NRC FORM 658
(9-1999)

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Do not include proprietary materials.

DATE OF MEETING
06/04/2002

The attached document(s), which was/were handed out in this meeting, is/are to be placed in the public domain as soon as possible. The minutes of the meeting will be issued in the near future. Following are administrative details regarding this meeting:

Docket Number(s)	**05000346**
Plant/Facility Name	**Davis-Besse Nuclear Power Station**
TAC Number(s) (if available)	
Reference Meeting Notice	**05/24/2002**
Purpose of Meeting (copy from meeting notice)	**To discuss replacing the Davis-Besse reactor pressure vessel head.**

NAME OF PERSON WHO ISSUED MEETING NOTICE	TITLE
Douglas V. Pickett	**Senior Project Manager**

OFFICE
NRR

DIVISION
Division of Licensing Project Management

BRANCH
Project Directorate III

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Reactor Pressure Vessel Closure Head (RPVCH) Replacement at the Davis-Besse Nuclear Power Station June 4, 2002

Agenda

- Introduction
  - Jim Powers
- RPVCH Replacement
  - Bob Schrauder
- Concluding Remarks
  - Jim Powers

RPVCH Replacement Considerations

- Evaluated several replacement options
  - Repair existing RPVCH
  - Fabricate new RPVCH
  - Purchase existing RPVCH

RPVCH Replacement Considerations

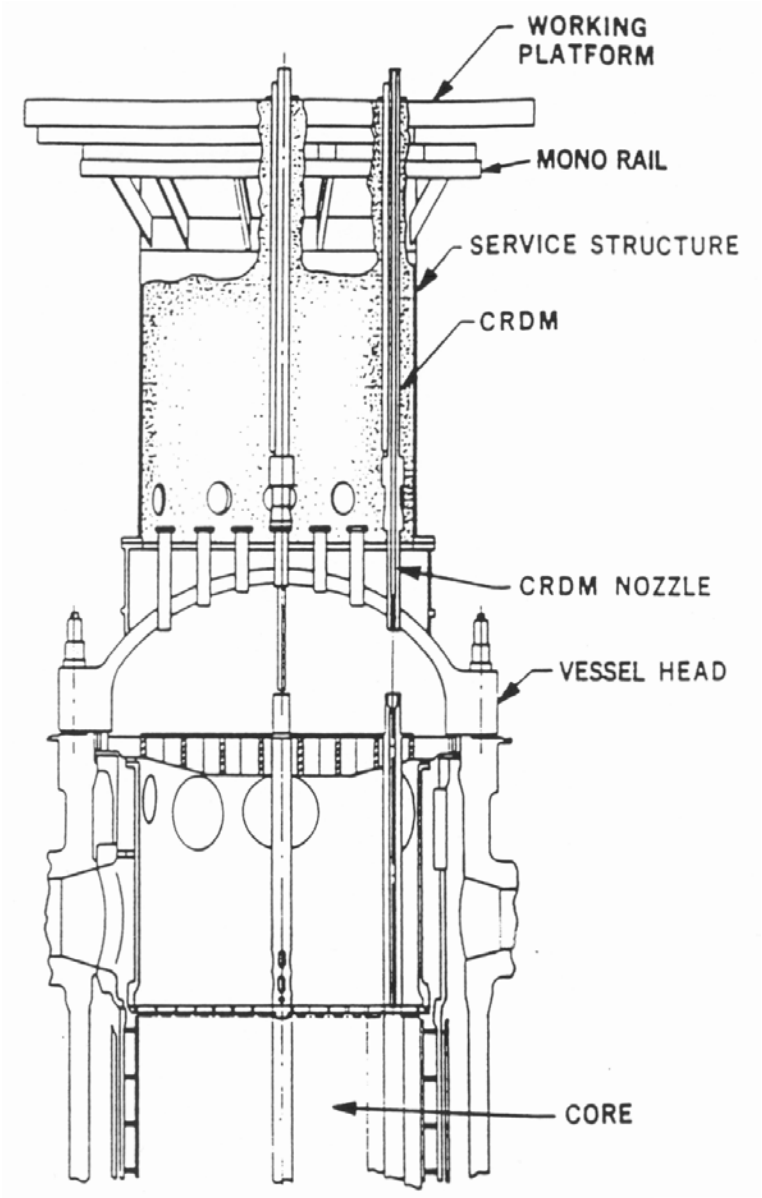
- The Midland RPVCH is
  - Similar in design to the Davis-Besse RPVCH
  - Readily available
  - Not contaminated

Replacement RPVCH

- Midland RPVCH was fabricated by Babcock and Wilcox
  - Manufactured to ASME Boiler & Pressure Vessel Code Section III, Code Class A, 1968 Edition, Summer 1968 Addenda
  - Accepted by Consumers Power and an Authorized Nuclear Inspector as an acceptable ASME component
  - Hydrostatically tested at 3125 psig per ASME Code Requirements

Replacement RPVCH

- Framatome-Advanced Nuclear Power (FRA-ANP) has purchased Midland RPVCH and is compiling/validating the ASME Code Data Package
- FRA-ANP is reconciling the Midland RPVCH against Davis-Besse design requirements
- FRA-ANP activities are governed by their safety-related Quality Assurance program, including 10CFR21 reporting



Replacement RPVCH Design

Replacement RPVCH Comparison to Davis-Besse RPVCH

	Davis-Besse	Midland
Material of Construction		
Closure Head	SA-533, GR B Cl 1	Same
Closure Head Flange	SA-508, Cl 2	SA-508-64, Cl 2
CRDM Nozzle	Inconel SB-167	Same
CRDM Flange	SA-182, F-304	Same
Design		
Pressure	2500 psig	Same
Temperature	650 degree F	Same

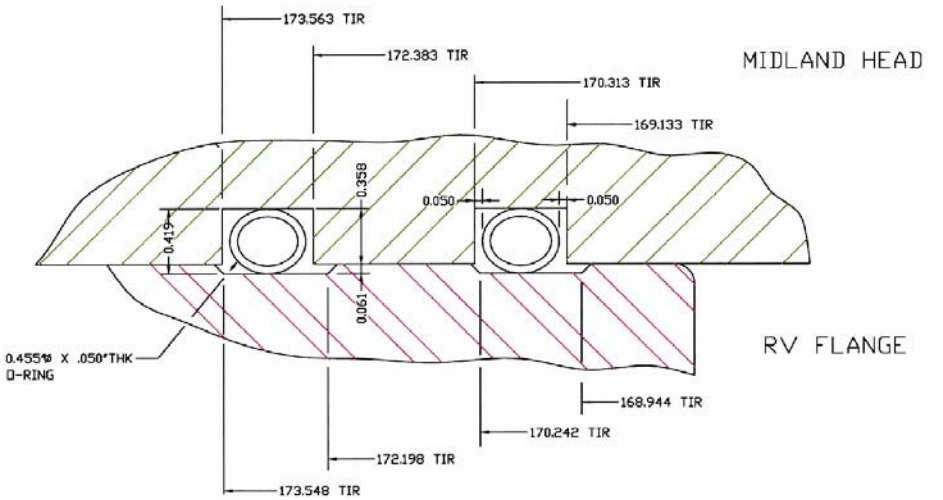
Replacement RPVCH CRD Nozzles

- Midland's Control Rod Drive (CRD) nozzles are similar to Davis-Besse
  - 68 Nozzles: Material Heat M7929
  - 1 Nozzle: Material Heat M6623
- Alignment of control rods to RPVCH nozzles is consistent with original Davis-Besse design

Replacement RPVCH

- Minor machining of 4 out of 8 vessel-to-head key-way surfaces is required
- The Midland CRDM flange indexing pin hole locations will be modified to match the proper Davis-Besse azimuth-orientation

Replacement RPVCH



- Minor differences in RPVCH O-ring design
  - O-ring grooves are slightly different requiring the use of smaller diameter O-rings (0.455 in. vs 0.500 in.)
  - New O-rings will be installed

Examinations of Replacement RPVCH

- Examinations to supplement ASME Code Data Package:
  - Visual examinations
  - Radiography (RT) of flange-to-dome weld
    - Lifting attachments prevented full coverage
  - RT of nozzle-to-flange welds
  - PT examination of the CRDM nozzle J-groove welds

Examinations of Replacement RPVCH

- Preservice Inspections
  - Magnetic Particle (MT) examination of flange-to-dome weld
  - Ultrasonic (UT) examination of flange-to-dome weld
  - Liquid Penetrant (PT) examination of peripheral CRDM nozzle-to-flange welds

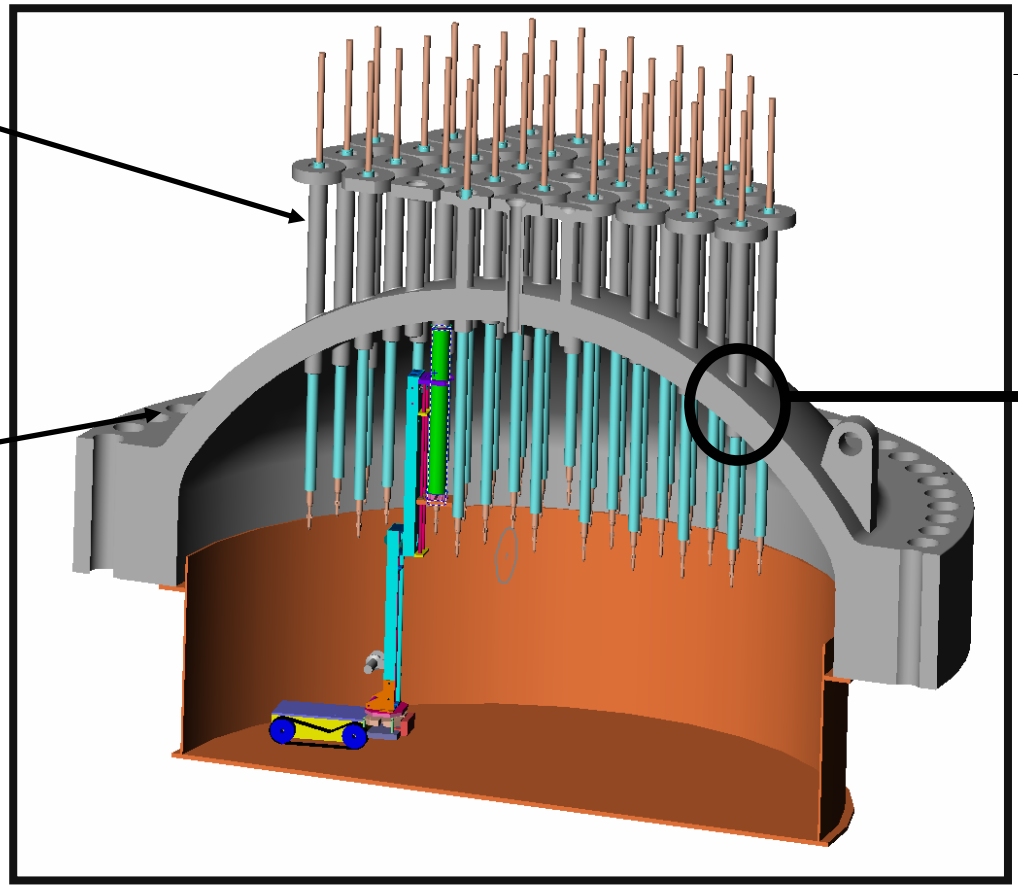
Examinations of Replacement RPVCH

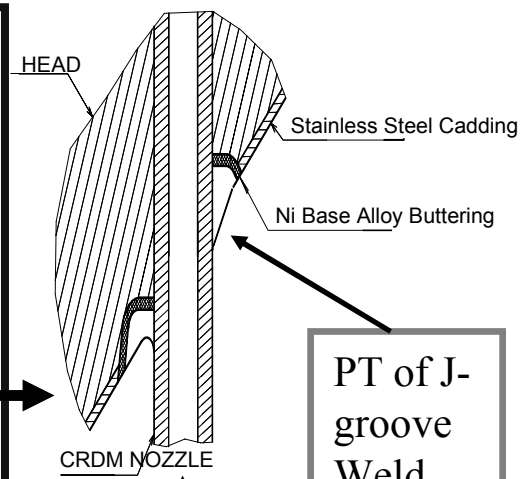
- Additional Non-Destructive Examinations
  - Chemical smears
  - Baseline UT of CRD nozzles
  - Eddy Current Testing (ET) of CRD nozzles

Examinations of Replacement RPVCH

RT and PT of CRD Nozzle to Flange Weld

RT, UT, and MT of Flange to Dome Weld





PT of J-groove Weld

UT and ET of CRD Nozzle

Installation of the Replacement RPVCH at Davis-Besse

- Davis-Besse Containment Building will require temporary access opening
- Original RPVCH will be moved outside Containment Building for storage and/or disposal
- Davis-Besse Service Structure will be used
- Inspection ports will be installed on replacement support skirt

Installation of the Replacement RPVCH at Davis-Besse (continued)

- Original Davis-Besse control rod location and core configuration will be used
  - Existing CRD Mechanisms will be used
  - CRD Mechanisms nozzle flange split nut ring modification will be performed
  - Upgraded gasket design will be incorporated

RPVCH Planned Post-Installation Activities

- Fill and vent RCS
  - Perform visual inspection for leakage
- Bring plant to normal operating temperature and pressure using Reactor Coolant Pump heat
  - Perform visual inspection for leakage
- Perform control rod drop time testing per Technical Specifications

NRC Approvals Identified to Date

- 10 CFR 50.55a approvals
  - Existing request RR-A2 for flange-to-dome weld volumetric examination
  - Existing request RR-E4 for VT-2 visual examination of containment building access opening following restoration
- No Technical Specification changes

Concluding Remarks