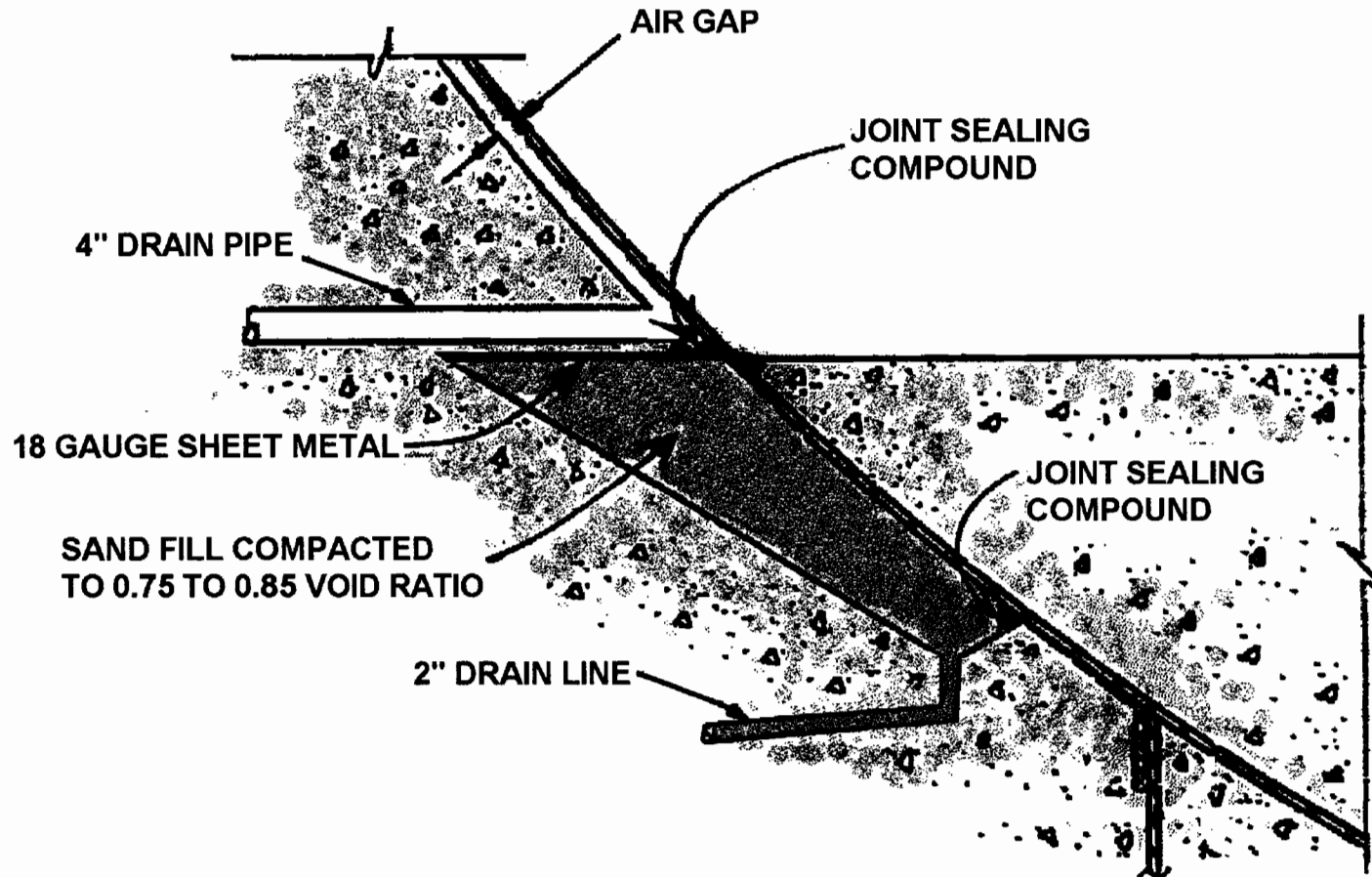


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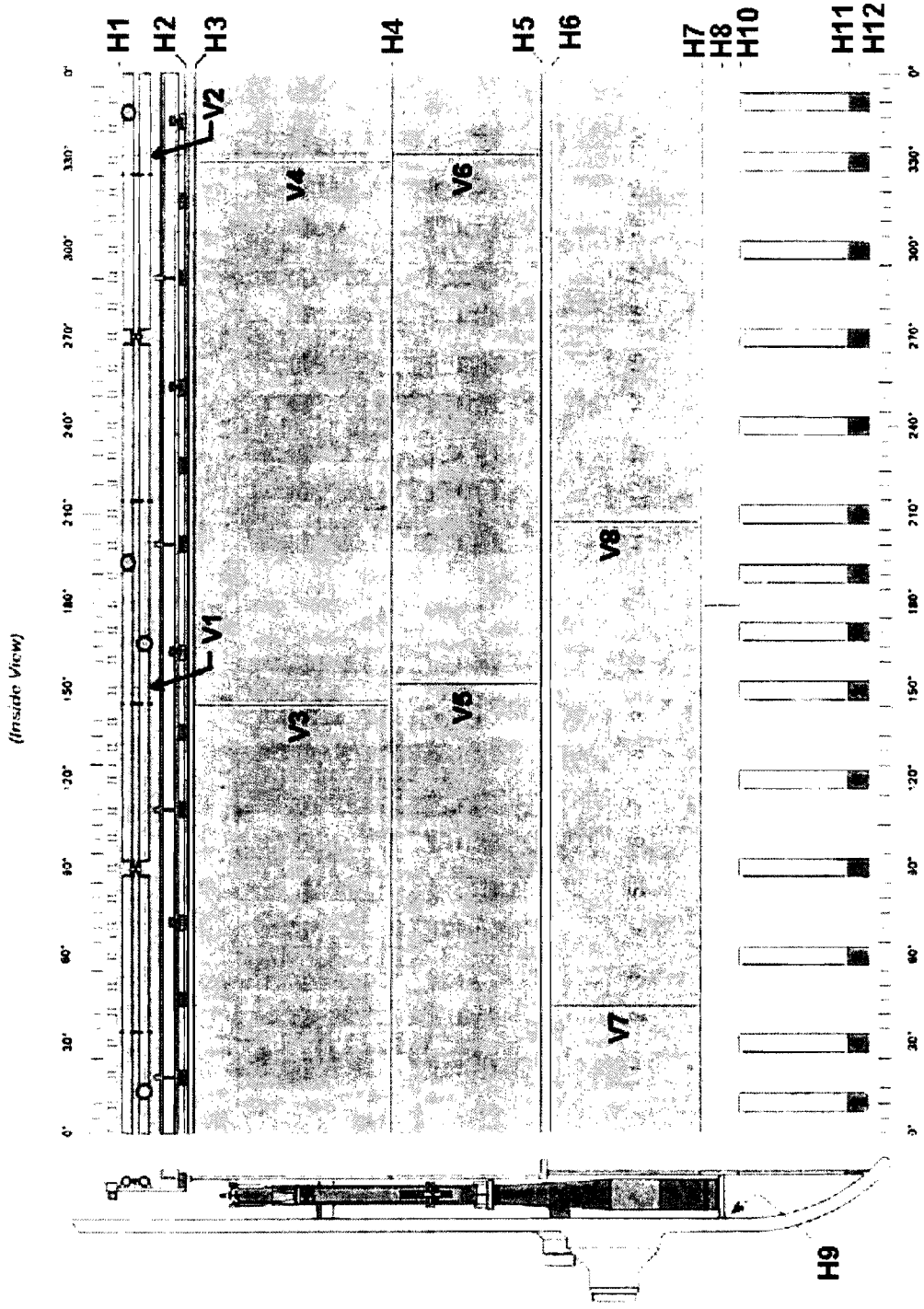
# Refueling Bellows



# Sand Pocket Area

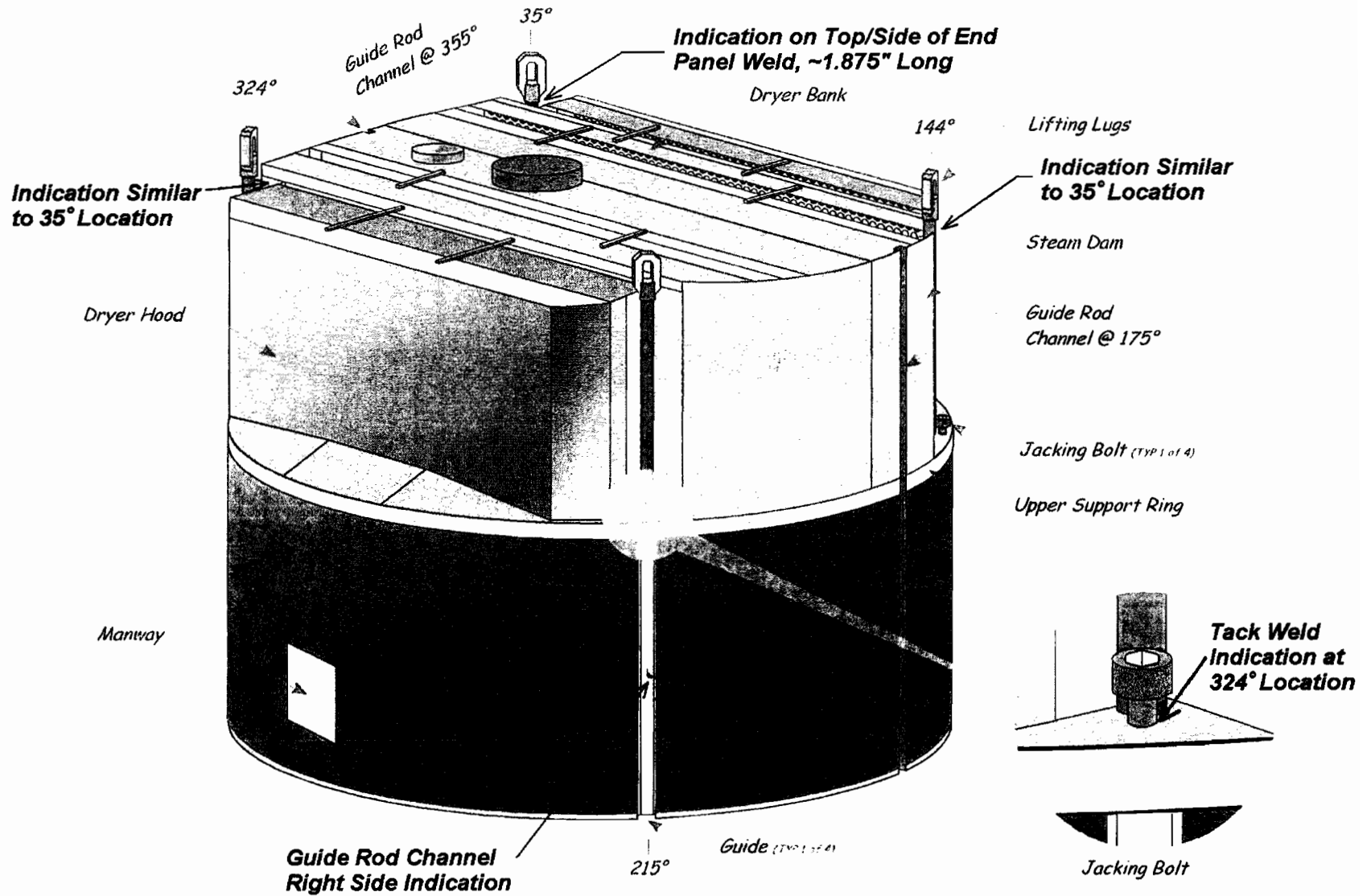


# MNGP Shroud – Rollout View



Back

# MNGP Dryer Inspection Summary – March, 2005







# **Monticello Nuclear Generating Plant License Renewal Safety Evaluation Report**

## **Staff Presentation to the ACRS**

Daniel J. Merzke, Project Manager  
Office of Nuclear Reactor Regulation  
May 30, 2006



# Introduction

- Overview
- Section 2: Scoping and Screening Review
- License Renewal Inspections
- Section 3: Aging Management Review Results
- Section 4: Time-Limited Aging Analyses (TLAAs)



# Overview

- LRA submitted by letter, dated March 16, 2005
- GE BWR-3, Mark I steel containment
- 1775 MWth, 600 MWe – includes 6.3% power uprate in 1998
- Operating License expires September 8, 2010
- MNGP located 30 miles NW of Minneapolis, MN



# Overview

- SER issued April 26, 2006
- No Open or Confirmatory items
- 3 license conditions
- 113 RAIs issued, 260 audit questions
- $\approx 95\%$  consistent with draft GALL Report, Revision 1
- Minor components brought into scope



# Overview

- AMP GALL Audit
  - June 13 -17, 2005
- Scoping and Screening Methodology Audit
  - June 20 – 24, 2005
- AMR GALL Audit
  - July 25 – 29, 2005
- Regional Inspections
  - January 23 – 27, 2006
  - February 6 – 10, 2006



## Section 2: Scoping and Screening Review

### Section 2.1 - Scoping and Screening Methodology

- Staff audit and review concluded that the applicant's methodology satisfies the rule pursuant to 10 CFR 54.4(a) and 10 CFR 54.21
  - Stored steel plates/hatch covers brought into scope

### Section 2.2 – Plant-Level Scoping

- No omission of systems or structures within the scope of license renewal



# Section 2: Scoping and Screening Review

## Section 2.3 – Mechanical Systems

- 36 mechanical systems
- 100% reviewed
- 17 items referred to Regional inspection team
  - Components brought into scope
    - HVAC piping and steam trap
    - Floor drain piping



## Section 2: Scoping and Screening Review

### Section 2.4 – Containment, Structures, and Supports

- No omission of structures or supports within the scope of license renewal

### Section 2.5 – Electrical and Instrumentation & Control

- Brought into scope
  - Motor Control Center (ATWS) (screened out)
  - 480 V load center breakers (screened out)





## Section 2: Scoping and Screening Summary

- The applicant's scoping methodology meets the requirements of 10 CFR Part 54
- Scoping and screening results, as amended, included all SSCs within the scope of license renewal and subject to AMR



# License Renewal Inspections

Patricia Loughheed  
Region III



# License Renewal Inspections

- Two–week onsite inspection from January 23 to February 10, 2006
- Scheduled to support NRR reviews
- Team of six inspectors
- Inspection performed in accordance with NRC Inspection Procedure 71002



# License Renewal Inspections

- Scoping and Screening
  - Looked at electrical, structural, and mechanical systems
  - Emphasized physical walk downs of the plant
  - Concentrated on non-safety systems whose failure could impact safety systems
- Conclusions:
  - Systems appropriately scoped
  - Only minor items identified
  - Applicant submitted clarification to application to more clearly define out-of-scope components, in particular reactor building areas



# License Renewal Inspections

- Aging Management
  - Reviewed all 33 aging management programs plus 2 time-limited aging analyses programs
- Conclusions
  - Existing aging management programs implemented as described in the application
  - Enhancements and exceptions were acceptable and were captured in commitment tracking database



# License Renewal Inspections

- Conclusions (con't)
  - Some minor inconsistencies identified which either required revision to the application or documentation in the corrective action program
  - Application revisions submitted in the annual application update
  - Aging Management Programs adequate for period of extended operation



# Conclusions

- Overall, Monticello scoping, screening, and implementation of aging management programs sufficient for extended operation.
- Optional third NRC license renewal inspection not required for Monticello.



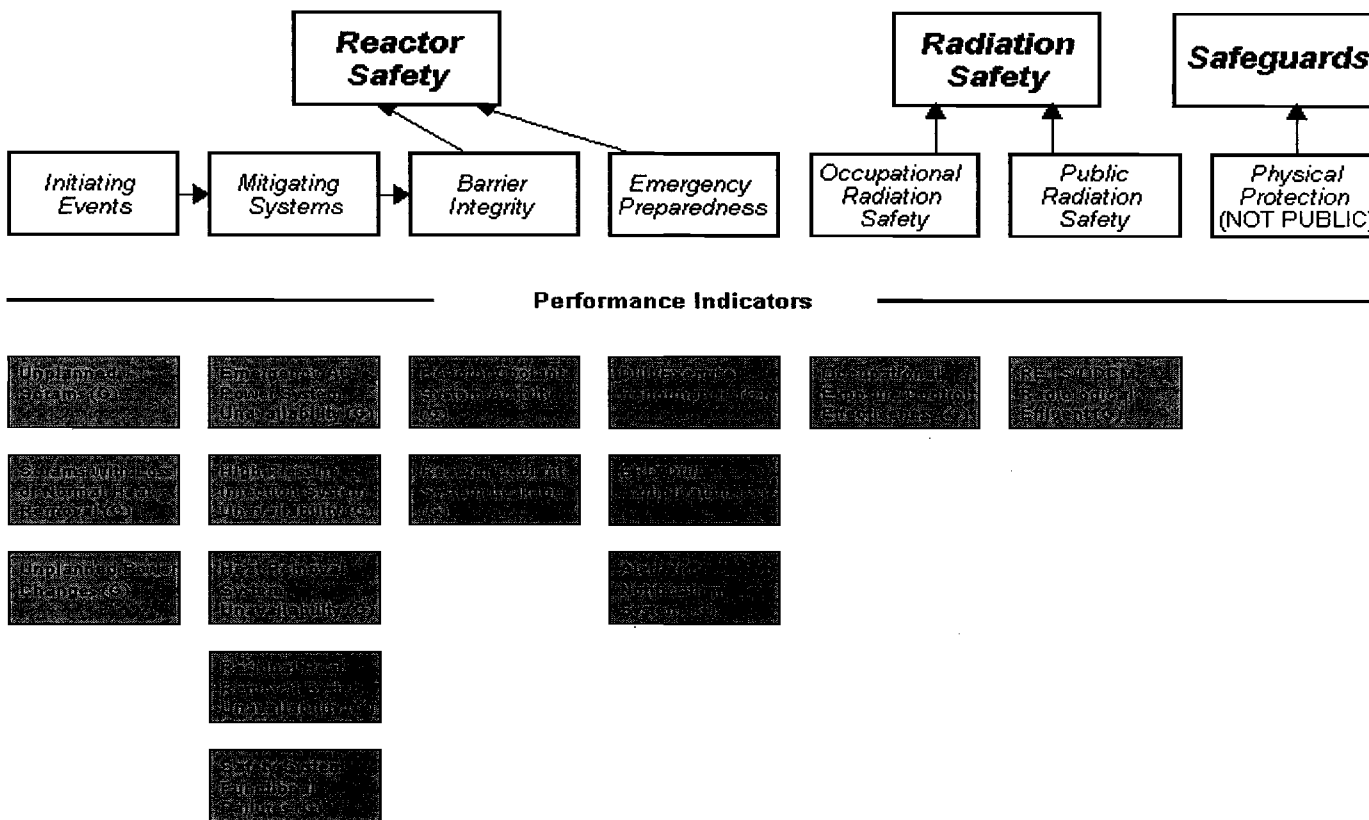
# Current Performance

- Licensee is in the Licensee Response Column (Column I) of the NRC's Action Matrix
- NRC does not currently have any cross-cutting issues open at Monticello
- Revised Reactor Oversight Process continues to be followed





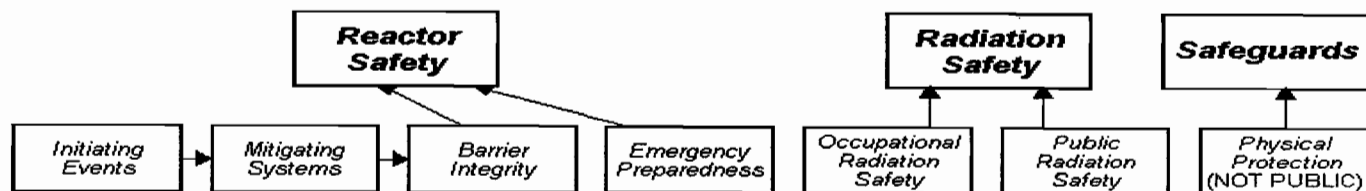
# Performance Indicators



Last Modified: May 5, 2006



# Inspection Findings



## Most Significant Inspection Findings

Quarter	Initiating Events	Mitigating Systems	Barrier Integrity	Emergency Preparedness	Occupational Radiation Safety	Public Radiation Safety	Physical Protection (NOT PUBLIC)
1Q/2006	██████████	██████████	██████████	██████████	██████████	██████████	██████████
4Q/2005	██████████	██████████	██████████	██████████	██████████	██████████	██████████
3Q/2005	██████████	██████████	██████████	██████████	██████████	██████████	██████████
2Q/2005	██████████	██████████	██████████	██████████	██████████	██████████	██████████

Miscellaneous Findings

## Additional Inspection & Assessment Information

### ◆ Assessment Reports/Inspection Plans:

- 1Q/2006
- 4Q/2005
- 3Q/2005
- 2Q/2005

### ◆ Cross Reference Of Assessment Reports

### ◆ List of Inspection Reports

### ◆ List of Assessment Letters/Inspection Plans



# Section 3: Aging Management Review Results

- 3.1 Reactor Coolant System
- 3.2 Engineered Safety Features
- 3.3 Auxiliary Systems
- 3.4 Steam and Power Conversion Systems
- 3.5 Containments, Structures, and Component Supports
- 3.6 Electrical and I&C Components



# Aging Management Programs (AMPs)

- 36 AMPs
  - 29 existing AMPs, 7 new AMPs
  - Consistent with GALL Report– 9
  - Consistent with GALL Report with exceptions/enhancements – 25
  - Plant-specific – 2



# ASME Section XI ISI, Subsections IWB, IWC, IWD

- Consistent with exceptions
  - LRA did not consider Code Cases and relief requests to be exceptions to GALL
  - Code Cases endorsed in RG 1.147
    - N-307-2 (UT for Class 1 bolting)
    - N-526 (requirements for successive inspections)
    - N-613-1 (examination volume of welded nozzles)



# Bolting Integrity AMP

- Consistent with enhancements
  - Add guidance for visual bolting inspections from EPRI technical reports
  - Closure bolting in all ESF, auxiliary, and steam & power conversion systems managed for loss of preload



# Buried Piping and Tanks Inspection

- Consistent with enhancements
  - 10-year frequency
  - Include inspections of opportunity
  - Diesel fuel oil storage tank internal inspection
  - Review of operating experience to determine susceptible locations
  - If pipe wall thickness shows a susceptibility to corrosion, perform further evaluation on extent
- UT and visual inspections completed in 1999 and 2003 with no degradation or aging effects detected



# BWR Vessel Internals Program

- Consistent with exception and enhancement
  - BWRVIP-130 vice -29 for water chemistry
  - Implement repair/replacement guidelines of BWRVIP
- Commitments
  - top guide grid inspections using EVT-1 for high fluence locations
  - inspect in-core monitoring dry tubes per GE SIL-409
  - inspect steam dryer per BWRVIP-139
  - inspect core spray piping welds per BWRVIP-18
  - inspect core plate hold-down bolts, or install wedges





# Flow-Accelerated Corrosion Program

- Existing program consistent with the GALL Report
- Commitment 53 – revise FAC program to use 87.5% of nominal pipe wall thickness for non-safety related piping as a trigger point for engineering evaluation



# Inaccessible Medium Voltage Cables Not Subject to 10 CFR 50.49 EQ Requirements

- New program consistent with GALL
- Commitment 36 – program will be implemented prior to period of extended operation
- Applicant will inspect for water in manholes initially at least once every two years, as well as perform cable testing



# Reactor Head Closure Studs Program

- Existing program consistent with GALL Report
- Staff determined two exceptions to GALL
  - Use of Code Case N-307-2 (UT examination volume)
  - RG 1.65 recommended ultimate tensile strength not exceed 170 ksi. Most installed studs exceed 170 ksi. Staff found acceptable because applicant considers studs susceptible to cracking, manages cracking using preventive measures in RG 1.65, conducts UT and surface exams every 10 years.



# Section 3: Aging Management Review Results

- 100% Review
  - 36 plant systems
  - 18 structures
  - 4 commodity groups



## Section 3.3: Auxiliary Systems

- Elastomers
  - LRA revised to manage aging of elastomers using System Condition Monitoring and One-Time Inspection Programs
- Cable spreading room Halon system tested and inspected every 18 months



## Section 3.5: Aging Management – Drywell Shell

- ASME Section XI, Subsection IWE
- UT of sand-pocket region performed in 1986 and 1987, no degradation detected
- Water leakage monitoring program (each refueling)
  - refueling seal bellows
  - drywell air gap drains
  - sand pocket drains
- 18 gauge galvanized sheet metal cover
- Refueling seal in scope for license renewal



# Aging Management of In-Scope Inaccessible Concrete

	Acceptance Criteria	MNGP
pH	>5.5	>7.0
Chlorides	<500 ppm	<100
Sulfates	<1500 ppm	<100

- Below-grade environment is non-aggressive
- Periodic testing of ground water will be performed for Structures Monitoring Program



## Section 3.6: Electrical and I&C Components

- 4 commodity groups reviewed
- Commitment 55 – Implement new program consistent with GALL XI.E6, Electrical Cable Connections Not Subject to 10 CFR 50.49 EQ Requirements





# Section 4: Time-Limited Aging Analyses (TLAA)

- 4.1 TLAA Process
- 4.2 Neutron Embrittlement of the RPV and Internals
- 4.3 Metal Fatigue
- 4.4 Irradiation Assisted Stress Corrosion Cracking
- 4.5 Effects of Reactor Coolant Environment
- 4.6 Fatigue Analysis of Primary Containment
- 4.7 Environmental Qualification of Electrical Equipment
- 4.8 Stress Relaxation of Rim Hold-down Bolts
- 4.9 Reactor Building Crane Load Cycles
- 4.10 Fatigue Analysis of HPCI and RCIC Turbine Exhaust Penetrations



# Reactor Vessel Upper Shelf Energy (USE) – Analysis Summary

RV Beltline Component	Acceptance Criterion	MNGP Value at 54 EFPY	Acceptable Y/N
C2220-2 Limiting Plate	>50 ft-lbs	57.5 ft-lbs	Y pursuant to 54.21(c)(1)(ii)
Welds – shielded metal arc	>50 ft-lbs	68 ft-lbs	Y pursuant to 54.21(c)(1)(ii)
N2 Nozzle - forging	>50 ft-lbs	52 ft-lbs	Y pursuant to 54.21(c)(1)(ii)



# RV Circumferential Weld Relief/ RV Axial Weld Probability of Failure Analyses

RV Material	TLAA Basis	Acceptance Criterion (°F)	MNGP Value (°F)
Limiting Circ. Weld	BWRVIP-05 Mean $RT_{NDT}$ Value (°F)	<70.6	47.4
Limiting Axial Weld	BWRVIP-05 Mean $RT_{NDT}$ Value (°F)	<114	47.4

- TLAA's for the Circ. Weld and Axial Weld Mean  $RT_{NDT}$  values were in all cases determined to be acceptable pursuant to 10 CFR 54.21(c)(1)(ii)



## Section 4.3: Metal Fatigue

- Acceptability Criterion: Cumulative Usage Factor,  $CUF < 1.0$  for all components based on a 60-year life
- Managed by Fatigue Monitoring Program
- Staff accepted the evaluations in accordance with 10 CFR 54.21(c)(1)(ii) and (iii)



## Section 4.4: Irradiation-Assisted Stress Corrosion Cracking (IASCC)

- Managed by ASME Section XI ISI, Subsections IWB, IWC, and IWD, BWR Vessel Internals, and Plant Chemistry Programs
- Commitment 22 – supplement requirements of BWRVIP-26 with inspection of top guide grid using EVT-1 for high fluence locations
- The staff accepted the evaluation in accordance with 10 CFR 54.21(c)(1)(iii)



## Section 4.7: Environmental Qualification (EQ) of Electrical Equipment

- Applicant's EQ Program consistent with GALL AMP X.E1, "Environmental Qualification of Electrical Equipment"
- Staff concluded the EQ Program is adequate to manage the effects of aging on the intended function of electrical components
- The staff accepted the evaluation in accordance with 10 CFR 54.21(c)(1)(iii)



## Section 4.8: Stress Relaxation of Rim Hold-Down Bolts

- GE analyses provided, "Comparative Evaluation of the Monticello Core Plate Rim Hold-down Bolts and BWRVIP-25, Appendix A"
- Analyses demonstrate axial and axial+bending stresses are bounded by results approved in BWRVIP-25, or within ASME allowables



# TLAA Summary

- 10 CFR 54.3 - TLAA list adequate
- 10 CFR 54.21(c)(1)
  - (i) analyses remain valid for PEO
  - (ii) analyses projected to the end of the PEO
  - (iii) effects of aging will be adequately managed for the PEO
- 10 CFR 54.21(c)(2) – no plant-specific exemptions





# Conclusions

- The staff has concluded that there is reasonable assurance that the activities authorized by the renewed license will continue to be conducted in accordance with the CLB, and that any changes made to the MNGP CLB in order to comply with 10 CFR 54.29(a) are in accord with the Act and the Commission's regulations.