

Final

**ADVISORY COMMITTEE ON REACTOR SAFEGUARDS
MINUTES OF ACRS PLANT LICENSE RENEWAL SUBCOMMITTEE MEETING
VERMONT YANKEE
JUNE 6, 2007
ROCKVILLE, MARYLAND**

On June 6, 2007, the Plant License Renewal Subcommittee held a meeting in Room T2B3, 11545 Rockville Pike, Rockville, Maryland, to review the License Renewal Application (LRA) for the Vermont Yankee Nuclear Power Station (VYNPS) and the associated Safety Evaluation Report (SER).

The meeting was open to the public. Mr. Michael Junge was the Designated Federal Official for this meeting. The meeting convened at 10:30 am and adjourned at 3:31pm on June 6, 2007.

ATTENDEES:

ACRS MEMBERS/STAFF

Mario Bonaca, Chairman
Otto Maynard, Member
Said Abdel-Kahlik, Member
John Barton, Consultant

William Shack, Member
J. Sam Armijo, Member
Michael Junge, ACRS Staff

NRC STAFF/PRESENTERS

J. Rowley, NRR
D. Hoang, NRR
S. Arova, NRR
D. Ashley, NRR
Y. Diaz, NRR
F. Saba, NRR
P. Buckberg, NRR
N. Igbal, NRR
L. Lois, NRR
J. Davis, NRR
R. Conte, Region I
B. Rogers, NRR
J. Medoff, NRR
B. Lehman, NRR
R. Auluck, NRR
K. Hsu, NRR
M. Modes, Region I
J. Thayer, Entergy
G. Young, Entergy
N. Rademacher, Entergy
A. Cox, Entergy

A. Stubbs, NRR
D. Reddy, NRR
P. Qualls, OCM
P. Kuo, NRR
L. Lund, NRR
J. Ayala, NRR
T. Le, NRR
C. Sydnor, OPA
E. Smith, OEDO
K. Howard, RES
E. Gettys, NRR
R. Mathew, NRR
E. Davidson, NRR
J. Rycyna, NRR
D. Nguyen, NRR
M. Young, OGC
T. Sullivan, Entergy
J. McCann, Entergy
J. Dreyfuss, Entergy
D. Mannai, Entergy
M. Metell, Entergy

The presentation slides, handouts used during the meeting, and a complete list of attendees are attached to the office copy of the meeting minutes. The presentations to the Subcommittee are summarized below.

Opening Remarks

Dr. Bonaca, Chairman of the Plant License Renewal Subcommittee, stated that the purpose of this meeting was to hear presentations by and hold discussions with representatives of the NRC staff and Entergy Nuclear Operations, Inc. (ENO), regarding the LRA submitted by ENO and the associated draft SER prepared by the staff.

The Chairman made a couple of general observations about the VYNPS application. The first was regarding the increasing number of exceptions to GALL. He noted that this is not only an issue for VYNPS, but a recurrent theme. He questioned whether GALL should be updated to be less directive or incorporate alternatives for issues that aren't really exceptions. GALL was originally a cooperative effort between industry and the staff, and to see a large number of programs take exceptions to GALL implies something has to be looked at in this program. The second issue was the size of the audit report. It is growing and is almost a duplicate portion of the SER, but not written the same way. The information in the SER may not be in the audit report. He suggested it might be beneficial to mesh the reports together in the future.

Dr. Kuo responded to the Chairmans observations. He stated that the staff had observed the same issues, and in 2005 had updated GALL. The recent reviews have found more exceptions than the staff expected. The staff is working with industry to find a way to reduce the number of exceptions. He stated that with the number of exceptions the staff sees now, there is no reason for GALL to exist. The staff will return to the Committee and provide a status report on the GALL progress. Mr. Kuo also discussed the audit reports. He stated that the staff was going to create a question and answer database. The staff would provide a technical justification similar to the SER to the database, identify the status of each item in the database, and when all items are closed, this report will become the audit report.

Vermont Yankee Nuclear Power Station License Renewal Application

Introduction

Mr. Gallagher, ENO, introduced Mr. Dreyfuss, ENO as the lead presenter, Mr. Rademacher, Director of Engineering, Mr. Mannai, Licensing Manager, Mr. Cox, License Renewal Team, and Mr. Metell, License Renewal Project Manager.

Agenda

Mr. Dreyfuss, ENO, discussed the agenda which included a brief description of the site, licensing history, major plant improvements, plant performance, the license renewal project and specific presentations on the Vernon Hydroelectric Station, as well as the Drywell Shell and Torus Shell integrity.

Vermont Yankee Plant Description

Mr. Dreyfuss stated the plant is located on the Connecticut River. General Electric was the Nuclear Steam Supply System and Turbine Generator vendor with Ebasco providing the architectural engineering and construction for the plant. It is a BWR-4 with a Mark I Containment. The plant is rated at 1912 MWt with a 650 MW electrical output. The cooling is a hybrid cycle condenser with forced draft cooling towers.

Licensing History and Major Plant Improvements

Mr. Dreyfuss described some licensing highlights. The plant received its operating license on March 21, 1972 and the current license expires on March 21, 2012. The plant was acquired by Entergy from Vermont Yankee Nuclear Power Corporation on July 31, 2002. Following the acquisition, a number of substantial capital upgrades and major projects took place including the 20 percent power uprate, dry fuel storage at the facility, as well as the license renewal project.

Mr. Dreyfuss described a number of major plant improvements including Core Spray System Piping Replacement, Mark-I Containment modifications, Recirculation System piping replacement, change over to hydrogen water chemistry in 2003 and several power uprate equipment upgrades such as both high and low pressure turbines.

Recent Plant Performance and Outage Summary

Mr. Dreyfuss stated the plant is currently starting up from a re-fueling outage. Prior to the refueling outage, the plant ran 549 continuous days. The power uprate was accomplished during this time period and the unit ran for a year at the higher power.

Mr. Dreyfuss identified and discussed a couple of items of interest from the outage. The steam dryer did not have fatigue indications that had been seen elsewhere in the industry. There were indications identified as Intergranular Stress Corrosion Cracking (IGSCC) which were acceptably dispositioned with the help of General Electric. Another item of interest Mr. Dreyfuss discussed was Flow Accelerated Corrosion (FAC). The FAC inspections were increased by 50% from the pre-uprate number during the outage. Mr. Fitzpatrick, ENO, stated that the inspections were satisfactory and consistent with the analytical modeling for FAC. The



UNITED STATES
NUCLEAR REGULATORY COMMISSION
ADVISORY COMMITTEE ON REACTOR SAFEGUARDS
WASHINGTON, DC 20555 - 0001

July 13, 2007

MEMORANDUM TO: ACRS Members

FROM: Michael Junge, Senior Staff Engineer
Technical Support Staff, ACRS

SUBJECT: CERTIFICATION OF THE MINUTES OF THE ACRS SUBCOMMITTEE
MEETING ON THE VERMONT YANKEE LICENSE RENEWAL
APPLICATION, JUNE 6, 2007 - ROCKVILLE, MARYLAND

The minutes of the subject meeting were certified on July 12, 2007 as the official record of the proceedings of that meeting. A copy of the certified minutes is attached.

Attachment: As stated

cc w/o Attachment: F. Gillespie
C. Santos
S. Duraiswamy



UNITED STATES
NUCLEAR REGULATORY COMMISSION
ADVISORY COMMITTEE ON REACTOR SAFEGUARDS
WASHINGTON, DC 20555 - 0001

MEMORANDUM TO: Michael Junge, Senior Staff Engineer,
Technical Support Staff, ACRS

FROM: Mario Bonaca, Chairman
ACRS Plant License Renewal Subcommittee

SUBJECT: CERTIFICATION OF THE MINUTES OF THE ACRS SUBCOMMITTEE
MEETING ON THE VERMONT YANKEE LICENSE RENEWAL
APPLICATION, JUNE 6, 2007 - ROCKVILLE, MARYLAND

I hereby certify, to the best of my knowledge and belief, that the minutes of the subject meeting on June 6, 2007, are an accurate record of the proceedings for that meeting.

Mario Bonaca

7/12/07

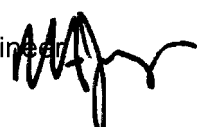
Mario Bonaca, Date
Plant License Renewal Subcommittee Chairman



UNITED STATES
NUCLEAR REGULATORY COMMISSION
ADVISORY COMMITTEE ON REACTOR SAFEGUARDS
WASHINGTON, DC 20555 - 0001

July 3, 2007

MEMORANDUM TO: Mario Bonaca, Chairman
ACRS Plant License Renewal Subcommittee

FROM: Michael Junge, Senior Staff Engineer,
Technical Support Staff, ACRS 

SUBJECT: WORKING COPY OF THE MINUTES OF THE ACRS SUBCOMMITTEE
MEETING ON THE VERMONT YANKEE LICENSE RENEWAL
APPLICATION, JUNE 6, 2007 - ROCKVILLE, MARYLAND

A working copy of the minutes for the subject meeting is attached for your review.

Please review and comment on them at your earliest convenience. If you are satisfied with these minutes please sign, date, and return the attached certification letter.

Attachments: Certification Letter
Minutes (DRAFT)

cc w/o Attachment: F. Gillespie
C. Santos
S. Duraiswamy

enhanced number of inspections will continue through the next couple of fuel cycles to get more data for use in the check-works model.

During the outage, major modifications included replacing a feedwater pump motor, as well as 345 kilovolt breakers.

License Renewal Project

Mr. Dreyfuss described the multi-discipline team used in the License Renewal Project. He described the applicants philosophy with respect to the many (>30) exceptions to the GALL. Mr. Dreyfuss explained that the exceptions were placed into six categories. Mr. Cox, ENO, described the six categories and provided examples of exceptions taken in each category. The categories were 1) an activity not applicable to the plant design, 2) an alternative consistent with approved methods, 3) a program based on a different ASME code edition, 4) a method that was equal to or better than the GALL method, 5) the applicants experience justified an exception, and 6) the GALL method was not feasible.

Mr. Dreyfuss stated that there were several peer reviews, as well as internal reviews conducted on the License Renewal Application. Comments from these sources were resolved prior to submitting the application. He also stated that the License Renewal Commitments would be tracked by an Entergy commitment tracking system and would be added to the FSAR when the renewed license is issued. Mr. Dreyfuss also described the thirty-nine Aging Management Programs (AMR). There are seventeen programs in place without enhancements, thirteen programs will be enhanced and there are nine new programs.

Drywell Shell and Torus Shell Integrity

Mr. Dreyfuss summarized the protective features associated with the drywell shell. He stated that the design minimized the potential for undetected water intrusion, that there are diverse methods of prevention and identification of potential water leakage into the air gap, and corrosion potential is minimized since there is no foam or insulation in the air gap. He stated that there have not been any refueling bellows or spent fuel pool liner leakage events. Additionally he described the inspection program and results from a number of inspections that have been performed on the drywell liner.

Mr. Dreyfuss summarized the torus shell integrity and monitoring. He stated that the Torus condition fully satisfies design requirements, no margins have been lost due to corrosion and that the material condition would be assured by ongoing inspections of the coating and ultrasonic measurements of the shell during the next three refueling outages.

Vernon Hydroelectric Station

Mr. Dreyfuss explained the purpose of the Vernon Hydroelectric Station (VHS) is to provide power to VYNPS in a station blackout event. It has 100% redundant cabling with a breaker that

can be closed by the control room operators to provide power to the plant. Mr. Dreyfuss described the contractual arrangements and interface with the VHS.

Staff Presentation

The presentation by Mr. Rowley, NRR, Mr. Modes, Region I, and Mr. Conte, Region I, provided an overview of the regions inspections during the 2006 refueling outage, and staff's draft SER.

SER Overview

The presentation by Mr. Rowley provided an overview of the staff's SER. He described the staff's review activities associated with scoping, screening, aging management, and time-limited aging analysis.

Mr. Rowley stated that the draft SER was issued on March 30, 2007 with no open items and six confirmatory items. The staff issued 85 RAIs and 386 audit questions. The staff's audits and inspections were conducted between April 2006 and May 2007.

Region I Inspections

Mr. Modes summarized the scope and results of the inspection the Region performed. The inspection noted a number of weaknesses. Mr. Modes described the weaknesses and provided examples that demonstrated the weaknesses. For example, scoping in the turbine building, the inspectors felt the applicant did not capture how non-safety equipment affects the safety equipment. This issue was corrected. Another example was containment management. The inspection team noted that there were no visual examination acceptance standards, no procedures for monitoring the sandbed region drains and the applicant only had a single point corrosion rate for the torus. These issues were corrected by creating procedures and committing to perform more UT examinations on the torus shell to establish a stronger position for the corrosion rate.

Mr. Modes stated the inspection team concluded that the screening and scoping of non-safety related systems, structures, and components was implemented as required by the rule and the aging management portions of the license renewal activities were conducted as described in the application.

Status of Open Items/Commitments

Mr. Rowley stated that the SER with confirmatory items was issued on March 30, 2007 with no open items and six confirmatory items. Mr. Rowley stated that the Region I inspection team provided enough information to close two of the confirmatory items, but four remained open. He stated that the remaining four confirmatory items will be closed soon, the information necessary to close the items has been obtained, but needs to be documented on the docket.

Scoping and Screening

Mr. Rowley stated that the applicants scoping and screening methodology meets the requirements of 10CFR54.4 and 10 CFR 54.21(a)(1) and that with the resolution of the confirmatory items, the scoping and screening results for systems, structures, and components within scope will be satisfied.

Aging Management Program (AMP)

Mr. Rowley described the staff's evaluation of the AMPs and aging management reviews for VYNPS. He stated that there were 39 AMPs, 29 are existing programs and 10 are new programs. He noted that 3 AMPs were added during the review by the staff.

Mr. Rowley stated that a program of interest was the structures monitoring of the VHS FERC inspection program. This was identified because of concerns over third party status of the VHS. The aging management of the VHS is being performed by FERC and the VHS owner without participation from VYNPS. References in the AMP are being clarified to show that the applicant is accountable for the monitoring.

Time Limited Aging Analysis (TLAAs)

Mr. Rowley discussed the TLAAs affected by neutron embrittlement. The Reactor Vessel Fluence and Upper-Shelf Energy (USE) were specifically discussed. He stated that an analysis performed by General Electric using an NRC approved methodology indicates the values calculated are within the boundaries for reactor vessel fluence with the incorporation of the power uprate.

Mr. Medoff, NRR, stated the relevant rule for USE is 10CFR50 Appendix G, which requires the USE at end of life be greater than 50 foot pounds. For this applicant the plate criteria is met. If that criteria cannot be met, then the rule requires an equivalent margins analysis be completed. For the limiting plate and limiting welds, equivalent margins were used and the applicant met that criteria.

Mr. Rowley stated the applicant will either refine the fatigue analyses to demonstrate cumulative usage factors are less than one, and/or manage the aging effects due to fatigue at affected locations by an NRC approved inspection program and/or repair or replace the affected locations, two years prior to entering the period of extended operation. Mr. Rowley stated the staff concluded that the metal fatigue analyses are in compliance with 10CFR54.21(c)(1)(I), (ii) and (iii).

Member Comments

General

Mr. Barton's comments: Mr. Barton provided his views on the SER. He felt that it was not a quality document and did not have good technical justifications for a lot of the positions. He thought the presentation by the applicant was good and presented a good picture of the application and condition of the plant. He felt there were too many exceptions to GALL and it may be worth while to make a revision to GALL. He felt the applicant did a good job categorizing the exceptions and explained very clearly why each exception was taken.

Mr. Maynard's comments: Mr. Maynard felt the presentations were very good and informative. The technical information needed for back up to questions that were asked was readily available. He had two issues that were generic in nature to the License Renewal process. The number of exceptions to GALL may require a revision to GALL or a category could be created that would identify which items were actual exceptions or that they are just slight deviations. He said it would be good to get back to a point where we were dealing with exceptions that are truly exceptions to the methodology.

The other issue Mr. Maynard identified was the number of issues applicants have with identifying proper boundaries. It may be that there isn't enough guidance to applicants, or that each applicants designs or drawings are unique, but there seems to be a number of questions on the boundaries.

Mr. Maynard thought it would be beneficial to have a meeting with the staff on GALL.

Dr. Armijo's comments: Dr. Armijo thought a number of the exceptions were borderline technicalities and shouldn't be labeled exceptions if the staff believed they were equivalent or better. He felt better terminology would solve the problem. The exceptions should be limited to issues of substance. He thought VYNPS did a very good job in the selection of replacement materials and that the applicant did a good job assuring the drywell shell and torus shell are in good shape. He thought the commitment made to use hydrogen water chemistry technology to protect their materials was the right way to go. The discussion about fatigue satisfied him in that it can be handled in more than one way and that the applicant is going to take care of the fatigue issue.

Dr. Armijo did not feel comfortable with the explanation as to how an IGSCC could occur in the upper portion of the steam dryer as opposed to a fatigue crack since the water in the region won't be there a long period of time. He felt that the cracks were found after the first cycle of 20 percent power uprate and if formed quickly, that its more a fatigue crack than a stress corrosion crack. But the applicant has done a loose parts analysis and states that it won't come apart.

Dr. Abdel-Khalik's comments: Dr. Abdel-Khalik had nothing to add beyond his colleagues comments. He felt the applicant and staff provided clear presentations.

Dr. Shack's comments: Dr. Shack felt that most of the exceptions were fairly trivial. He noted one that was substantive, which was the lack of visual inspections on the ID of the core shroud. The staff negotiated with the applicant and the inspections will be completed in accordance with BWR VIP 76. He thought this serious exception to GALL was resolved properly.

Chairman Bonaca's comments: Chairman Bonaca stated the presentations were very good. He agreed that the exceptions didn't seem to be substantive. He does not want to see GALL become obsolete as to exceptions and he felt that staff and industry should revisit the GALL and put in latitude that is more accepting of a variety of programs.

Chairman Bonaca agreed that the issue of boundaries for scoping is identified in approximately 50 percent of the plants that have come through the License Renewal process. He thought the level of drawings is an issue, but the inspections that occur on site should be able to solve the issue or come to an agreement on the boundaries.

Chairman Bonaca also stated that he was impressed with the conditions in the plant. The measures of the drywell and torus are in good shape and the pictures convey how well the plant is being maintained.

Subcommittee Decisions and Follow-up Actions

The Subcommittee Chairman will summarize the discussions at the June 2007 ACRS meeting.

The staff will provide a presentation to the ACRS on issues related to the GALL.

Background Materials Provided to the Committee

- 1) Vermont Yankee Nuclear Power Station- License Renewal Application, dated January 27, 2006.
- 2) Safety Evaluation Report with Confirmatory Items Related to the License Renewal of Vermont Yankee Nuclear Power Station dated March 2007.
- 3) Audit and Review Report for Plant Aging Management Reviews and Programs- Vermont Yankee Nuclear Power Station dated March 30, 2007.

NOTE:

Additional details of this meeting can be obtained from a transcript of this meeting available in the NRC Public Document Room, One White Flint North, 11555 Rockville Pike, Rockville, MD, (301) 415-7000, downloading on the Internet at <http://www.nrc.gov/reading-rm/doc-collections/acrs/> can be purchased from Neal R. Gross and Co., 1323 Rhode Island Avenue, NW, Washington, D.C. 20005, (202) 234-4433 (voice), (202) 387-7330 (fax), nrgross@nealgross.com (e-mail).

Office of the Governor of American Samoa and six copies at the National Office of the Wage and Hour Division, U.S. Department of Labor, Washington, DC 20210. Each prehearing statement shall contain the data specified in 29 CFR 511.8 of the regulations and shall be filed not later than May 30, 2007. If such statements are sent by airmail between American Samoa and the mainland, such filing shall be deemed timely if postmarked within the time provided.

Signed in Washington, DC this 10th day of May, 2007.

Elaine L. Chao,
Secretary of Labor

[FR Doc. E7-9425 Filed 5-14-07; 8:45 am]
BILLING CODE 4510-27-P

NATIONAL CREDIT UNION ADMINISTRATION

Agency Information Collection Activities: Submission to OMB for Extension of a Currently Approved Collection; Comment Request

AGENCY: National Credit Union
Administration (NCUA).

ACTION: Request for comment.

SUMMARY: The NCUA intends to submit the following information collection to the Office of Management and Budget (OMB) for review and clearance under the Paperwork Reduction Act of 1995 (Pub. L. 104-13, 44 U.S.C. Chapter 35). This information collection is published to obtain comments from the public.

DATES: Comments will be accepted until June 14, 2007.

ADDRESSES: Interested parties are invited to submit written comments to the NCUA Clearance Officer listed below:

Clearance Officer: Mr. Neil McNamara, National Credit Union Administration, 1775 Duke Street, Alexandria, VA 22314-3428, Fax No. 703-837-2861, E-mail: mcnamara@ncua.gov.

FOR FURTHER INFORMATION CONTACT: Requests for additional information or a copy of the information collection request, should be directed to Tracy Sumpter at the National Credit Union Administration, 1775 Duke Street, Alexandria, VA 22314-3428, or at (703) 518-6444.

SUPPLEMENTARY INFORMATION: Proposal for the following collection of information:

Title: 12 CFR part 748, Security Program and Appendix B.
OMB Number: 3133-0033.
Form Number: None.

Type of Review: Third party disclosure, and reporting, on occasion.

Description: 12 CFR part 748 requires federally insured credit unions to develop a written security program to safeguard sensitive member information. This information collection requires that such programs be designed to respond to incidents of unauthorized access or use, in order to prevent substantial harm or serious inconvenience to members.

Respondents: Federally insured credit unions.

Estimated No. of Respondents/Recordkeepers: 8,695.

Estimated Burden Hours per Response: 20 hours.

Frequency of Response: On occasion.
Estimated Total Annual Burden Hours: 178,076 hours.

Estimated Total Annual Cost: None.

By the National Credit Union Administration Board on May 8, 2007.

Mary Rupp,

Secretary of the Board.

[FR Doc. E7-9231 Filed 5-14-07; 8:45 am]
BILLING CODE 7535-01-P

NUCLEAR REGULATORY COMMISSION

Advisory Committee on Reactor Safeguards (ACRS) Meeting of the Subcommittee on Plant License Renewal; Notice of Meeting

The ACRS Subcommittee on Plant License Renewal will hold a meeting on June 5, 2007, 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, June 5, 2007—10:30 a.m. until 5 p.m.

The Subcommittee will review the Vermont Yankee license renewal application and the associated Safety Evaluation Report (SER) prepared by the NRR staff. The Subcommittee will hear presentations by and hold discussions with representatives of the NRC staff, Entergy Nuclear Operations, Inc., 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. Michael Junge (telephone 301/415-6855) 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 6:45 a.m. and 3:30 p.m. (ET). Persons planning to attend this meeting are urged to contact the above named individual at least two working days prior to the meeting to be advised of any potential changes to the agenda.

Dated: May 8, 2007.

Cayetano Santos,

Branch Chief, ACRS.

[FR Doc. E7-9307 Filed 5-14-07; 8:45 am]
BILLING CODE 7590-01-P

NUCLEAR REGULATORY COMMISSION

Advisory Committee on Reactor Safeguards (ACRS) Subcommittee Meeting on Thermal-Hydraulic Phenomena; Revised

A portion of the ACRS Subcommittee meeting on Thermal-Hydraulic Phenomena scheduled to be held on May 15-16, 2007, Commissioners' Conference Room O-1G16, 11555 Rockville Pike, Rockville, Maryland, will be closed to discuss vendor proprietary information pursuant to 5 U.S.C. 552b(c)(4). All other items pertaining to this meeting remain the same as published previously in the **Federal Register** on Wednesday, May 2, 2007 (72 FR 24339).

FOR FURTHER INFORMATION CONTACT: Ms. Zena Abdullahi, Designated Federal Official (Telephone: 301-415-2808) between 7:30 a.m. and 4:15 p.m. (ET) or by e-mail zxa@nrc.gov.

Dated: May 9, 2007.

Cayetano Santos,

Branch Chief, ACRS.

[FR Doc. E7-9308 Filed 5-14-07; 8:45 am]
BILLING CODE 7590-01-P

NUCLEAR REGULATORY COMMISSION

Advisory Committee on Reactor Safeguards Subcommittee Meeting on Planning and Procedures; Notice of Meeting

The ACRS Subcommittee on Planning and Procedures will hold a meeting on June 5, 2007, Room T-2B1, 11545 Rockville Pike, Rockville, Maryland.

The entire meeting will be open to public attendance, with the exception of a portion that may be closed pursuant to 5 U.S.C. 552b(c)(2) and (6) to discuss organizational and personnel matters that relate solely to the internal

personnel rules and practices of the ACRS, and information the release of which would constitute a clearly unwarranted invasion of personal privacy.

The agenda for the subject meeting shall be as follows:

Tuesday, June 5, 2007, 8:30 a.m.—10 a.m.

The Subcommittee will discuss proposed ACRS activities and related matters. 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. Sam Duraiswamy (telephone: 301-415-7364) between 7:30 a.m. and 4 p.m. (ET) five days prior to the meeting, if possible, so that appropriate arrangements can be made. Electronic recordings will be permitted only during those portions of the meeting that are open to the public.

Further information regarding this meeting can be obtained by contacting the Designated Federal Official between 7:30 a.m. and 4 p.m. (ET). Persons planning to attend this meeting are urged to contact the above named individual at least two working days prior to the meeting to be advised of any potential changes in the agenda.

Dated: May 8, 2007.

Cayetano Santos,

Branch Chief, ACRS.

[FR Doc. E7-9309 Filed 5-14-07; 8:45 am]

BILLING CODE 7590-01-P

NUCLEAR REGULATORY COMMISSION

Sunshine Act Federal Register Notice

Agency Holding the Meetings: Nuclear Regulatory Commission.

DATES: Weeks of May 14, 21, 28, June 4, 11, 18, 2007.

PLACE: Commissioners' Conference Room, 11555 Rockville Pike, Rockville, Maryland.

STATUS: Public and Closed.

Matters to be Considered

Week of May 14, 2007

Monday, May 14, 2007

12:45 p.m.

Affirmation Session (Public Meeting) (Tentative).

- a. Final Rule: Requirements for Expanded Definition of Byproduct Material (RIN: 3150-AH84)

(Tentative).

Week of May 21, 2007—Tentative

There are no meetings scheduled for the week of May 21, 2007.

Week of May 28, 2007—Tentative

Tuesday, May 29, 2007

1:30 p.m.

NRC All Hands Meeting (Public Meeting) (Contact: Rickie Seltzer, 301-415-1728), Marriott Bethesda North Hotel, Salons A-E, 5701 Marinelli Road, Rockville, MD 20852.

Wednesday, May 30, 2007

9:30 a.m.

Briefing on Results of the Agency Action Review Meeting (AARM)—Materials (Public Meeting) (Contact: Duane White, 301-415-6272).

This meeting will be webcast live at the Web address—www.nrc.gov.

10:15 a.m.

Discussion of Security Issues (Closed—Ex. 1).

Thursday, May 31, 2007

9 a.m.

Briefing on Results of the Agency Action Review Meeting (AARM)—Reactors (Public Meeting) (Contact: Mark Tonacci, 301-415-4045).

This meeting will be webcast live at the Web address—www.nrc.gov.

Week of June 4, 2007—Tentative

Thursday, June 7, 2007

1:30 p.m.

Meeting with the Advisory Committee on Reactor Safeguards (ACRS) (Public Meeting) (Contact: Frank Gillespie, 301-415-7360).

This meeting will be webcast live at the Web address—www.nrc.gov.

Week of June 11, 2007—Tentative

There are no meetings scheduled for the week of June 11, 2007.

Week of June 18, 2007—Tentative

There are no meetings scheduled for the week of June 18, 2007.

* * * * *

* 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: www.nrc.gov/about-nrc/policy-making/schedule.html.

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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. 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.

Dated: May 10, 2007.

R. Michelle Schroll,

Office of the Secretary.

[FR Doc. 07-2402 Filed 5-11-07; 12:13 pm]

BILLING CODE 7590-01-P

PENSION BENEFIT GUARANTY CORPORATION

Required Interest Rate Assumption for Determining Variable-Rate Premium for Single-Employer Plans; Interest Assumptions for Multiemployer Plan Valuations Following Mass Withdrawal

AGENCY: Pension Benefit Guaranty Corporation.

ACTION: Notice of interest rates and assumptions.

SUMMARY: This notice informs the public of the interest rates and assumptions to be used under certain Pension Benefit Guaranty Corporation regulations. These rates and assumptions are published elsewhere (or can be derived from rates published elsewhere), but are collected and published in this notice for the convenience of the public. Interest rates are also published on the PBGC's Web site (<http://www.pbgc.gov>).

DATES: The required interest rate for determining the variable-rate premium under part 4006 applies to premium payment years beginning in May 2007. The interest assumptions for performing multiemployer plan valuations following mass withdrawal under part

**Advisory Committee on Reactor Safeguards
Plant License Renewal Subcommittee Meeting
Vermont Yankee Nuclear Power Station**

June 5, 2007
Rockville, MD

-SCHEDULE-

Cognizant Staff Engineer: Michael A. Junge MXJ@2NRC.GOV (301) 415-6855

Topics	Presenters	Time
Opening Remarks	M. Bonaca, ACRS	10:30 pm - 10:35 pm
Staff Introduction	P.T. Kuo, NRR	10:35 pm - 10:40 pm
Vermont Yankee License Renewal Application A. Application Background B. Description of Vermont Yankee C. Operating History D. Scoping Discussion E. Application of GALL F. Commitment Process	Entergy Nuclear Vermont Yankee Ted Sullivan, John Dreyfuss, et. al	10:40 pm - 12:00 pm
Lunch Break		12:00 pm - 1:00 pm
Vermont Yankee License Renewal Application (Con't)	Entergy Nuclear Vermont Yankee Ted Sullivan, John Dreyfuss, et. al	1:00 pm - 2:00 pm
SER Overview A. Scoping and Screening Results B. Onsite Inspection Results	NRR -J. Rowley Region I - R. Conte M. Modes	2:00 pm - 2:30 pm
Aging Management Program Review and Audits	NRR - J. Rowley	2:30 pm - 3:00 pm
Break		3:00 pm - 3:15 pm
Time-Limited Aging Analyses	NRR - J. Rowley	3:15 pm - 4:15 pm
Subcommittee Discussion	M. Bonaca, ACRS	4:15 pm - 5:00 pm

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.
- 50 copies of the presentation materials to be provided.

**Advisory Committee on Reactor Safeguards
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ADVISORY COMMITTEE ON REACTOR SAFEGUARDS
SUBCOMMITTEE MEETING ON PLANT LICENSE RENEWAL

June 5, 2007
Date

NRC STAFF SIGN IN FOR ACRS MEETING

PLEASE PRINT

	<u>NAME</u>	<u>NRC ORGANIZATION</u>
1	Richard J. Condo	Region I
2	MITZI YOUNG	OGC
3	Kathwa Robert HSU	NRR/DLR
4	Duc Nguyen	NRR/DLR
5	Raj Atulude	NRR/DLR
6	John Berman	NRR/DLR
7	Bryce Lehman	NRR/DLR
8	EVAN DAVIDSON	NRR/DK/SBOS
9	Donnie Ashley	NRR/DLR
10	JAMES MEDOFF	NRR/DLR
11	Roy MATHEW	NRR/DLR.
12	Bill Rogers	NRR/DLR
13	Jim DAVIS	NRR/DLR
14	Lambert Lois	NRR/DSS/SR/B
15	Nareem Iqbal	NRR/DRA/AFPB
16	Perry Buckberg	NRR/DLR/PLRA
17	Faridch Saba	NRR/DLR
18	John Ma	NRR/DE
19	Yoira Diaz	NRR/DLR
20	Jonathan Rowley	NRR/DLR/RLRB

ADVISORY COMMITTEE ON REACTOR SAFEGUARDS
SUBCOMMITTEE MEETING ON PLANT LICENSE RENEWAL

June 5, 2007
Date

NRC STAFF SIGN IN FOR ACRS MEETING

PLEASE PRINT

	<u>NAME</u>	<u>NRC ORGANIZATION</u>
1	<u>Dan Young</u>	<u>NRR / DLR / RLRC</u>
2	<u>Surinder Arora</u>	<u>NRR / DLR / RLRC</u>
3	<u>ANGELO STUBBS</u>	<u>NRR / DSS / SBPB</u>
4	<u>Devender K. Reddy</u>	<u>NRR / DLR / RLRC</u>
5	<u>Phil Qualls</u>	<u>NRR</u>
6	<u>P T KUO</u>	<u>NRR / DLR</u>
7	<u>Ganesh Chermant</u>	<u>NRR / DCF</u>
8	<u>Louise Lund</u>	<u>NRR / DLR</u>
9	<u>Juan Ayala</u>	<u>NRR / DLR</u>
10	<u>Tommy Le</u>	<u>NRR / DLR</u>
11	<u>Chris Sydnor</u>	<u>NRR / DCI / CVIB</u>
12	<u>Ed Smith</u>	<u>NRR / DSS / SBPB</u>
13	<u>Kent Howard</u>	<u>NRR / DLR / RLRC</u>
14	<u>Evelyn Bettys</u>	<u>DLR / RLRC</u>
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ADVISORY COMMITTEE ON REACTOR SAFEGUARDS
SUBCOMMITTEE MEETING ON PLANT LICENSE RENEWAL

June 5, 2007
Date

PLEASE PRINT

	<u>NAME</u>	<u>AFFILIATION</u>
1	Barry Gordon	Structural Integrity Associates
2	John Hoffman	Vermont Yankee
3	David J. Lach	Entergy
4	Mike NAMEK	Vermont Yankee - Entergy
5	Larry Lukens	Entergy - Vermont Yankee
6	Ted Ivy	Entergy
7	MIKE STROUD	ENTERGY
8	John McCann	ENTERGY
9	SCOTT Goodwin	Entergy
10	Michael Metell	Entergy
11	REZA AHRABDI	ENTERGY
12	Floyd Underkoffler	Entergy
13	Jaw Profess	Entergy
14	Norm Rodenchr	Entergy
15	Ted Sullivan	ENTERGY
16	Paul Johnson	Entergy
17	JIM FITZPATRICK	ENTERGY
18	Beth McElwee	Entergy
19	Alan Cox	Entergy
20	JAY THAYER	ENTERGY/NEI

ADVISORY COMMITTEE ON REACTOR SAFEGUARDS
SUBCOMMITTEE MEETING ON PLANT LICENSE RENEWAL

June 5, 2007
Date

PLEASE PRINT

	<u>NAME</u>	<u>AFFILIATION</u>
1	GARRY G. YOUNG	ENERGY NUCLEAR
2	CRAIG J. NICHOLS	GE-HITACHI NUCLEAR.
3	Michael McBrearty	Southern California Edison
4		
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**Advisory Committee on Reactor Safeguards
(ACRS) License Renewal Subcommittee
Vermont Yankee Nuclear Power Station**

Safety Evaluation Report with Confirmatory Items

June 5, 2007

Jonathan Rowley, Project Manager
Office of Nuclear Reactor Regulation

Introduction



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

Overview



-
- LRA Submitted by Letter, January 25, 2006
 - GE BWR - MARK 1 Containment design
 - 1912 megawatt thermal, 650 megawatt electric
 - Facility Operating License Number DPR-28
Expires March 21, 2012
 - Located in Vernon, VT

Overview



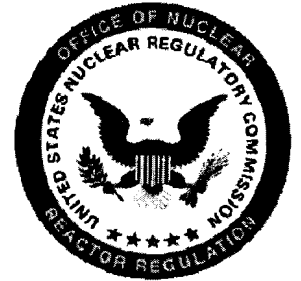
-
- Safety Evaluation Report with Confirmatory Items (SER) was issued March 30, 2007
 - Zero (0) Open Items
 - Six (6) Confirmatory Items
 - 386 Audit Questions
 - 85 RAIs Issued

Review Highlights



-
- Aging Management Program (AMP) & TLAA Audit
 - April 17 - April 21, 2006
 - Scoping and Screening Methodology Audit
 - April 25 - April 28, 2006
 - Aging Management Review (AMR) & TLAA Audit
 - May 15 - May 19, 2006

Review Highlights



- Combined AMP/AMR/TLAA Audits
 - June 26 - June 28, 2006
 - December 10 - December 12, 2006
- Public Audit Status Briefing
 - July 20, 2006
- Regional License Renewal Inspections
 - January 22 - 26, 2007
 - February 5 - 9, 2007
- • Regional Inspections Exit Meeting
 - Mid May
 - May 24, 2007



License Renewal Inspections

Michael Modes

Region I Inspection Team Leader

Regional Inspection



- Two Weeks on Site
 - 10 CFR 54.2(a) One inspector week
 - 19 Aging Management Programs 12 inspector weeks
- One Week at Beginning of Outage
 - Confirmatory Inspection of internal base sill seal
 - Confirmatory Inspection of drywell condition
 - Follow Up on Torus Ultrasonic Testing

Regional Inspection



-
- Performance Indicators Green Except:
 - White in HP Transportation
 - Advanced Crusher Shearer shipped from VY to Susquehanna 8/31/06 exceeded contact radiation limit of 200 microcurie/hr by 620 microcuries/hr
 - 95001 PI Follow Up scheduled for 7/9/2007

Regional Inspection



- Inspection noted Weaknesses
 - Scoping in Turbine Building
 - Containment Management
 - Visual Examination Acceptance Standards
 - Procedures for Sandbed Drain Monitoring
 - Torus Corrosion Rate
 - Fire Water System lacked corrosion monitoring and biofouling management

Regional Inspection



- CONCLUSION

- The inspection team concluded the screening and scoping of non-safety related systems, structures, and components, was implemented as required by the rule and the aging management portions of the license renewal activities were conducted as described in the application.

Section 2: Structures and Components Subject to Aging Management Review



Section 2.1 – Scoping and Screening Methodology

- Staff Audit and Review concluded that the Applicant's Methodology is consistent with the requirements of 10 CFR 54.4 and 54.21(a)(1)

Section 2.2 – Plant-Level Scoping Results

- Staff found no omission of systems and structures within the scope of license renewal

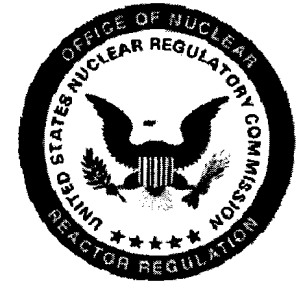
Section 2: Structures and Components Subject to Aging Management Review



Section 2.3 – Scoping and Screening Results: Mechanical Systems

- Six (6) Confirmatory Items
 - Region I Inspection Team was asked to verify if license renewal scope boundaries satisfy the requirements of 10 CFR 54.4(a)(2) for the components of several systems
 - Region I Inspection Team was asked to verify if license renewal scope boundaries satisfy the requirements of 10 CFR 54.4(a)(3) for components of the John Deere Diesel

Confirmatory Items



-
- **Confirmatory Item 2.3.3.2a-1**
 - Verify the location of the license renewal scope boundary for pipe section 2"-SW-566C (which is included in the nonsafety-related portion of the Service Water System).
 - **Confirmatory Item 2.3.3.2a-2**
 - Verify that portions of the nonsafety-related piping, which is attached to safety-related piping, are included up to the first seismic or equivalent anchor of the Service Water System.
 - **Confirmatory Item 2.3.3.12-1**
 - Verify if all components subject to an AMR for the John Deere Diesel were included in the LRA.

Confirmatory Items



- Confirmatory Item 2.3.3.13a-1
 - Verify if all components subject to an AMR for the Augmented Off-Gas system were included in the LRA
- Confirmatory Item 2.3.3.13e-1
 - Verify if all components subject to an AMR for the Circulating Water System were included in the LRA
- Confirmatory Item 2.3.3.13m-1
 - Verify if all components subject to an AMR for the Reactor Water Cleanup System were included in the LRA

Confirmatory Items Status



-
- Regional Inspection Team determined that components of the Augmented Off-Gas System satisfy requirements of 10 CFR 54.4(a)(2)
 - Regional Inspection Team determined that components of the John Deere Diesel System satisfy requirements of 10 CFR 54.4(a)(3)
 - Issues related to the Service Water, Circulating Water, and Reactor Water Cleanup Systems are under discussion

Section 2: Structures and Components Subject to Aging Management Review



Section 2.4 – Scoping and Screening

Results: Structures

- No omission of structures within the scope of license renewal

Section 2.5 – Scoping and Screening

Results: Electrical and Instrumentation and Control Systems

- No omission of electrical and instrumentation and control system components within the scope of license renewal

Section 2: Structures and Components Subject to Aging Management Review



Summary

- The applicant's scoping and screening methodology meets the requirements of 10 CFR 54.4 and 54.21(a)(1)
- Scoping and screening results included all SSCs within the scope of license renewal and subject to AMR with the resolution of the Confirmatory Items

Section 3: Aging Management Review Results



Section 3.0.3 – Aging Management Programs (AMPs)

- 39 AMPs
 - 10 are NEW programs
 - 7 in the original LRA
 - 3 added during review
 - 29 are EXISTING programs

Bolting Integrity Program (B.1.31)



- Originally, the applicant credited Inservice Inspection and System Walkdown to manage aging of bolting.
- GALL AMP XI.M18 recommends comprehensive integrity program, as delineated in NUREG 1339, and EPRI NP-5769 to address generic safety issue.
- A new AMP was added as a result of the audit team's AMR review.

Metal-Enclosed Bus Inspection Program (B.1.32)



- Metal enclosed bus provides back feeding through the step up and unit transformers. It is in-scope of license renewal for SBO restoration path.
- GALL Report AMP XI.E4 recommends inspection for metal enclosed bus
- A new AMP was added as a result of the audit team's AMR review.

Bolted Cable Connections Program (B.1.33)



- GALL Report XI.E6 recommends testing of cable connections
- A new AMP was added as a result of the audit team's AMR review.

Structures Monitoring – Vernon Dam FERC Inspection Program (B.1.27.3)



- Vernon Hydroelectric Station (VHS) in-scope of license renewal by 10 CFR 50.63, coping source for station blackout
- Aging management of VHS performed by Federal Energy Regulatory Commission (FERC) and VHS owner
- References in program are being clarified

Section 4: Time-Limited Aging Analyses



Section 4.2 – Reactor Vessel Neutron Embrittlement Analyses

- Six TLAAAs affected by Neutron Embrittlement
 - Reactor Vessel Fluence
 - Pressure-Temperature Limits
 - Charpy Upper Shelf Energy
 - Adjusted Reference Temperature
 - Circumferential Weld Inspection Relief
 - Axial Weld Failure Probability

Reactor Vessel Fluence



1/4 T fluence, n/cm ² (E>1 MeV)			
Location	Original Extrapolation from 40-year (32 EFPY) curve	Revised Extrapolation from 40-year (32 EFPY) curve	Extrapolation from 60-year (51.6 EFPY) curve
Bottom of active fuel (BAF)	9.8 x 10 ¹⁶	9.8 x 10 ¹⁶	1.0 x 10 ¹⁷
BAF + 19%	1.2 x 10 ¹⁷	1.2 x 10 ¹⁷	1.2 x 10 ¹⁷
Nozzle	6.7 x 10 ¹⁶	6.4 x 10 ¹⁶	7.5 x 10 ¹⁶
Nozzle + 19%	7.9 x 10 ¹⁶	7.6 x 10 ¹⁶	9.0 x 10 ¹⁶

- End of extended life calculated vessel fluence and axial distribution
- Extrapolations to 54 EFPY

Upper-Shelf Energy



VY RV Material	RG 1.99, Revision 2 Predicted USE % Drop Or EOL USE Value	EOL USE Acceptance Criterion	Evaluation Result
Limiting Plate 1-15	10.7%	% USE drop must be < 23.5%	Acceptable per 10 CFR 54.21(c)(1)(ii)
Limiting Welds 1-338A, B, C	11.19%	% USE drop must be < 39%	Acceptable per 10 CFR 54.21(c)(1)(ii)
Plate 1-14	67.7 ft-lb	USE must be > 50 ft-lb	Acceptable per 10 CFR 54.21(c)(1)(ii)

Equivalent margin must be 50 ft-lb

- Values verified by the staff
- Charpy USE analyses have been projected to the PEO

Section 4: Time-Limited Aging Analyses



Section 4.3 – Metal Fatigue Analyses

- VY will implement one or more of the following two years prior to period of extended operation:
 - Refine fatigue analyses to demonstrate valid cumulative usage factors (CUFs) < 1
 - Manage aging effects due to fatigue at affected locations by NRC approved inspection program
 - Repair or replace the affected locations
- The staff concludes metal fatigue analyses are in compliance with 10 CFR 54.21(c)(1)(i),(ii) and (iii)

Commitments



- 47 total Commitments
 - 27 Commitments in original LRA
 - 15 Commitments as a result of Audit activities
 - 5 Commitments as a result of Regional Inspections

Conclusions



-
- On the basis of its review of the LRA, the staff determines that the requirements of 10 CFR 54.29(a) have been met.



Questions

Fax Cover Page

TO: MICHAEL JUNG-E SR. STAFF ENGR,
FAX 301-415-5589

From: JOHN BARTON ACRS CONSULTANT
FAX: 772-287-5576
PHONE: 5577

SUBJ: Renewal Comments - Vermont
YANKEE NUCLEAR POWER STATION

TOTAL PGS- SENT, INCL THIS PG. 6

J.J.B.
6/03/07

JUNE 1, 2007

To: DR. MARIO BONACA
CHAIRMAN, VERMONT YANKEE LICENSE
RENEWAL - SUBCOMMITTEE

From: JOHN J. BARTON
ACRS CONSULTANT

SUBJ: LICENSE RENEWAL APPLICATION -
VERMONT YANKEE NUCLEAR POWER
STATION

HAVING CONDUCTED A REVIEW OF
THE LICENSE RENEWAL APPLICATION, THE
VERMONT YANKEE AUDIT AND REVIEW REPORT,
AND THE NRC STAFF SAFETY EVALUATION
REPORT WITH CONFIRMATORY ITEMS, I
HAVE THE FOLLOWING QUESTIONS AND
COMMENTS

1. SINCE VERMONT YANKEE IS AN
EARLY VINTAGE BWR WITH A
MARK I CONTAINMENT I WOULD LIKE
TO KNOW WHY THE STAFF IS
SATISFIED WITH THE CONDITION OF

THE DRYWELL AND TORUS. THESE SEEM TO BE TWO AREAS OF CONCERN REGARDING THE OLDER BUR'S.

2. LICENSE RENEWAL COMMITMENTS -

• IT IS NOTED THAT SEVERAL AGING MANAGEMENT PROGRAMS ARE DESCRIBED AS NEW PROGRAMS, YET THE STATION SHOULD BE PERFORMING THESE ACTIVITIES AT THIS TIME.

EX: AMP B.1.14 HEAT EXCHANGER MONITORING
AMP B.1.19 NON-EQ INSULATED CABLES
& CONNECTIONS

• LICENSE RENEWAL COMMITMENTS ALL SEEM TO BE IMPLEMENTED ON THE START OF THE 20 YR. LICENSE EXTENSION.

COMMON SENSE SAYS THAT YOU NEED TO START TO IMPLEMENT SOME OF THESE PROGRAMS PRIOR TO THAT DATE. GOOD EXAMPLE IS "ONE TIME INSPECTION PROGRAM". I THOUGHT THESE INSPECTIONS ARE TO PRE-CEED LICENSE EXTENSION.

SOME COMMITMENTS MADE BY THE APPLICANT STATE THAT ACTIONS WILL BE TAKEN PRIOR TO ENTERING THE PERIOD OF

6. EXCEPTIONS TO GALL -

~~I CAN'T BELIEVE THE NUMBER OF EXCEPTIONS TAKEN IN REFERENCE TO GALL REQUIREMENTS - ALSO THE AUDIT TEAM SEEMED TO ACCEPT THEM ALL.~~
~~FOR THE RESULTS ACCEPTABLE.~~

3

EXTENDED OPERATION, YET THE IMPLEMENT DATE PROVIDED COINCIDES WITH THE START OF EXTENDED OPERATION. I DON'T UNDERSTAND WHAT THAT ALL MEANS,

3. VY AUDIT AND REVIEW REPORT -

DISCUSSION, (PG 5482-3) REGARDING AN AMP FOR THE VHS GENERATORS AND SWITCHYARD, I DON'T UNDERSTAND WHY THE APPLICANT MADE SUCH A CASE AGAINST DEVELOPING AN AMP FOR THIS EQUIPMENT.

THE APPLICANT USED "REDUNDANCY" AS THE REASON FOR NOT REQUIRING AN AMP FOR THE VHS EQUIPMENT. WHY IS THIS AN ACCEPTABLE REASON?

4. STRUCTURES MONITORING PROGRAM -

THE APPLICANTS INSPECTION PROGRAM FOR CRANE RAILS AND GIRDERS IS NOT UNDER GALL AMP 4.1.M 23.

THE APPLICANT STATES THAT THE STATION SURVEILLANCE AND PREVENTIVE MAINTENANCE PROGRAMS MANAGE THE AGING EFFECTS
DID THE AUDIT TEAM REVIEW THE

STATION PROGRAMS THE APPLICANT PREFERENCES TO? DID THE AUDIT TEAM SATISFY THEMSELVES THAT THE CALL REQUIREMENTS WOULD BE SATISFIED?

5. AMR FOR FUSE HOLDERS -

I'M CONFUSED ON THIS ISSUE WITH REGARDS TO THE POSITION TAKEN BY THE APPLICANT.

I DO BELIEVE THAT SOME OTHER APPLICANTS FOR LICENSE EXTENSION DID INCLUDE FUSE HOLDERS IN THEIR AGING MANAGEMENT PROGRAMS.

THIS APPLICANT STATES THAT AN AGING MANAGEMENT PROGRAM IS NOT REQUIRED BECAUSE FUSE HOLDERS ARE PART OF AN ACTIVE DEVICE, OR BECAUSE THEY ARE LOCATED IN CIRCUITS THAT PROVIDE NO LICENSE RENEWAL INTENDED FUNCTION.

CAN THE STAFF EXPLAIN THE RELATIONSHIP OF A FUSE HOLDER TO SOME ACTIVE DEVICE, AND WHY THE FUSE HOLDER ITSELF IS NOT A PASSIVE DEVICE?

6. EXCEPTIONS TO GALL -

- I CAN'T BELIEVE THE NUMBER OF EXCEPTIONS TAKEN IN PREFERENCE TO GALL REQUIREMENTS - ALSO THE AUDIT TEAM SEEMED TO ACCEPT THEM ALL.

IF THIS POSITION IS ACCEPTABLE TO THE NRC, WHY DOESN'T GALL REFLECT THIS POSITION ?? IF THIS NUMBER OF EXCEPTIONS NEEDS TO BE REVIEWED AND ANALYZED, WHY NOT JUST REVISE GALL AND BE DONE WITH IT ? (THE AMP FOR FIRE PROTECTION IS JUST ONE EXAMPLE)

- I HAVE EXCEPTIONS TAKEN BY THIS APPLICANT THAT HAVE NOT BEEN TAKEN BY OTHER APPLICATIONS I HAVE REVIEWED.

7. SERVICE WATER SYSTEM PIPING -

THE PIPING IS MADE OF CARBON STEEL, - UNLINED - AND IS BEING AGGRESSIVELY ATTACKED, WHAT IS APPLICANT'S PROPOSED SOLUTION TO THIS PROBLEM?

J.B.

April 25, 2007

MEMORANDUM TO: Jenny Gallo, Chief
Operations Support Branch, ACRS

FROM: Michael A. Junge, Senior Staff Engineer
Technical Support Staff, ACRS

SUBJECT: CONFLICT OF INTEREST

The ACRS Subcommittee on License Renewals will hold a meeting on June 5, 2007, in Bethesda, MD, to review information related to the License Renewal of the Vermont Yankee Nuclear Power Station. I have reviewed the conflict of interest statements available in the Office Files of the following individuals for potential conflict of interest.

Mario Bonaca	Subcommittee Chairman
Otto Maynard	Member
William Shack	Member
Sam Armijo	Member
Said Abdel-Kahlik	Member
John Barton	Consultant

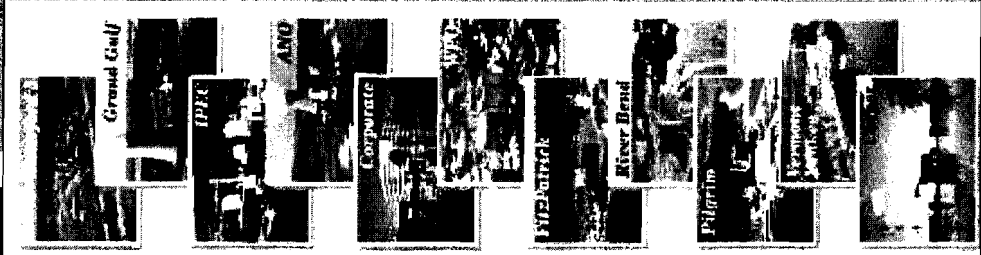
None of the members has a conflict of interest with respect to any of the issues to be discussed.

cc: ACRS Members
F. Gillespie
B. White

Vermont Yankee Nuclear Power Station

ACRS License Renewal Subcommittee Presentation

June 5, 2007



Energy

Entergy Personnel in Attendance

Executives

Ted Sullivan
Jay Thayer

Vermont Yankee Site Vice President
Vice President, Operations Entergy/NEI

Corporate Management

John McCann
Garry Young

Director of Licensing, White Plains
Manager, Business Development

Presentation Panel

John Dreyfuss
Norm Rademacher
Dave Mannaj
Alan Cox
Mike Metelli

Director of Nuclear Safety Assurance
Director of Engineering
Licensing Manager
Technical Manager
Project Manager



Entergy

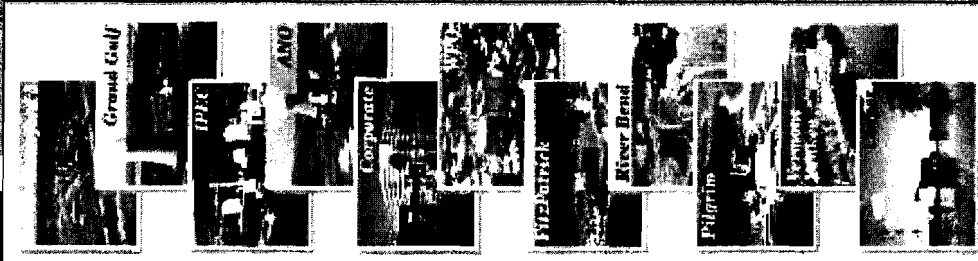
Agenda

- Site Description
- Licensing History
- Major Plant Improvements
- Recent Plant Performance
- License Renewal Project
- Cost-Beneficial SAMAs
- Presentation Topics
 - Drywell Shell Integrity
 - Torus Shell Integrity
 - Vernon Hydroelectric Station
- Questions

Vermont Yankee Nuclear Power Station

ACRS License Renewal Subcommittee Presentation

June 5, 2007



Energy

Entergy Personnel in Attendance

Executives

Ted Sullivan
Jay Thayer

Vermont Yankee Site Vice President
Vice President, Operations Entergy/NEI

Corporate Management

John McCann
Garry Young

Director of Licensing, White Plains
Manager, Business Development

Presentation Panel

John Dreyfuss
Norm Rademacher
Dave Mannaj
Alan Cox
Mike Metelli

Director of Nuclear Safety Assurance
Director of Engineering
Licensing Manager
Technical Manager
Project Manager



Entergy

Agenda

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 - Vernon Hydroelectric Station
- Questions

VYNPS Site Description

- General Electric (NSSS & TG), Ebasco (AE and Constructor)
- BWR-4, Mark I Containment
- 1912 MWt Thermal Power; ~ 650 MWe
- Hybrid Cycle Condenser Cooling with Forced Draft Cooling
- Staff Complement: approximately 650

VYNPS Site Description

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- Staff Complement: approximately 650

Licensing History

Construction Permit	December 11, 1967
Operating License	March 21, 1972
Commercial Operation	November 30, 1972
License Transfer to Entergy	July 31, 2002
LR Application Submitted	January 27, 2006
Upgraded Power License	March 3, 2006
Operating License Expires	March 21, 2012



Major Plant Improvements

- 1978 Core Spray System Piping Replacement
- 1978-1982 Mark I Containment Modifications
- 1986 Recirculation System Piping Replacement
- 1998 ECCS Suction Strainer Upgrade
- 2001 First Noble Metals Chemistry Application
- 2003 Hydrogen Water Chemistry
- 2003-2006 Power Upgrade Equipment Upgrades
- 2007 Re-Application of Noble Metals Chemistry



Entergy

Recent Plant Performance

- Current Plant Status
- Cycle 25 – 549 day safe continuous operation
- RFO-26 Began May 12, 2007
- Startup from RFO-26
- Outage Summary



Entergy

Outage Summary

- Excellent plant material condition
- No significant equipment issues identified
- Outage items of interest
 - Steam Dryer
 - Flow Accelerated Corrosion



Steam Dryer Performance

License Condition and GE SIL 644

On-line monitoring

- No unexplained reactor water level changes
- No unexplained moisture carry-over measurements operation

Outage monitoring

- No fatigue indications found during visual inspection
- IGSCC indications found and acceptably dispositioned



Outage Performance

Flow Accelerated Corrosion (FAC)

- Number of FAC inspections increased 50% from pre-uprate number
- 63 FAC inspections performed
- Visual/UT inspections confirmed satisfactory performance following operation at new power
- Increased scope inspections will continue for two more cycles



VYNPS License Renewal Project

- License Renewal Application team composition
- VYNPS and Pilgrim – first submittals under SRP/GALL Rev. 1
- Incorporated industry lessons learned

VYNPS License Renewal Project (continued)

GALL Program Exception Types

- NUREG-1801 activity not applicable to VYNPS design
- Alternative consistent with approved methods
- Program based on different ASME code edition

VYNPS License Renewal Project (continued)

GALL Program Exception Types

- VYNPS method equal to or better than NUREG-1801 method
- VYNPS experience justifies exception
- NUREG-1801 method not feasible

VYNPS License Renewal Project (continued)

- Peer review conducted (10 Utilities)
- LRA internal reviews (Safety Review Committees and QA)
- Comments resolved prior to submittal

VYNPS License Renewal Project (continued)

- License Renewal Commitments
 - Refined during audit/inspection process
 - Tracked by Entergy commitment tracking and engineering work tracking systems
 - Add to UFSAR when renewed license is issued
- 39 Aging Management Programs
 - 17 programs in place without enhancements
 - 13 programs will be enhanced
 - 9 new programs



VYNPS License Renewal Project

Draft SER Summary

- Open Items – None
- Confirmatory Items – 2 resolved; 4 pending



Cost-Beneficial SAMAS

- Six potentially cost-beneficial SAMAS identified
- No age-related SAMAS
- Implementation will be evaluated using the plant corrective action process

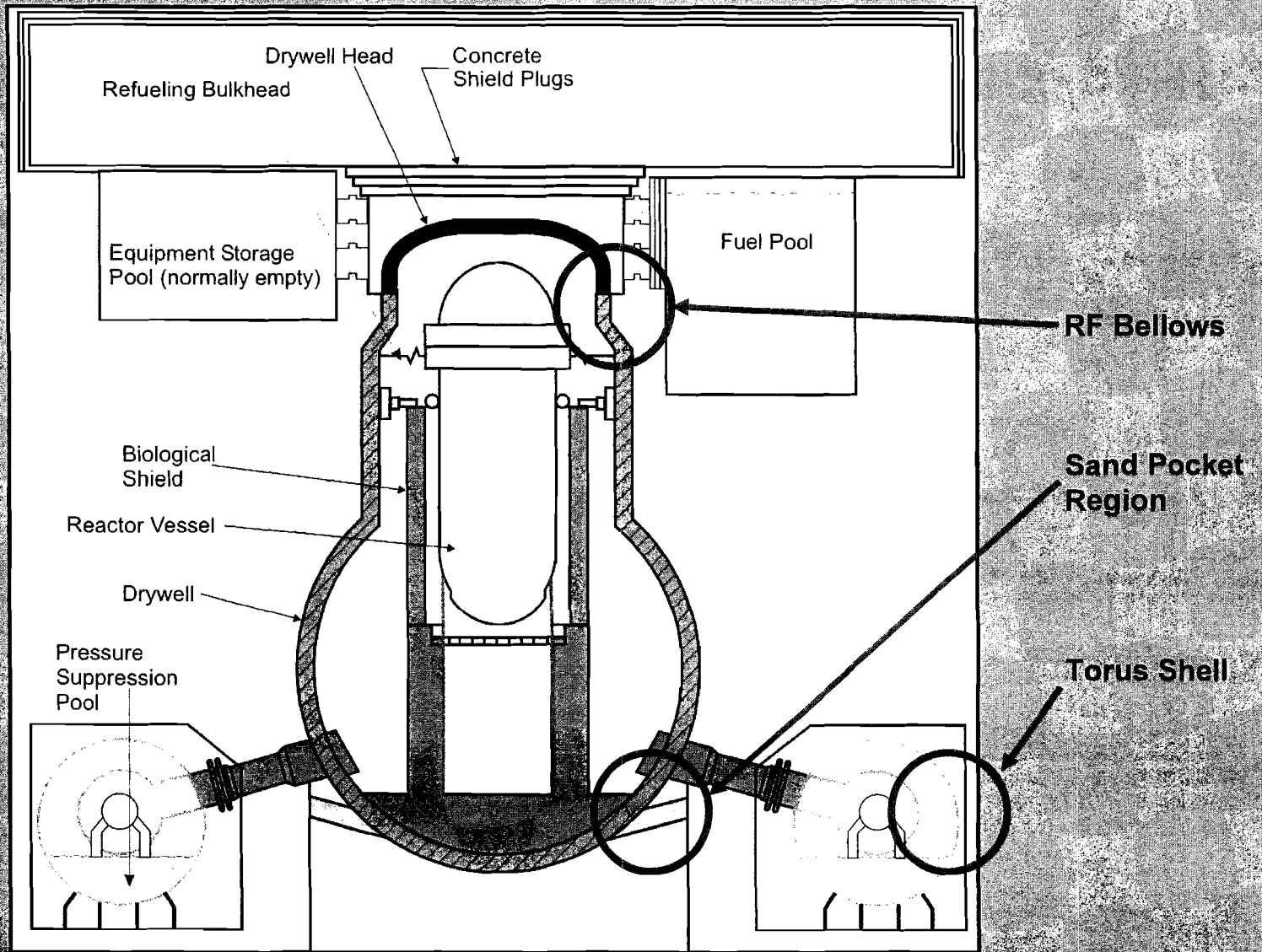
Presentation Topics

- Drywell Shell Integrity and Monitoring
- Torus Shell Integrity and Monitoring
- Vernon Hydroelectric Station

Drywell Shell Integrity and Monitoring

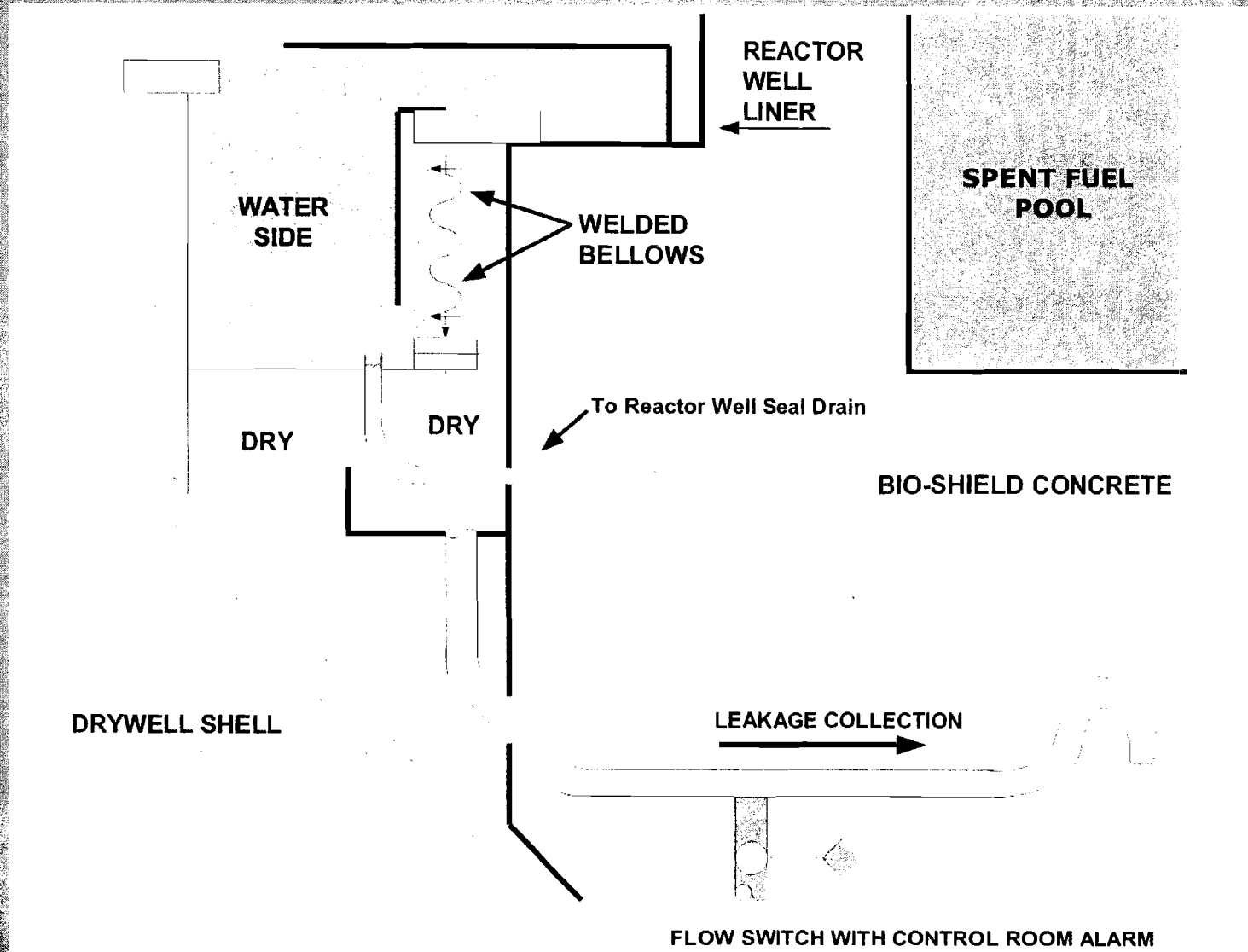


Containment Overview

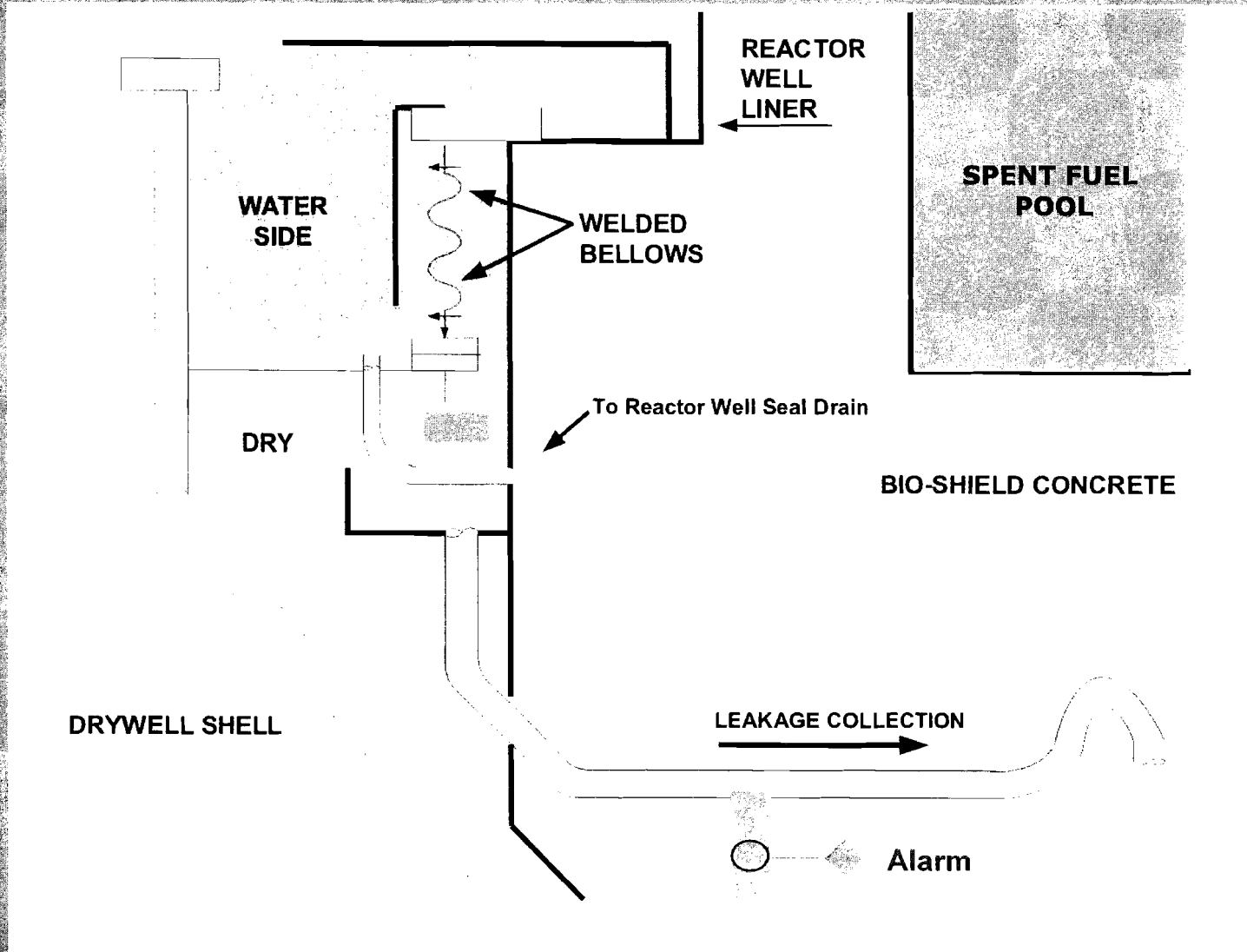


Entergy

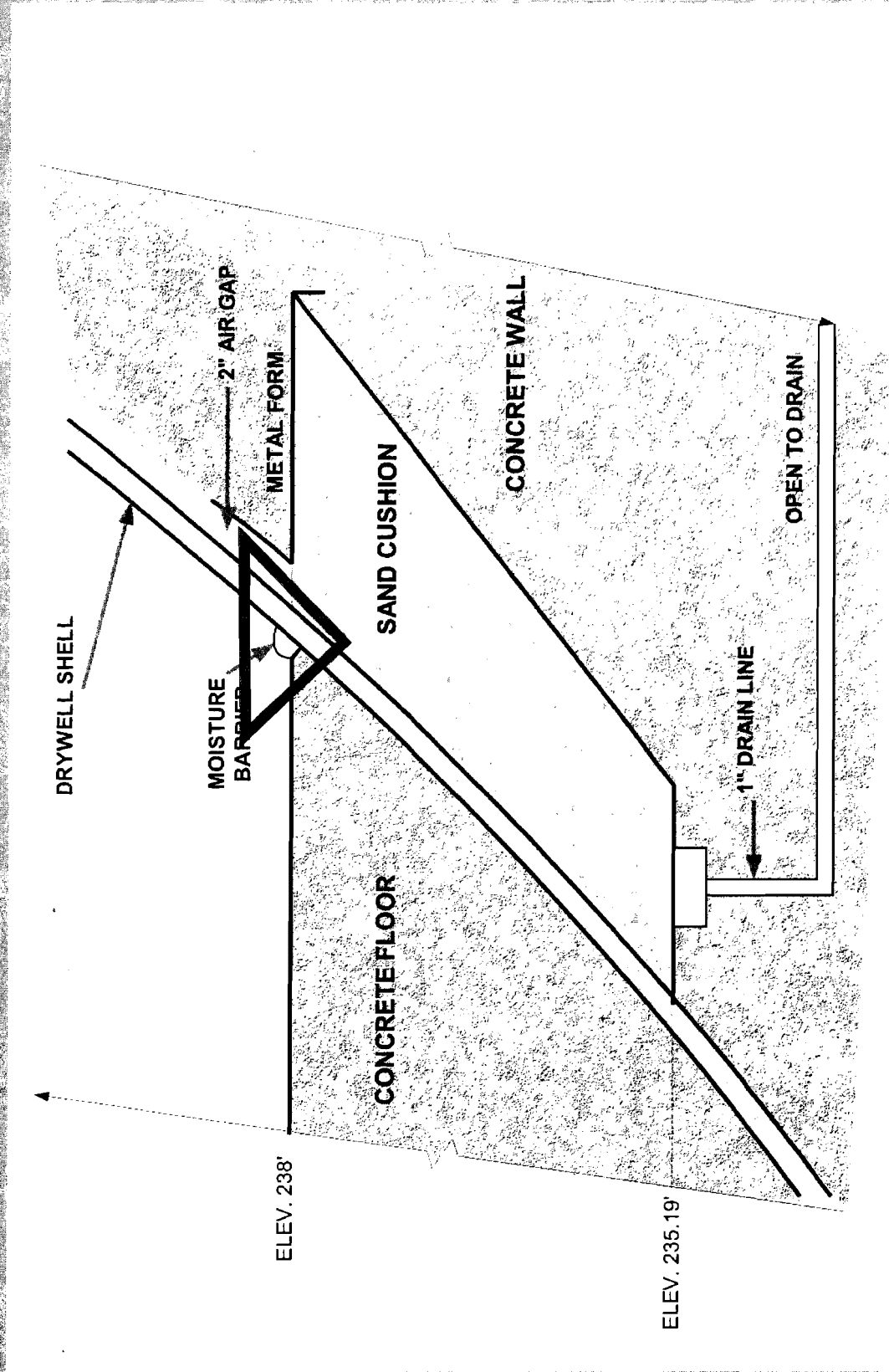
Drywell Shell Integrity and Monitoring Refueling Bellows Region



Drywell Shell Integrity and Monitoring Refueling Bellows Region



Drywell Shell Integrity and Monitoring Sand Cushion Region



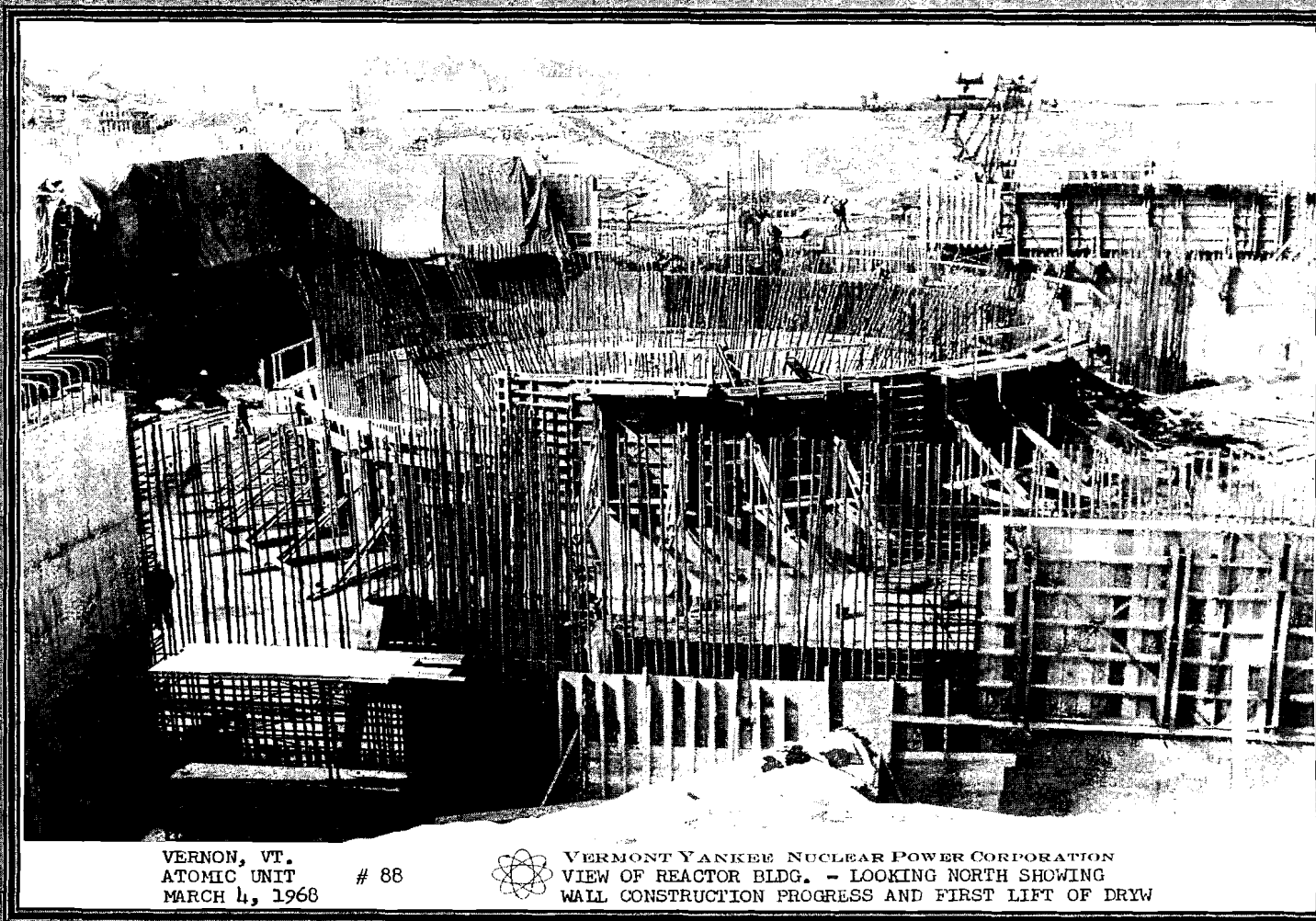
Drywell Shell Integrity and Monitoring

Summary of Protective Features

- Design minimizes potential for undetected water intrusion
- Diverse methods of prevention and identification of potential water leakage into air gap
- Corrosion potential minimized (no foam/insulation)



Drywell Shell Integrity and Monitoring Construction Photo



VERNON, VT.
ATOMIC UNIT # 88
MARCH 4, 1968

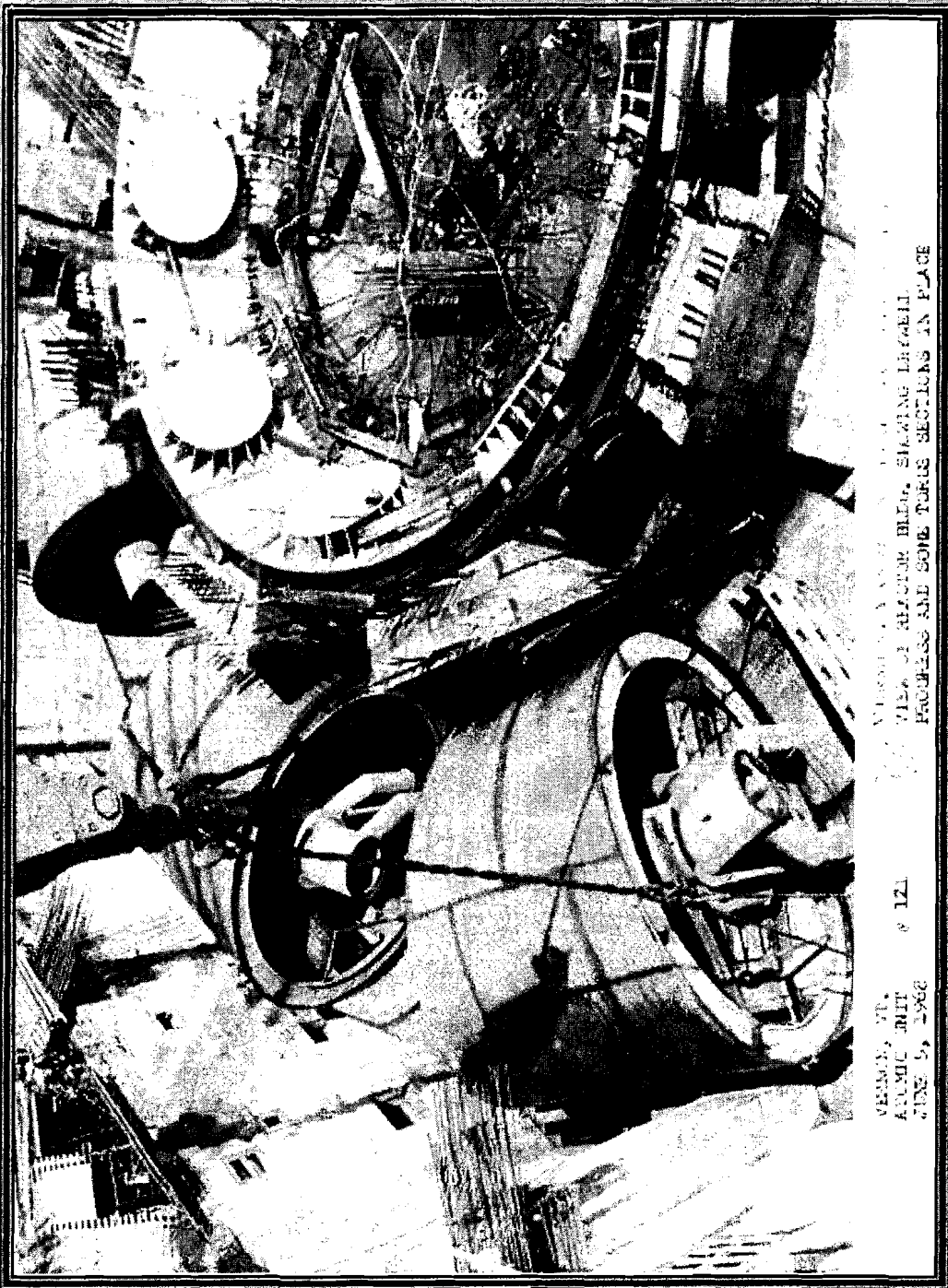


VERMONT YANKEE NUCLEAR POWER CORPORATION
VIEW OF REACTOR BLDG. - LOOKING NORTH SHOWING
WALL CONSTRUCTION PROGRESS AND FIRST LIFT OF DRYW

Energy

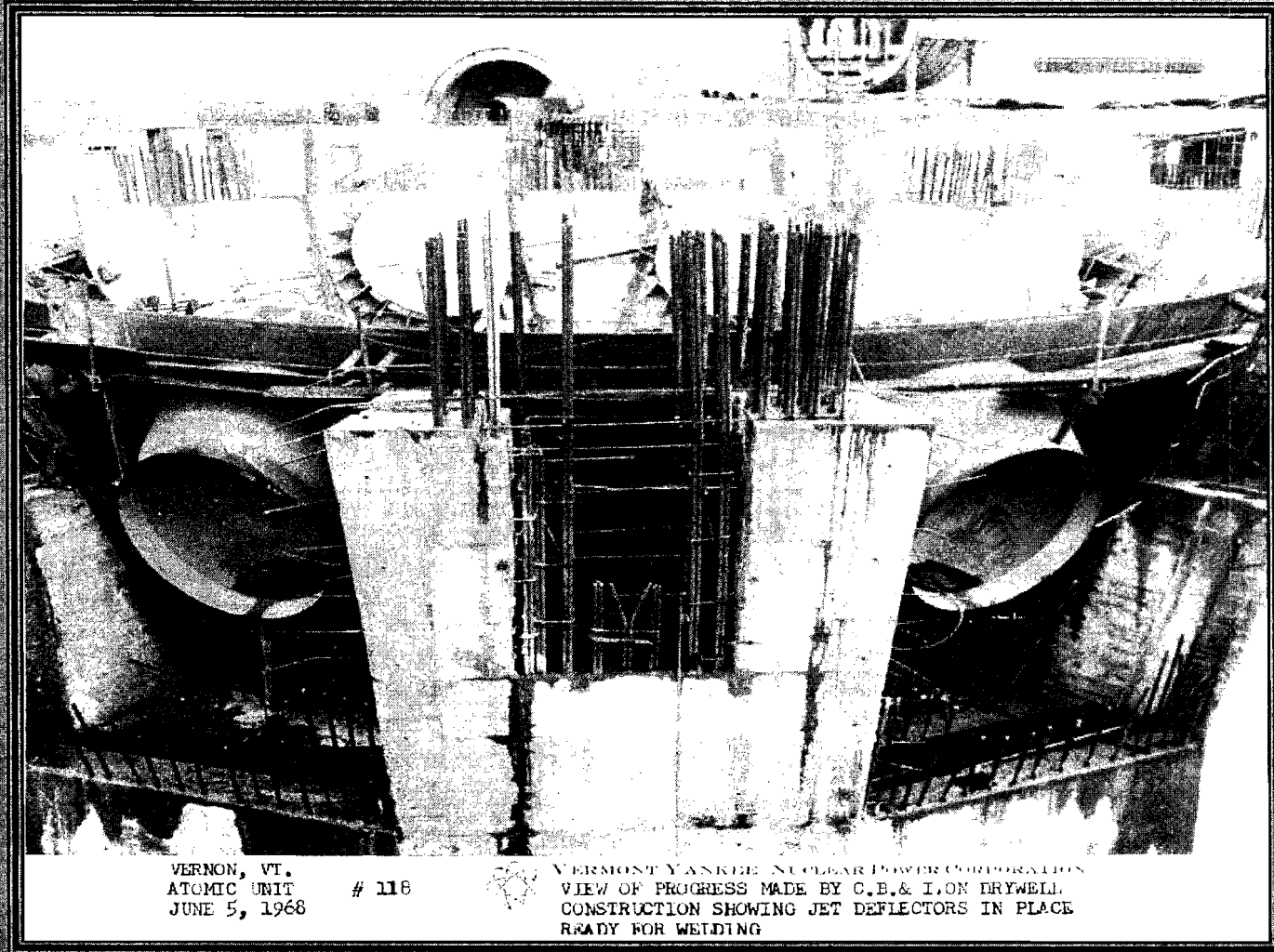
Drywell Shell Integrity and Monitoring

Construction Photo



VERMONT, VT. VERMONT STATE UNIVERSITY
VIEW OF REACTOR BUILDING, SHOWING BRACKET
PROGRESS AND SOME TUBES SECTIONS IN PLACE
© 121
ATOMIC UNIT
JUNE 5, 1962

Drywell Shell Integrity and Monitoring Construction Photo



Drywell Shell Integrity and Monitoring

- No refueling bellows or spent fuel pool liner leakage events
- 3 boroscopic inspections of sand cushion drains performed with acceptable results
 - 1987, 1991, 2007
- 1991 - main steam line drain valve packing leak

Drywell Shell Integrity and Monitoring

- 1999 – IWE drywell interior inspection
- 2001 – UT inspection of the drywell shell at the interior floor to wall junction demonstrated nominal wall thickness
- 2001 – Installed enhanced moisture barrier design
- 2003-2007 – Moisture barrier periodically inspected per Containment ISI Program

Torus Shell Integrity and Monitoring

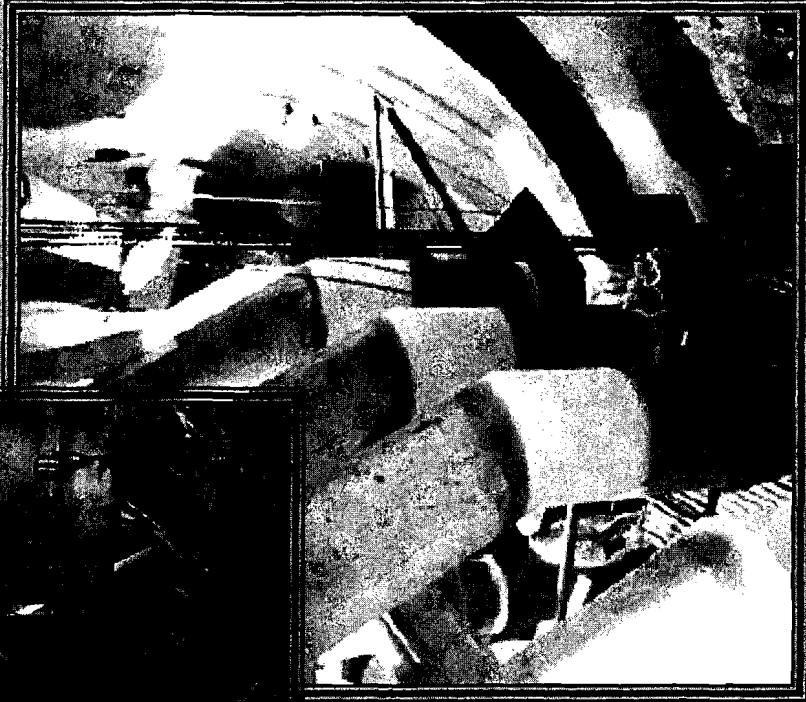
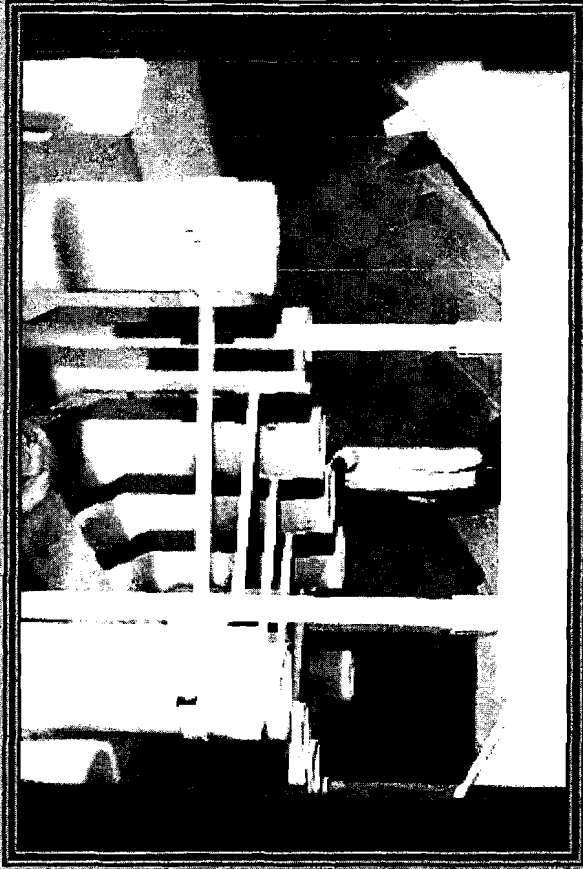
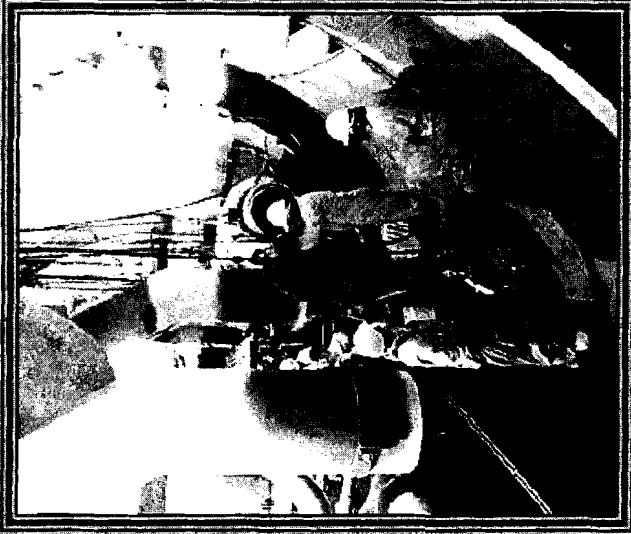


Torus Shell Integrity and Monitoring



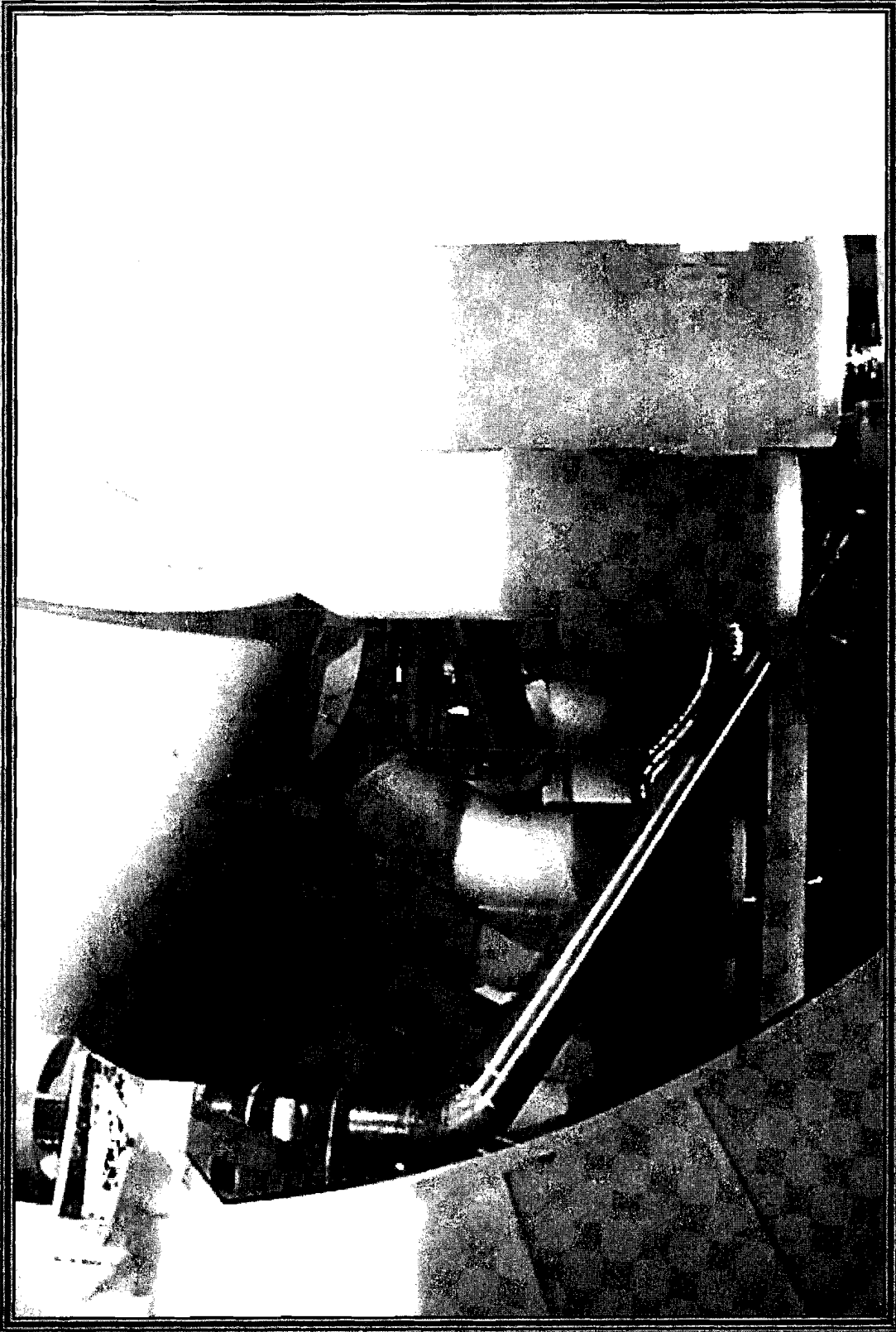
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Torus Shell Integrity and Monitoring



Emtegy

Torus Shell Integrity and Monitoring



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Torus Shell Integrity Monitoring

Shell Plates

- Thickness specified for 56 psig design pressure; 27 psig accident pressure
- Plates supplied at specified wall
 - Bottom half at 0.584"
 - Top half at 0.533"
- Per design drawings, "No Excess Metal Thickness Provided" (bottom center)

Torus Shell Integrity and Monitoring

Interior Coating

- Zinc primer / phenolic top coat applied at construction
- Wetted surfaces top coat re-applied after Mark 1 Program Modifications - early 80s
- 1998 re-coating of torus wetted surfaces - grit blasted & qualified coating applied
- Zinc primer with phenolic top coat at waterline



Torus Shell Integrity and Monitoring

1998: Initial IWE Inspections Prior to Recoating

- Condition satisfactory
- Limited areas of localized corrosion identified
- Extensive UT measurements performed
 - Full coverage test areas on bottom of 2 bays - 2800 measurements
 - UT examination of 15 localized areas identified by visual inspections
 - Permanent grids system established for monitoring of general corrosion
(286 locations on 16 bays)

Torus Shell Integrity and Monitoring

Shell Thickness Margins

- Significant margins for localized thinning (design pressure & Mark 1 DBA loads)
- Significant margin for general corrosion for Mark 1 DBA loads
- Limited margin for general corrosion for design pressure at bottom center of each bay

Torus Shell Integrity and Monitoring

UT measurements at permanent grid locations

	1998	2007
Average Thickness (inch)	0.602	0.601
Minimum Thickness (inch)	0.573	0.571
Average Difference =	0.001 inch	

Calculated General Corrosion Rate: 3×10^{-4} inch/year*

* Includes factor of 2 to account for uncertainties



Torus Shell Integrity and Monitoring

Conclusions / Summary

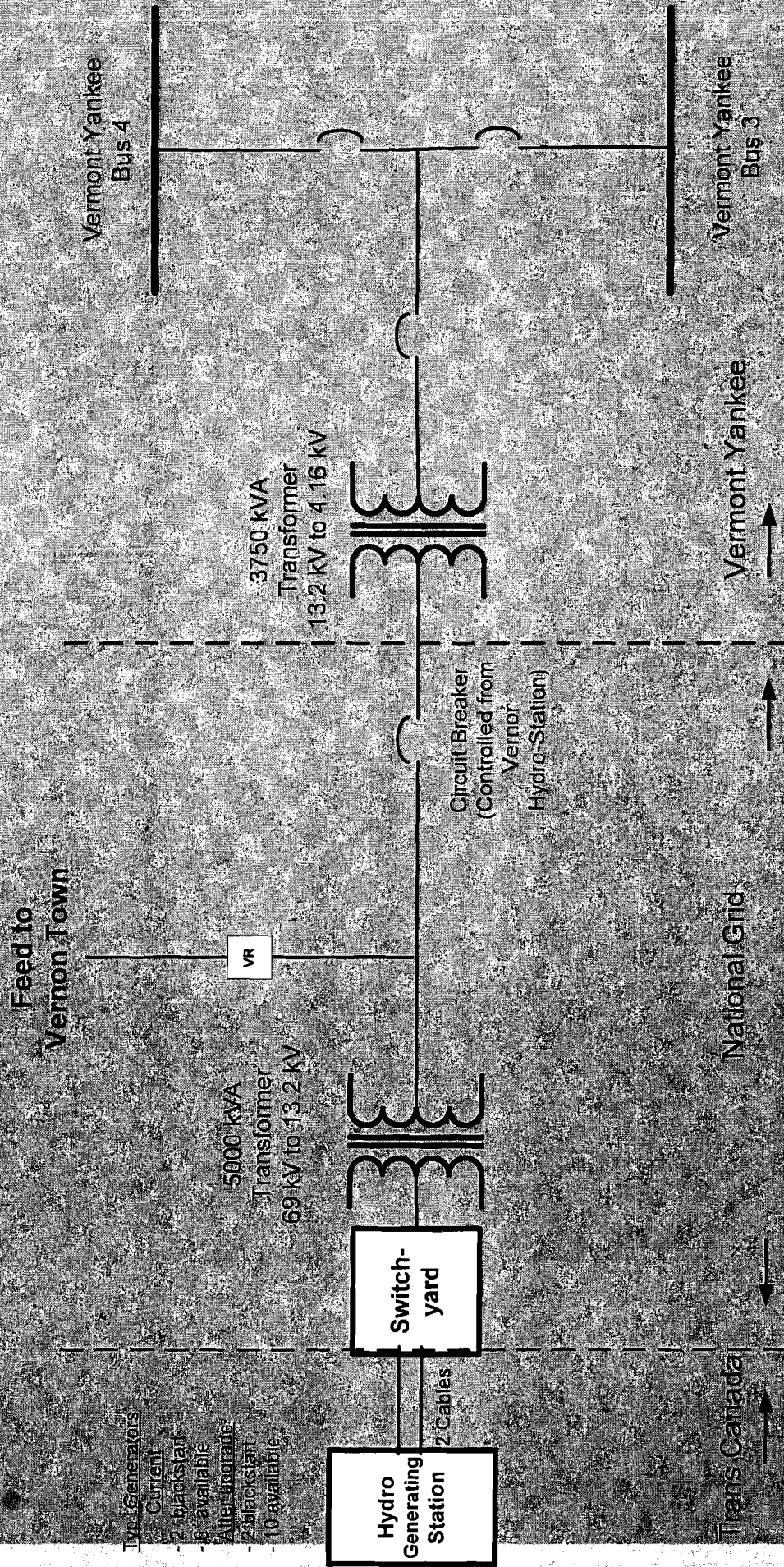
- Torus condition fully satisfies design requirements
- No measurable general corrosion since 1998 recoating
- No margins lost due to corrosion
- Material condition assured by
 - Ongoing IWE inspections of coating
 - UT measurements for the next 3 refueling outages

Vernon Hydroelectric Station



 Emergy

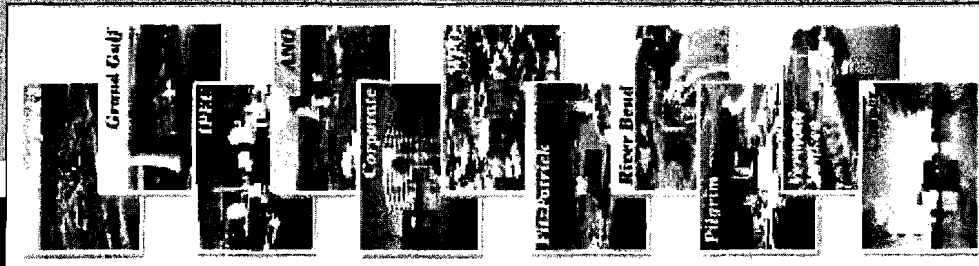
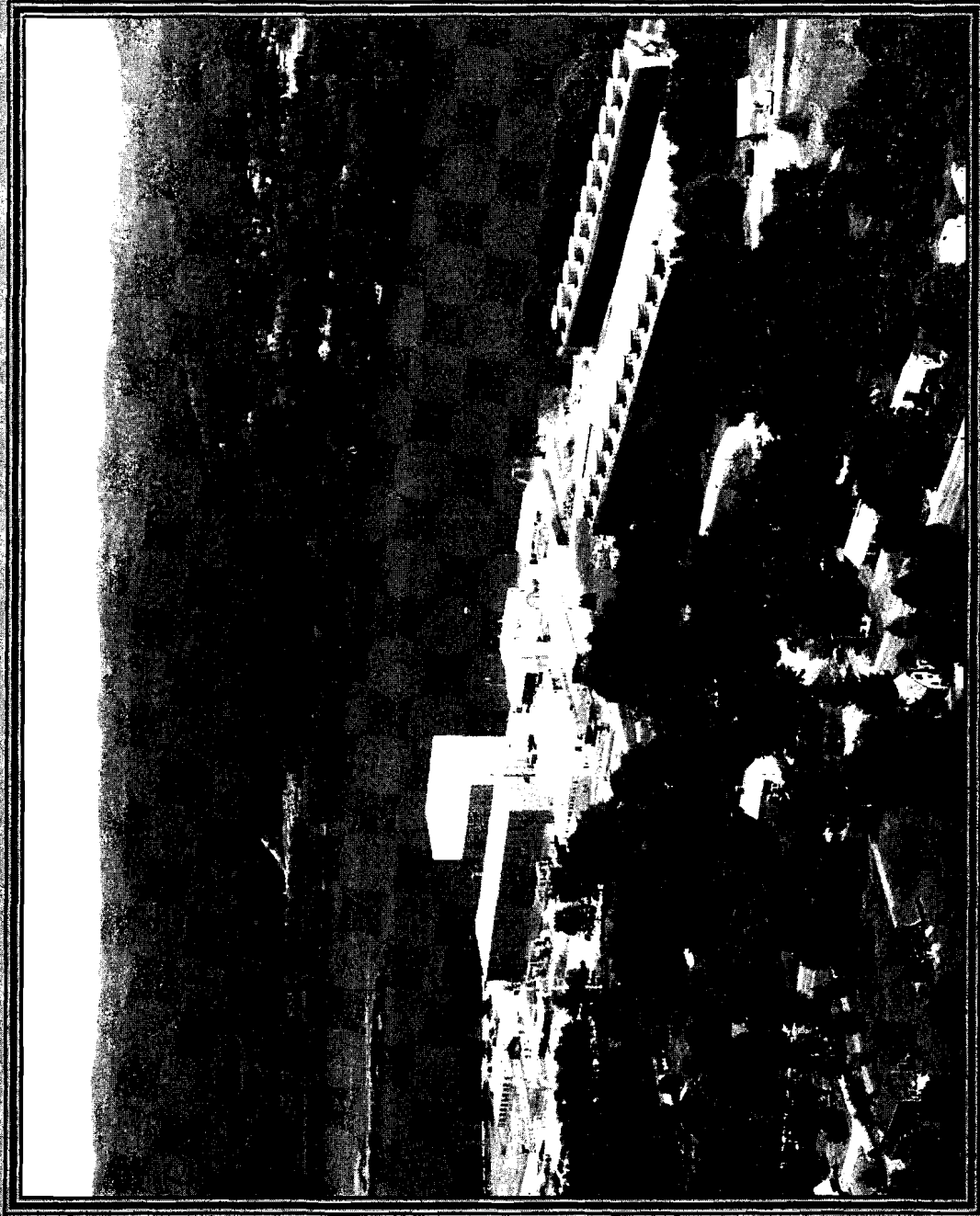
VYNPS Vernon Tie Line One-Line Diagram



- 100 Generators
- Current
- 2 blackstart
- 6 available
- After upgrade
- 2 blackstart
- 10 available



Comments and Questions



Energy