



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**

REGION III
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October 21, 2009

Mr. Barry Allen
Site Vice President
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Davis-Besse Nuclear Power Station
5501 North State Route 2, Mail Stop A-DB-3080
Oak Harbor, OH 43449-9760

**SUBJECT: DAVIS-BESSE NUCLEAR POWER STATION INTEGRATED
INSPECTION REPORT 05000346/2009-004**

Dear Mr. Allen:

On September 30, 2009, the U.S. Nuclear Regulatory Commission (NRC) completed an integrated inspection at your Davis-Besse Nuclear Power Station. The enclosed inspection report documents the inspection findings which were discussed on October 6, 2009, with you and other members of your staff.

The inspection examined activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations and with the conditions of your license. The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel.

This report documents one self-revealed finding of very low safety significance (Green). No violation of NRC regulatory requirements occurred. Additionally, licensee-identified violations which were determined to be of very low safety significance are listed in this report. However, because of the very low safety significance and because they are entered into your corrective action program, the NRC is treating these findings as non-cited violations (NCVs) consistent with Section VI.A.1 of the NRC Enforcement Policy. If you contest any NCV, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington DC 20555-0001; with copies to the Regional Administrator, Region III; the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, DC 20555-0001; and the NRC Resident Inspector at Davis-Besse. In addition, if you disagree with the characterization of any finding in this report, you should provide a response within 30 days of the date of this inspection report, with the basis for your disagreement, to the Regional Administrator, Region III, and the NRC Resident Inspector at Davis-Besse. The information you provide will be considered in accordance with Inspection Manual Chapter 0305.

B. Allen

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In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be made available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS), accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Sincerely,

/RA/

Jamnes L. Cameron, Chief
Branch 6
Division of Reactor Projects

Docket No. 50-346
License No. NPF-3

Enclosure: Inspection Report 05000346/2009-004
w/Attachment: Supplemental Information

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U. S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket No: 50-346
License No: NPF-3

Report No: 05000346/2009-004

Licensee: FirstEnergy Nuclear Operating Company (FENOC)

Facility: Davis-Besse Nuclear Power Station

Location: Oak Harbor, OH

Dates: July 1, 2009, through September 30, 2009

Inspectors: J. Rutkowski, Senior Resident Inspector
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Approved by: Jamnes L. Cameron, Chief
Branch 6
Division of Reactor Projects

Enclosure

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SUMMARY OF FINDINGS

IR 05000346/2009-004; 7/1/09 – 9/30/09; Davis-Besse Nuclear Power Station; Identification and Resolution of Problems.

This report covers a 3-month period of inspection by resident inspectors and announced baseline inspections by regional inspectors. One Green finding was identified by the inspectors. The significance of most findings is indicated by their color (Green, White, Yellow, Red) using Inspection Manual Chapter (IMC) 0609, "Significance Determination Process" (SDP). Findings for which the SDP does not apply may be Green or be assigned a severity level after NRC management review. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 4, dated December 2006.

A. NRC-Identified and Self-Revealed Findings

Cornerstone: Initiating Events

- Green: A Green self-revealed finding was identified for the failure to implement a maintenance strategy to replace a capacitive coupled potential device (CCPD) in a timely manner. The CCPD had been installed beyond the 25-year life expectancy and failed catastrophically on June 25, 2009, causing the loss of one offsite AC circuit and some burning debris. The licensee included this finding in their corrective action program as CR 09-61025. Corrective actions were initiated to trend secondary voltages on the remaining CCPDs that have been installed beyond 25 years. The six remaining CCPDs have been scheduled for replacement in November, 2009.

This finding affected the initiating events cornerstone and could be reasonably viewed as a precursor to a significant event because a CCPD failure can subject the plant to a unit trip, loss of an offsite power source or startup transformer. This finding is greater than minor because it had an actual impact of causing one offsite AC source to become inoperable. The finding was not a LOCA initiator and did not contribute to both the likelihood of a reactor trip and the likelihood that mitigation equipment will not be available. The burning debris in the switchyard was extinguished within a short time period, and there was not an impact on operating plant equipment because one offsite power source and the emergency diesel generators remained available throughout the event. Therefore, the finding was determined to be of very low safety significance (Green). No violation of NRC requirements occurred. This finding has a cross-cutting aspect in the area of problem identification and resolution, corrective action program (P.1.d). (Section 4OA2)

B. Licensee-Identified Violations

Violations of very low safety significance that were identified by the licensee have been reviewed by the inspectors. Corrective actions planned or taken by the licensee have been entered into the licensee's corrective action program. These violations and corrective actions are listed in Section 4OA7 of this report.

REPORT DETAILS

Summary of Plant Status

At the beginning and at the end of the inspection period, the plant was operating at 100 percent power.

On July 24, 2009, an automatic runback to 93 percent power occurred during an attempt to swap main generator stator water cooling pumps. A check valve failure caused reduced stator water cooling flow which initiated the turbine runback. Operators safely restored stator water cooling flow and returned reactor power to 100 percent on July 24, 2009.

On September 20, 2009, the licensee reduced power to approximately 90 percent to perform quarterly main turbine valve testing along with condensate pump breaker maintenance and control rod drive exercising. Operators returned reactor power to 100 percent on September 20, 2009, after completion of the testing.

1. REACTOR SAFETY

Cornerstone: Initiating Events, Mitigating Systems, and Barrier Integrity

1R01 Adverse Weather Protection – External Flooding (71111.01)

a. Inspection Scope

The inspectors evaluated the design, material condition, and procedures for coping with the design basis probable maximum flood. The evaluation included a review to check for deviations from the descriptions provided in the Updated Final Safety Analysis Report (UFSAR) for features intended to mitigate the potential for flooding from external factors. As part of this evaluation, the inspectors checked for obstructions that could prevent draining, checked that the roofs did not contain obvious loose items that could clog drains in the event of heavy precipitation, and determined that barriers required to mitigate the flood were in place and operable. Additionally, the inspectors performed a walkdown of the protected area to identify any modification to the site which would inhibit site drainage during a probable maximum precipitation event or allow water ingress past a barrier. The inspectors also walked down the above-ground portion of underground bunkers/manholes subject to flooding that contained multiple train or multiple function risk-significant cables. The inspectors also reviewed the abnormal operating procedure (AOP) for mitigating the design basis flood to ensure it could be implemented as written.

This inspection constituted one external flooding sample as defined in IP 71111.01-05.

b. Findings

No findings of significance were identified.

1R04 Equipment Alignment – Quarterly Partial System Walkdowns (71111.04)

a. Inspection Scope

The inspectors performed partial system walkdowns of the following risk-significant systems:

- high pressure injection train 1 after realignment of the system upon completion of quarterly surveillance testing on August 7, 2009;
- decay heat train 1 during inoperability of decay heat train 2 for planned maintenance on a room cooler on August 13, 2009;
- electrical power system alignment during the inoperability and unavailability of startup transformer 1 during fire suppression deluge testing on August 31, 2009; and
- high pressure injection train 1 during the inoperability of high pressure injection train 2 for planned maintenance on September 15, 2009.

The inspectors selected these systems based on their risk significance relative to the Reactor Safety Cornerstones at the time they were inspected. The inspectors attempted to identify any discrepancies that could impact the function of the system, and therefore, potentially increase risk. The inspectors reviewed applicable operating procedures, system diagrams, UFSAR, Technical Specification (TS) requirements, outstanding work orders (WOs), condition reports (CRs), and the impact of ongoing work activities on redundant trains of equipment in order to identify conditions that could have rendered the systems incapable of performing their intended functions. The inspectors also walked down accessible portions of the systems to verify system components and support equipment were aligned correctly and operable. The inspectors examined the material condition of the components and observed operating parameters of equipment to verify that there were no obvious deficiencies. The inspectors also verified that the licensee had properly identified and resolved equipment alignment problems that could cause initiating events or impact the capability of mitigating systems or barriers and entered them into the corrective action program (CAP) with the appropriate significance characterization. Documents reviewed are listed in the Attachment.

These activities constituted four partial system walkdown samples as defined in IP 71111.04-05.

b. Findings

No findings of significance were identified.

1R05 Fire Protection – Routine Resident Inspector Tours (71111.05Q)

a. Inspection Scope

The inspectors conducted fire protection walkdowns which were focused on availability, accessibility, and the condition of firefighting equipment in the following risk-significant plant areas:

- mechanical penetration room 3 (Room 303, Fire Area AB);
- service water pump room (Room 52, Fire Area BF);

- ECCS pump room 1 (Room 105, Fire Area AB);
- clean waste receiver tank room 1 (Room 124, Fire Area A);
- mechanical penetration room 2 (Room 236, Fire Area A); and
- water treatment building and turbine building chemical storage lockers for the Chemistry Department (Fire Areas BH and II).

The inspectors reviewed areas to assess if the licensee had implemented a fire protection program that adequately controlled combustibles and ignition sources within the plant, effectively maintained fire detection and suppression capability, maintained passive fire protection features in good material condition, and implemented adequate compensatory measures for out-of-service, degraded or inoperable fire protection equipment, systems, or features in accordance with the licensee's fire plan. The inspectors selected fire areas based on their overall contribution to internal fire risk as documented in the plant's Individual Plant Examination of External Events (IPEEE) with later additional insights, their potential to impact equipment which could initiate or mitigate a plant transient, or their impact on the plant's ability to respond to a security event. Using the documents listed in the Attachment, the inspectors verified that fire hoses and extinguishers were in their designated locations and available for immediate use; that fire detectors and sprinklers were unobstructed; that transient material loading was within the analyzed limits; and fire doors, dampers, and penetration seals appeared to be in satisfactory condition. Documents reviewed are listed in the Attachment to this report.

These activities constituted six quarterly fire protection inspection samples as defined in IP 71111.05-05.

b. Findings

No findings of significance were identified.

1R06 Flooding (71111.06)

.1 Internal Flooding

a. Inspection Scope

The inspectors reviewed selected risk important plant design features and licensee procedures intended to protect the plant and its safety-related equipment from internal flooding events. The inspectors reviewed flood analyses and design documents, including the UFSAR, engineering calculations, and abnormal operating procedures to identify licensee commitments. The specific documents reviewed are listed in the Attachment to this report. In addition, the inspectors reviewed licensee drawings to identify areas and equipment that may be affected by internal flooding caused by the failure or misalignment of nearby sources of water, such as the fire suppression or the circulating water systems. The inspectors also reviewed the licensee's corrective action documents with respect to past flood-related items identified in the corrective action program to verify the adequacy of the corrective actions. The inspectors performed a walkdown of the following plant areas to assess the adequacy of watertight doors and verify drains and sumps were clear of debris and were operable, and that the licensee complied with its commitments:

- service water tunnel and valve rooms; and
- ECCS pump room 2.

The inspections constituted two internal flooding samples as defined in IP 71111.06-05.

b. Findings

No findings of significance were identified.

.2 Underground Vaults

a. Inspection Scope

The inspectors selected manhole 3001 which is potentially subject to flooding and contained cables whose failure could disable risk-significant equipment. The inspectors determined that the cables were not submerged, that splices were intact, and that appropriate cable support structures were in place. The sump pump for this manhole was operable and level switches were set appropriately to ensure that the cables would not be submerged. The inspectors also reviewed the licensee's corrective action documents with respect to past submerged cable issues identified in the corrective action program to verify the adequacy of the corrective actions.

This inspection constituted a partial completion of an underground vaults sample as defined in IP 71111.06-05. The remaining requirements of the sample will be completed during the fourth quarter of 2009.

b. Findings

No findings of significance were identified.

1R11 Licensed Operator Requalification Program (71111.11)

.1 Resident Inspector Quarterly Review (71111.11Q)

a. Inspection Scope

On August 12, 2009, the inspectors observed a crew of licensed operators in the plant's simulator during licensed operator training sessions to verify that operator performance was adequate, evaluators were identifying and documenting crew performance problems, and training was being conducted in accordance with licensee procedures. The inspectors evaluated the following areas:

- licensed operator performance;
- crew's clarity and formality of communications;
- ability to take timely actions in the conservative direction;
- prioritization, interpretation, and verification of annunciator alarms;
- correct use and implementation of abnormal and emergency procedures;
- control board manipulations;
- oversight and direction from supervisors; and
- ability to identify and implement appropriate TS actions and Emergency Plan actions and notifications.

The crew's performance in these areas was compared to pre-established operator action expectations and successful critical task completion requirements. Documents reviewed are listed in the Attachment to this report.

This inspection constituted one quarterly licensed operator requalification program sample as defined in IP 71111.11.

b. Findings

No findings of significance were identified.

1R12 Maintenance Effectiveness – Routine Quarterly Evaluations (71111.12Q)

a. Inspection Scope

The inspectors evaluated degraded performance issues involving the following risk-significant systems:

- feedwater heaters, vents and drains; and
- reactor coolant system.

The inspectors reviewed events such as where ineffective equipment maintenance had resulted in valid or invalid system transients and independently verified the licensee's actions to address system performance or condition problems in terms of the following:

- implementing appropriate work practices;
- identifying and addressing common cause failures;
- scoping of systems in accordance with 10 CFR 50.65(b) of the maintenance rule;
- characterizing system reliability issues for performance;
- charging unavailability for performance;
- trending key parameters for condition monitoring;
- ensuring 10 CFR 50.65(a)(1) or (a)(2) classification or re-classification; and
- verifying appropriate performance criteria for structures, systems, and components (SSCs)/functions classified as (a)(2) or appropriate and adequate goals and corrective actions for systems classified as (a)(1).

The inspectors assessed performance issues with respect to the reliability, availability, and condition monitoring of the system. In addition, the inspectors verified maintenance effectiveness issues were entered into the CAP with the appropriate significance characterization. Documents reviewed are listed in the Attachment to this report.

This inspection constituted two quarterly maintenance effectiveness samples as defined in IP 71111.12-05.

b. Findings

No findings of significance were identified.

1R13 Maintenance Risk Assessments and Emergent Work Control (71111.13)

a. Inspection Scope

The inspectors reviewed the licensee's evaluation and management of plant risk for the maintenance and emergent work activities affecting risk-significant and safety-related equipment listed below to verify that the appropriate risk assessments were performed prior to removing equipment for work:

- operational decision making after discovery of a nitrogen leak in containment, and emergent work after emergency ventilation system train 1 was declared inoperable after failure of the control damper during the week of July 6, 2009;
- scheduled activities for the week starting August 3, 2009, including an orange risk activity for the replacement of a leaking nitrogen relief valve with an oxygen-deficient atmosphere inside containment;
- scheduled activities for the week starting on August 23, 2009, and the emergent activities associated with degraded station air compressors and an increasing differential pressure on a non-isolable filter on the main generator's stator water cooling system; and
- scheduled activities from September 2, 2009, through September 12, 2009, which included emergent work and troubleshooting of the main generator stator water cooling system.

These activities were selected based on their potential risk significance relative to the Reactor Safety Cornerstones. As applicable for each activity, the inspectors verified that risk assessments were performed as required by 10 CFR 50.65(a)(4) and were accurate and complete. When emergent work was performed, the inspectors verified that the plant risk was promptly reassessed and managed. The inspectors reviewed the scope of maintenance work, discussed the results of the assessment with the licensee's probabilistic risk analyst or shift technical advisor, and verified plant conditions were consistent with the risk assessment. The inspectors also reviewed TS requirements and walked down portions of redundant safety systems, when applicable, to verify risk analysis assumptions were valid and applicable requirements were met.

These maintenance risk assessments and emergent work control activities constituted four samples as defined in IP 71111.13-05.

b. Findings

No findings of significance were identified.

1R15 Operability Evaluations (71111.15)

a. Inspection Scope

The inspectors reviewed the following issues:

- CR 09-61572 which documented degraded flow through ECCS room coolers 1 and 2;

- CR 09-09-63458 which documented an accumulation of water in auxiliary feedwater pump 2 casing due to a closed casing drain valve which is normally open; and
- CR 09-63655 which documented internal-housing electrical connections in motor operated valve CV5090 that were not consistent with the present environmental qualification package requirements.

The inspectors selected these potential operability issues based on the risk significance of the associated components and systems. The inspectors evaluated the technical adequacy of the evaluations to ensure that TS operability was properly justified and the subject component or system remained available such that no unrecognized increase in risk occurred. The inspectors compared the operability and design criteria in the appropriate sections of the TS and Updated Safety Analysis Report (USAR) to the licensee's evaluations, to determine whether the components or systems were operable. Where compensatory measures were required to maintain operability, the inspectors determined whether the measures in place would function as intended and were properly controlled. The inspectors determined, where appropriate, compliance with bounding limitations associated with the evaluations. Additionally, the inspectors also reviewed a sampling of corrective action documents to verify that the licensee was identifying and correcting any deficiencies associated with operability evaluations. Documents reviewed are listed in the Attachment to this report.

This operability inspection constituted three samples as defined in IP 71111.15-05

b. Findings

No findings of significance were identified.

1R18 Plant Modifications - Temporary Plant Modifications (71111.18)

a. Inspection Scope

The inspectors reviewed the following temporary modifications:

- a non-permanent use of a low pressure fan to provide low-volume makeup air to the containment under a revision to an operating procedure for radioactive gaseous batch releases; and
- ECP 09-0651, "Installation of a temporary by-pass stator water cooling system filter assembly."

The inspectors compared the temporary configuration changes and associated 10 CFR 50.59 screening and evaluation information against the design basis, the UFSAR, existing plant design change procedures, and the TS, as applicable, to verify that the modification did not affect the operability or availability of the affected systems. The inspectors also reviewed the station's decision to not classify the use of the low pressure fan as a temporary modification. The inspectors, as applicable, performed field verifications to ensure that the modification was installed as directed; the modification operated as expected; modification testing adequately demonstrated continued required system operability, availability, and reliability; and that operation of the modification did not impact the operability of any interfacing systems. Lastly, the inspectors discussed the temporary modification with operations, chemistry, maintenance, and engineering,

personnel to ensure that the individuals were aware of how extended operation with the modification in place could impact overall plant performance. Documents reviewed in the course of this inspection are listed in the Attachment to this document.

This inspection constituted two temporary modification samples as defined in IP 71111.18-05.

b. Findings

No findings of significance were identified.

1R19 Post-Maintenance Testing (71111.19)

a. Inspection Scope

The inspectors reviewed the following post-maintenance (PM) activities to verify that procedures and test activities were adequate to ensure system operability and functional capability:

- station blackout diesel generator monthly test on July 16, 2009, after output breaker preventive maintenance and air start hose replacement;
- safety features actuation channel 1 low-low pressure block relay module (BA-105) testing after annunciator driver relay replacement on August 5, 2009;
- emergency diesel generator 1 slow speed start on August 6, 2009, after disconnecting and reconnecting air line supplying air to the engage mechanisms of the air start motors;
- high pressure injection train 2 pump and valve test on September 16, 2009 after preventive maintenance on the pump, motor, discharge valves, and decay heat cross-connect valve;
- motor driven feed pump quarterly test including bearing stabilization test on September 17, 2009, after planned maintenance on coolers and replacement of the shaft driven lubricating oil pump; and
- meggering and high potential testing in September, 2009, of the newly installed cable 3PACD06A which is a four thousand volt cable to service water pump 3.

These activities were selected based upon the structure, system, or component's ability to impact risk. The inspectors evaluated these activities for the following (as applicable): the effect of testing on the plant had been adequately addressed; testing was adequate for the maintenance performed; acceptance criteria were clear and demonstrated operational readiness; test instrumentation was appropriate; tests were performed as written in accordance with properly reviewed and approved procedures; equipment was returned to its operational status following testing (temporary modifications or jumpers required for test performance were properly removed after test completion), and test documentation was properly evaluated. The inspectors evaluated the activities against TS, the UFSAR, 10 CFR Part 50 requirements, licensee procedures, and various NRC generic communications to ensure that the test results adequately ensured that the equipment met the licensing basis and design requirements. In addition, the inspectors reviewed corrective action documents associated with PM tests to determine whether the licensee was identifying problems and entering them in the CAP and that the problems were being corrected commensurate with their importance to safety. Documents reviewed are listed in the Attachment to this report.

This inspection constituted six post-maintenance testing samples as defined in IP 71111.19-05.

b. Findings

No findings of significance were identified.

1R22 Surveillance Testing (71111.22)

a. Inspection Scope

The inspectors reviewed the test results for the following activities to determine whether risk-significant systems and equipment were capable of performing their intended safety function and to verify testing was conducted in accordance with applicable procedural and TS requirements:

- DB-SP-3337, "Containment Spray Train 1 Quarterly Pump and Valve Test," on July 2, 2009 (IST);
- DB-SP-4150, "Auxiliary Feedwater Pump 1 Monthly Test," on July 10, 2009 (routine);
- DB-SP-3136, "Decay Heat Train 1 Pump and Valve Test," on July 31, 2009 (IST);
- DB-PF-9301, "Preventive Maintenance for Type SMB Limitorque Operators," and DB-PF-9302, "Testing Motor Operated Valves," for containment isolation valve CV5090 on August 25, 2009 (ISO Valve);
- DB-SC-3272, "Control Rod Exercising Test," on September 20, 2009 (routine); and
- DB-ME-3000, "Station Battery and Charger Weekly Surveillance," and DB-ME-3004, "Station Battery Monthly Surveillance," on September 29, 2009 (routine).

The inspectors observed in plant activities and reviewed procedures and associated records to determine the following:

- did preconditioning occur;
- were the effects of the testing adequately addressed by control room personnel or engineers prior to the commencement of the testing;
- were acceptance criteria clearly stated, demonstrated operational readiness, and consistent with the system design basis;
- plant equipment calibration was correct, accurate, and properly documented;
- as-left setpoints were within required ranges; and the calibration frequency were in accordance with TSs, the USAR, procedures, and applicable commitments;
- measuring and test equipment calibration was current;
- test equipment was used within the required range and accuracy; applicable prerequisites described in the test procedures were satisfied;
- test frequencies met TS requirements to demonstrate operability and reliability; tests were performed in accordance with the test procedures and other applicable procedures; jumpers and lifted leads were controlled and restored where used;
- test data and results were accurate, complete, within limits, and valid;
- test equipment was removed after testing;

- where applicable for inservice testing activities, testing was performed in accordance with the applicable version of Section XI, American Society of Mechanical Engineers code, and reference values were consistent with the system design basis;
- where applicable, test results not meeting acceptance criteria were addressed with an adequate operability evaluation or the system or component was declared inoperable;
- where applicable for safety-related instrument control surveillance tests, reference setting data were accurately incorporated in the test procedure;
- where applicable, actual conditions encountering high resistance electrical contacts were such that the intended safety function could still be accomplished;
- prior procedure changes had not provided an opportunity to identify problems encountered during the performance of the surveillance or calibration test;
- equipment was returned to a position or status required to support the performance of its safety functions; and
- all problems identified during the testing were appropriately documented and dispositioned in the CAP.

Documents reviewed are listed in the Attachment to this report.

This inspection constituted three routine surveillance testing samples, two inservice testing samples, and one containment isolation valve sample as defined in IP 71111.22, Sections -02 and -05.

b. Findings

Introduction: The inspectors determined that an unresolved item (URI) existed concerning the sequencing of procedures in the periodic maintenance and testing of motor operated valves.

Description: During observation of the motor operated valve scheduled activities on valve CV5090, the inspectors noted that the motor operator and the valve were manually operated and gear and limit switch compartments were visually inspected prior to periodic testing that measured motor and valve operating characteristics. The inspectors asked how this sequencing might affect measured variables during this test and how as-found motor operated valve data, where required, was collected such that preconditioning did not have to be considered. The licensee's response was not available for the inspectors' review before the end of the inspection period. Therefore, this issue is considered an unresolved item (URI 05000346/2009004-02) pending completion of the inspectors' review of the licensee's response. The licensee entered the issue in their corrective action program as CR 09-65084.

CORNERSTONE: Emergency Preparedness

1EP6 Drill Evaluation - Emergency Preparedness Drill Observation (71114.06)

a. Inspection Scope

The inspectors evaluated the conduct of routine licensee emergency drills on August 20, 2009, and September 17, 2009, to identify any weaknesses and deficiencies in classification, notification, and protective action recommendation development activities.

The inspectors observed emergency response operations in the simulator control room, technical support center, and the emergency operations facility to determine whether the event classification, notifications, and protective action recommendations were performed in accordance with procedures. The inspectors also attended the licensee drill critique in the emergency operations facility to compare any inspector-observed weakness with those identified by the licensee staff in order to evaluate the critique and to verify whether the licensee staff was properly identifying weaknesses and entering them into the corrective action program. As part of the inspection, the inspectors reviewed the drill package and other documents listed in the Attachment to this report.

The emergency preparedness drill inspections constituted two samples as defined in IP 71114.06-05.

b. Findings

No findings of significance were identified.

2. RADIATION SAFETY

Cornerstone: Occupational Radiation Safety

2OS1 Access Control to Radiologically Significant Areas (71121.01)

.1 Review of Licensee Performance Indicators for the Occupational Exposure Cornerstone

a. Inspection Scope

The inspectors reviewed the licensee's Occupational Exposure Control Cornerstone performance indicator (PI) to determine whether the conditions resulting in any PI occurrences had been evaluated and whether identified problems had been entered into the licensee's CAP for resolution.

This inspection constituted one sample as defined in IP 71121.01-5.

b. Findings

No findings of significance were identified.

.2 Plant Walkdowns and Radiation Work Permit Reviews

a. Inspection Scope

The inspectors reviewed licensee controls and surveys in the following radiologically significant work areas within radiation areas, high radiation areas, and airborne radioactivity areas in the plant to determine if radiological controls including surveys, postings, and barricades were acceptable:

- walkdown and permanent scaffolding installation;
- alloy 600 procedures; and
- under vessel inspection and walkdown.

This inspection constituted one sample as defined in IP 71121.01-5.

The inspectors reviewed the radiation work permits (RWPs) and work packages used to access these areas and other high radiation work areas. The inspectors assessed the work control instructions and control barriers specified by the licensee. Electronic dosimeter alarm set points for both integrated dose and dose rate were evaluated for conformity with survey indications and plant policy. The inspectors interviewed workers to verify that they were aware of the actions required if their electronic dosimeters noticeably malfunctioned or alarmed.

This inspection constituted one sample as defined in IP 71121.01-5.

The inspectors walked down and surveyed (using an NRC survey meter) areas to verify that the prescribed RWP, procedure, and engineering controls were in place; that licensee surveys and postings were complete and accurate; and that air samplers were properly located.

This inspection constituted one sample as defined in IP 71121.01-5.

The inspectors reviewed RWPs from the 2009 code-safety station outage for airborne radioactivity areas to verify barrier integrity and engineering controls performance (e.g. high-efficiency particulate air ventilation system operation) and to determine if there was a potential for individual worker internal exposures in excess of 50 millirem committed effective dose equivalent. There were no airborne radioactivity work areas during the inspection period.

Work areas having a history of, or the potential for, airborne transuranics were evaluated to verify that the licensee had considered the potential for transuranic isotopes and had provided appropriate worker protection.

This inspection constituted one sample as defined in IP 71121.01-5.

The inspectors assessed the adequacy of the licensee's internal dose assessment process for internal exposures in excess of 50 millirem committed effective dose equivalent. There were no internal exposures greater than 50 millirem committed effective dose equivalent.

This inspection constituted one sample as defined in IP 71121.01-5.

The inspectors also reviewed the licensee's physical and programmatic controls for highly activated and/or contaminated materials (non-fuel) stored within the spent fuel pool or other storage pools.

This inspection constituted one sample as defined in IP 71121.01-5.

b. Findings

No findings of significance were identified.

.3 Problem Identification and Resolution

a. Inspection Scope

The inspectors reviewed a sample of the licensee's self-assessments, audits, Licensee Event Reports (LERs), and Special Reports related to the access control program to verify that identified problems were entered into the CAP for resolution.

This inspection constituted one sample as defined in IP 71121.01-5.

The inspectors reviewed corrective action reports related to access controls and any high radiation area radiological incidents (issues that did not count as PI occurrences identified by the licensee in high radiation areas less than 1R/hr). Staff members were interviewed and corrective action documents were reviewed to verify that follow-up activities were being conducted in an effective and timely manner commensurate with their importance to safety and risk based on the following:

- initial problem identification, characterization, and tracking;
- disposition of operability/reportability issues;
- evaluation of safety significance/risk and priority for resolution;
- identification of repetitive problems;
- identification of contributing causes;
- identification and implementation of effective corrective actions;
- resolution of NCVs tracked in the corrective action system; and
- implementation/consideration of risk significant operational experience feedback.

This inspection constituted one sample as defined in IP 71121.01-5.

The inspectors evaluated the licensee's process for problem identification, characterization, and prioritization and verified that problems were entered into the CAP and resolved. For repetitive deficiencies and/or significant individual deficiencies in problem identification and resolution, the inspectors verified that the licensee's self-assessment activities were capable of identifying and addressing these deficiencies.

This inspection constituted one sample as defined in IP 71121.01-5.

The inspectors reviewed licensee documentation packages for all PI events occurring since the last inspection to determine if any of these PI events involved dose rates in excess of 25 R/hr at 30 centimeters or in excess of 500 R/hr at 1 meter. Barriers were evaluated for failure and to determine if there were any barriers left to prevent personnel access. Unintended exposures exceeding 100 millirem total effective dose equivalent (or 5 rem shallow dose equivalent or 1.5 rem lens dose equivalent) were evaluated to determine if there were any regulatory overexposures or if there was a substantial potential for an overexposure.

This inspection constituted one sample as defined in IP 71121.01-5.

b. Findings

No findings of significance were identified.

.4 Job-In-Progress Reviews

a. Inspection Scope

The inspectors observed the following job that was being performed in radiation areas, for observation of work activities that presented the greatest radiological risk to workers - specifically activities during HPI 2 Maintenance Outage. The inspectors reviewed radiological job requirements for these activities, including RWP requirements and work procedure requirements and attended As-Low-As-Is-Reasonably-Achievable (ALARA) pre-job briefings.

This inspection constituted one sample as defined in IP 71121.01-5.

Job performance was observed with respect to the radiological control requirements to assess whether radiological conditions in the work area were adequately communicated to workers through pre-job briefings and postings. The inspectors evaluated the adequacy of radiological controls, including required radiation, contamination, and airborne surveys for system breaches; radiation protection job coverage, including any applicable audio and visual surveillance for remote job coverage; and contamination controls.

This inspection constituted one sample as defined in Inspection Procedure 71121.01-5.

The inspectors reviewed radiological work in high radiation work areas having significant dose rate gradients to evaluate whether the licensee adequately monitored exposure to personnel and to assess the adequacy of licensee controls. These work areas involved areas where the dose rate gradients were severe, thereby increasing the necessity of providing multiple dosimeters or enhanced job controls.

This inspection constituted one sample as defined in Inspection Procedure 71121.01-5.

b. Findings

No findings of significance were identified.

.5 High Risk Significant, High Dose Rate, High Radiation Area and Very High Radiation Area Controls

a. Inspection Scope

The inspectors held discussions with the Radiation Protection Manager concerning high dose rate, high radiation area and very high radiation area controls and procedures, including procedural changes that had occurred since the last inspection, in order to assess whether any procedure modifications substantially reduced the effectiveness and level of worker protection.

This inspection constituted one sample as defined in IP 71121.01-5.

The inspectors discussed with radiation protection supervisors the controls that were in place for special areas of the plant that had the potential to become very high radiation areas during certain plant operations. The inspectors assessed if plant operations

required communication beforehand with the radiation protection group, so as to allow corresponding timely actions to properly post and control the radiation hazards.

This inspection constituted one sample as defined in IP 71121.01-5.

The inspectors conducted plant walkdowns to assess the posting and locking of entrances to high dose rate high radiation areas and very high radiation areas.

This inspection constituted one sample as defined in IP 71121.01-5.

b. Findings

No findings of significance were identified

.6 Radiation Worker Performance

a. Inspection Scope

During job performance observations, the inspectors evaluated radiation worker performance with respect to stated radiation safety work requirements. The inspectors evaluated whether workers were aware of any significant radiological conditions in their workplace, of the RWP controls and limits in place, and of the level of radiological hazards present. The inspectors also observed worker performance to determine if workers accounted for these radiological hazards.

This inspection constituted one sample as defined in IP 71121.01-5.

The inspectors reviewed radiological problem reports for which the cause of the event was due to radiation worker errors to determine if there was an observable pattern traceable to a similar cause and to determine if this perspective matched the corrective action approach taken by the licensee to resolve the reported problems. Problems or issues with planned or completed corrective actions were discussed with the Radiation Protection Manager.

This inspection constituted one sample as defined in IP 71121.01-5.

b. Findings

No findings of significance were identified.

.7 Radiation Protection Technician Proficiency

a. Inspection Scope

During job performance observations, the inspectors evaluated radiation protection technician performance with respect to radiation safety work requirements. The inspectors evaluated whether technicians were aware of the radiological conditions in their workplace, the RWP controls and limits in place, and if their performance was consistent with their training and qualifications with respect to the radiological hazards and work activities.

This inspection constituted one sample as defined in Inspection Procedure 71121.01-5.

The inspectors reviewed radiological problem reports for which the cause of the event was radiation protection technician error to determine if there was an observable pattern traceable to a similar cause and to determine if this perspective matched the corrective action approach taken by the licensee to resolve the reported problems.

This inspection constituted one sample as defined in IP 71121.01-5.

b. Findings

No findings of significance were identified.

4OA1 Performance Indicator Verification (71151)

.1 Safety System Functional Failures

a. Inspection Scope

The inspectors sampled licensee submittals for the Safety System Functional Failures performance indicator for the period from the third quarter of 2008 through the second quarter of 2009. To determine the accuracy of the PI data reported during those periods, PI definitions and guidance contained in the Nuclear Energy Institute (NEI) Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 5, and NUREG-1022, "Event Reporting Guidelines 10 CFR 50.72 and 50.73" definitions and guidance, were used. The inspectors reviewed the licensee's operator narrative logs, operability assessments, maintenance rule records, maintenance WOs, issue reports, event reports and NRC Integrated Inspection Reports for the period of the third quarter of 2008 through the second quarter of 2009 to validate the accuracy of the submittals. The inspectors also reviewed the licensee's issue report database to determine if any problems had been identified with the PI data collected or transmitted for this indicator and none were identified. Documents reviewed are listed in the Attachment to this report.

This inspection constituted one safety system functional failures sample as defined in IP 71151-05.

b. Findings

No findings of significance were identified.

.2 Mitigating Systems Performance Index - Emergency AC Power System

a. Inspection Scope

The inspectors sampled licensee submittals for the Mitigating Systems Performance Index (MSPI) - Emergency AC Power System performance indicator for the period from the third quarter of 2008 through the second quarter of 2009. To determine the accuracy of the PI data reported during those periods, PI definitions and guidance contained in the NEI Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 5, were used. The inspectors reviewed the licensee's operator narrative logs,

MSPI derivation reports, issue reports, event reports and NRC Integrated Inspection Reports for the period of the third quarter of 2008 through the second quarter of 2009 to validate the accuracy of the submittals. The inspectors reviewed the MSPI component risk coefficient to determine if it had changed by more than 25 percent in value since the previous inspection, and if so, that the change was in accordance with applicable NEI guidance. The inspectors also reviewed the licensee's issue report database to determine if any problems had been identified with the PI data collected or transmitted for this indicator and none were identified. Documents reviewed are listed in the Attachment to this report.

This inspection constituted one MSPI emergency AC power system sample as defined in IP 71151-05.

b. Findings

No findings of significance were identified.

.3 Mitigating Systems Performance Index - High Pressure Injection Systems

a. Inspection Scope

The inspectors sampled licensee submittals for the Mitigating Systems Performance Index - High Pressure Injection Systems performance indicator for the period from the third quarter of 2008 through the second quarter of 2009. To determine the accuracy of the PI data reported during those periods, PI definitions and guidance contained in the NEI Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 5, were used. The inspectors reviewed the licensee's operator narrative logs, issue reports, MSPI derivation reports, event reports and NRC Integrated Inspection Reports for the period of the third quarter of 2008 through the second quarter of 2009 to validate the accuracy of the submittals. The inspectors reviewed the MSPI component risk coefficient to determine if it had changed by more than 25 percent in value since the previous inspection, and if so, that the change was in accordance with applicable NEI guidance. The inspectors also reviewed the licensee's issue report database to determine if any problems had been identified with the PI data collected or transmitted for this indicator and none were identified. Documents reviewed are listed in the Attachment to this report.

This inspection constituted one MSPI high pressure injection system sample as defined in IP 71151-05.

b. Findings

No findings of significance were identified.

.4 Reactor Coolant System Specific Activity

a. Inspection Scope

The inspectors sampled licensee submittals for the RCS Specific Activity performance indicator for the period from the first quarter 2008 through the second quarter 2009. To determine the accuracy of the PI data reported during those periods, PI definitions and

guidance contained in the NEI Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 5, was used. The inspectors reviewed the licensee's RCS chemistry samples, TS requirements, issue reports, event reports and NRC Integrated Inspection Reports for the period of the first quarter 2008 through the second quarter 2009 to validate the accuracy of the submittals. The inspectors also reviewed the licensee's issue report database to determine if any problems had been identified with the PI data collected or transmitted for this indicator and none were identified. In addition to record reviews, the inspectors observed a chemistry technician obtain and analyze a RCS sample. Documents reviewed are listed in the Attachment to this report.

This inspection constituted one reactor coolant system specific activity sample as defined in IP 71151-05.

b. Findings

No findings of significance were identified.

.5 Occupational Exposure Control Effectiveness

a. Inspection Scope

The inspectors sampled licensee submittals for the Occupational Radiological Occurrences performance indicator for the period from the first quarter 2008 through second quarter 2009. To determine the accuracy of the PI data reported during those periods, PI definitions and guidance contained in the NEI Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 5, were used. The inspectors reviewed the licensee's assessment of the PI for occupational radiation safety to determine if indicator related data was adequately assessed and reported. To assess the adequacy of the licensee's PI data collection and analyses, the inspectors discussed with radiation protection staff, the scope and breadth of its data review, and the results of those reviews. The inspectors independently reviewed electronic dosimetry dose rate and accumulated dose alarm and dose reports and the dose assignments for any intakes that occurred during the time period reviewed to determine if there were potentially unrecognized occurrences. The inspectors also conducted walkdowns of locked high radiation area (LHRA) entrances to determine the adequacy of the controls in place for these areas. Documents reviewed are listed in the Attachment to this report.

This inspection constituted one occupational radiological occurrences sample as defined in IP 71151-05.

b. Findings

No findings of significance were identified.

.6 Radiological Effluent Technical Specifications (RETS)/Offsite Dose Calculation Manual (ODCM) Radiological Effluent Occurrences

a. Inspection Scope

The inspectors sampled licensee submittals for the RETS/ODCM Radiological Effluent Occurrences performance indicator for the period of January 2008 through December 2008. The inspectors used PI definitions and guidance contained in the NEI Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 5 to determine the accuracy of the PI data reported during those periods. The inspectors reviewed the licensee's issue report database and selected individual reports generated since this indicator was last reviewed to identify any potential occurrences such as unmonitored, uncontrolled, or improperly calculated effluent releases that may have impacted offsite dose. The inspectors reviewed gaseous effluent summary data and the results of associated offsite dose calculations for selected dates between January 2008 and December 2008 to determine if indicator results were accurately reported. The inspectors also reviewed the licensee's methods for quantifying gaseous and liquid effluents and determining effluent dose. Documents reviewed are listed in the Attachment to this report.

This inspection constituted one RETS/ODCM Radiological Effluent Occurrences sample as defined in IP 71151-05.

b. Findings

No findings of significance were identified.

4OA2 Identification and Resolution of Problems (71152)

Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity, Emergency Preparedness, Public Radiation Safety, Occupational Radiation Safety, and Physical Protection

.1 Routine Review of Items Entered into the Corrective Action Program

a. Inspection Scope

As part of the various baseline inspection procedures discussed in previous sections of this report, the inspectors routinely reviewed issues during baseline inspection activities and plant status reviews to verify that they were being entered into the licensee's CAP at an appropriate threshold, that adequate attention was being given to timely corrective actions, and that adverse trends were identified and addressed. Attributes reviewed included: the complete and accurate identification of the problem; that timeliness was commensurate with the safety significance; that evaluation and disposition of performance issues, generic implications, common causes, contributing factors, root causes, extent-of-condition reviews, and previous occurrences reviews were proper and adequate; and that the classification, prioritization, focus, and timeliness of corrective actions were commensurate with safety and sufficient to prevent recurrence of the issue. Minor issues entered into the licensee's CAP as a result of the inspectors' observations are included in the attached List of Documents Reviewed.

These routine reviews for the identification and resolution of problems did not constitute any additional inspection samples. Instead, by procedure they were considered an integral part of the inspections performed during the quarter and documented in Section 1 of this report.

b. Findings

No findings of significance were identified.

.2 Daily Corrective Action Program Reviews

a. Inspection Scope

In order to assist with the identification of repetitive equipment failures and specific human performance issues for follow-up, the inspectors performed a daily screening of items entered into the licensee's CAP. This review was accomplished through inspection of the station's daily condition report packages.

These daily reviews were performed by procedure as part of the inspectors' daily plant status monitoring activities and, as such, did not constitute any separate inspection samples.

b. Findings

No findings of significance were identified.

.3 Selected Issue Follow-Up Inspection: Loss of the Switchyard J Bus Due to a Faulted Coupling Capacitor Potential Device

a. Inspection Scope

During a review of items entered in the licensee's CAP, the inspectors recognized a corrective action item (CR 09-61025) documenting the licensee's root cause evaluation of an event on June 25, 2009, that caused the loss of the switchyard J Bus. The event was caused by a faulted coupling capacitor potential device which required entry into a 72-hour limiting condition. The inspectors reviewed the cause evaluation for thoroughness and the developed corrective actions for appropriateness.

This review constituted one in-depth problem identification and resolution sample as defined in IP 71152-05.

b. Findings

Introduction: A self-revealed finding was identified for the failure to implement a maintenance strategy to replace a CCPD in a timely manner. The CCPD had been installed beyond the 25-year life expectancy and failed catastrophically on June 25, 2009.

Description: At 12:49 a.m. on June 25, 2009, the 345 KV J Bus was de-energized upon a catastrophic failure of the phase B CCPD. The event required the licensee to declare one offsite AC source inoperable and enter TS LCO 3.8.1(a) requiring restoration of one

offsite circuit within 72 hours. During the event, debris fires were reported in the switchyard. The licensee's fire brigade was able to extinguish the fires within 33 minutes. As a conservative measure, the assistance of Carroll Township was requested, but was not needed to put out any fires. A temporary modification was issued to remove the CCPDs on all three phases of the J Bus until a bus outage could be scheduled to replace the potential devices. At 11:05 p.m. on June 26, the licensee safely restored the J Bus to an energized and operable condition, which was required to meet TS 3.8.1 and exit the 72-hour shutdown requirement.

Industry operating experience has shown that CCPDs tend to fail after 20 to 25 years of life. These devices have a potential to fail catastrophically if installed beyond the recommended life. The licensee was aware of the age-related failure potential after performing a review of operating experience in 2004. The philosophy at the time was to run the CCPDs to failure, as they were not considered critical components.

In response to industry recommendations in 2006, CR 06-00890 was generated, which created a plan to replace older CCPDs. Replacement was in accordance with the switchyard maintenance strategy template, NORM-ER-3105, which now classified the CCPDs as critical components. However, no preventive maintenance (PM) actions to generate CCPD replacement activities were ever taken.

Two non-catastrophic failures of CCPDs occurred at Davis-Besse in December 2007, and January 2008. The licensee identified that these components were installed beyond the 25-year life expectancy. A walkdown of the switchyard revealed eight CCPDs that were beyond 25 years and needed replacement. Shortly after the two failures at Davis-Besse, CR 08-36370 identified that the switchyard maintenance strategy template did not match the First Energy Substation Manual, which recommended running the CCPDs to failure. A PM action to replace the older CCPDs was eventually approved on December 10, 2008. However, before the PM could be implemented, the B phase CCPD on the 345KV J Bus catastrophically failed on June 25, 2009.

CR 09-61025 documented the equipment failure. A root cause evaluation was assigned to determine the cause of the failure, to identify equipment, organizational and programmatic factors involved in the failure and to develop preventive actions to prevent recurrence. The evaluation revealed that the CCPD failed due to age-related degradation. The CCPD had been installed in the switchyard for over 30 years.

Analysis: The inspectors determined that the failure to replace the CCPD in a timely manner in accordance with industry standards was a performance deficiency. The finding affected the initiating events cornerstone and could be reasonably viewed as a precursor to a significant event because a CCPD failure can subject the plant to a unit trip, loss of an offsite power source, or loss of a startup transformer. This finding is greater than minor because it had an actual impact, i.e., it caused one offsite AC power source to become inoperable. Therefore, the finding was evaluated by IMC 0609, "Significance Determination Process," Appendix A, using Attachment 0609.04, "Phase 1 - Initial Screening and Characterization of Findings," Table 4a for the Initiating Events cornerstone. The finding was determined to be of very low safety significance (Green) because it was not a loss of coolant accident (LOCA) initiator and did not contribute to both the likelihood of a reactor trip and the likelihood that mitigation equipment will not be available. The fires in the switchyard were extinguished within a short time period and there was not an impact on operating plant equipment because one offsite power

source, the auxiliary transformer supplying plant electrical power, and the emergency diesel generators remained available throughout the event.

This finding has a cross-cutting aspect in the area of Problem Identification and Resolution, Corrective Action Program. The licensee did not take corrective actions in a timely manner when responding to an issue that impacted nuclear safety. Specifically, the response to a known and repetitive problem with older CCPDs was untimely. A catastrophic failure of a CCPD occurred before preventive maintenance (PM) actions were accomplished. (P.1.d)

Enforcement: No violation of NRC regulatory requirements occurred. The licensee included this finding in their corrective action program as CR 09-61025. Corrective actions were initiated to trend secondary voltages on the remaining CCPDs that had been installed beyond 25 years. The six remaining CCPDs are also scheduled for replacement in November, 2009. (FIN 5000346/2009004-01)

4OA5 Other Activities

.1 Licensee Activities and Meetings

The inspectors observed select portions of licensee activities and meetings and met with licensee personnel to discuss various topics. The activities that were sampled included:

- Morning oncoming shift meetings and Management Alignment and Ownership Meetings;
- Corporate Nuclear Review Board plant status presentation on August 12, 2009;
- Corporate Nuclear Review Board debriefs on August 13, 2009;
- Monthly performance review meeting on August 22, 2009;
- Third Quarter Safety Culture Monitoring Review Meeting on September 1, 2009; and
- Davis-Besse Site All Hands Meeting on September 28, 2009.

.2 Concerns With Analysis Supporting The Modification Of Gaskets Used In The Fuel Transfer Tube Blind Flanges

Introduction: The inspectors identified an unresolved item (URI) regarding the as-found testing requirements associated with the gaskets used on the Fuel Transfer Tube Blind Flanges. Specifically, the requirement to conduct as-found testing was removed from the TS; however, shortly after the TS modification was implemented, the licensee modified the fitting which called into question the basis for the NRC granting the TS change.

Description: The inspectors reviewed license bases and amendment documents to verify that the fuel transfer tube blind flange gaskets were as described in TS and UFSAR, as part of the review of CR 08-32482, dated December 2, 2008.

During this review, the inspectors identified that the licensee submitted a License Amendment Request, dated July 26, 1999, requesting the NRC to eliminate "As-Found" testing of the fuel transfer tube blind flange assemblies. In License Amendment 240, the Safety Evaluation Report states "The staff has considered the ALARA and industrial safety concerns that the licensee has described, and based on these concerns, the

excellent testing history of these flanges, and the continuation of the 30-month testing frequency, the staff finds that the proposed exception for the fuel transfer tube blind flanges is justified and acceptable.”

In Equipment Equivalency Review (EER) 60-0003-070, dated November 12, 1999, the licensee proposed a change to modify the gaskets used in the fuel transfer tube blind flange assemblies. While it is unclear as to when the changes were actually implemented, the EER was finalized on May 9, 2000, and the Investigation Summary Section of CR 08-33846 stated that the EER proposals could be implemented in 2002.

The inspectors noted that during the time the licensee asked for the amendment to eliminate as-found testing, the licensee also changed the gasket arrangement and geometry in accordance with EER 60-0003-070. In the safety screening, the licensee noted no impact on UFSAR or TS; however, the inspectors noted that the licensee did not review the section of the TS where the bases for as-found testing was documented (TS 6.16).

The inspectors were concerned that the as-found testing requirement was eliminated based on a condition that no longer existed, i.e., because the gasket material and configuration was changed, the “excellent testing history of these flanges” was no longer supported. This issue is considered an Unresolved Item (URI 05000346/2009004-03) pending further review of maintenance records, confirmation of actual installation, and the license bases.

.3 (Closed) Unresolved Item 05000346/2009002-04 Steam Generator Blowdown Pipe Whip Restraint R7 Design - Power Uprate

During the power uprate inspection, the inspectors identified a URI concerning the design basis structural analysis for the Steam Generator Blowdown (SGBD) pipe whip restraint R7 being in conformance with safety-related High Energy Line Break (HELB) and USAR requirements. Specifically, the pipe whip restraint calculation did not consider a dynamic amplification factor (DAF) for the pipe whip restraint force as required in USAR Section 3.6.2.5.9. As a result, the inspectors were not able to determine if the design basis calculation was sufficient to ensure conformance with safety-related HELB design requirements.

To address this concern, the licensee provided additional licensing and design basis documents for pipe whip restraint design. Davis-Besse Design Criteria Manual Section III.B.8, “Structures Associated with High Energy Pipe Breaks,” Revision 2 stated that the equivalent static load method utilizes a DAF to determine the pipe whip restraint force. The equivalent static load methodology was described in USAR Section 3.6.2.5.9. Also, Davis Besse Design Criteria Manual Section III.B.8 stated that the Steam Generator Blowdown pipe whip restraints were designed by the assumption of a full transfer of energy solution of the energy balance method. Calculation No. VF11/B00-016, “FCR 78-126 Steam Generator Blowdown Line Pipe Whip Restraint R7,” Revision 5 used the energy balance method as its design methodology for pipe whip restraint design. The use of a DAF was specific to the equivalent static load method for pipe whip restraint design. Therefore, SGBD pipe whip restraint R7 was not required to utilize a DAF in the analysis.

The inspectors did not identify a performance deficiency or violation of NRC requirements. Based on the review of licensing and design basis documents for pipe whip restraint design, this unresolved item is closed.

.4 (Closed) NRC Temporary Instruction 2515/173 Review of the Industry Ground Water Protection Voluntary Initiative

a. Inspection Scope

An NRC assessment was performed of the licensee's implementation of the Nuclear Energy Institute – Ground Water Protection Initiative (dated August 2007 (ML072610036)). The licensee has evaluated work practices that could lead to leaks and spills, and has performed an evaluation of systems, structures, and components that contain licensed radioactive material to determine potential leak or spill mechanisms.

The licensee has completed a site characterization of geology and hydrology to determine the predominant ground water gradients and potential pathways for ground water migration from on-site locations to off-site locations. An on-site ground water monitoring program has been implemented to monitor for potential licensed radioactive leakage into groundwater. The ground water monitoring results are being reported in the annual effluent and/or environmental monitoring report (see <http://www.nrc.gov/reactors/operating/ops-experience/tritium/plant-info.html>).

The licensee has prepared procedures for the decision making process for potential remediation of leaks and spills, including consideration of the long-term decommissioning impacts. Records of leaks and spills are being recorded in the licensee's decommissioning files in accordance with 10 CFR 50.75(g).

The licensee has identified the appropriate local and state officials and has conducted briefings on the licensee's ground water protection initiative. Protocols have been established for notification to these local and state officials regarding detection of leaks and spills.

b. Findings

No findings of significance were identified; however, as specified in reporting requirement section TI2515/173-05, the inspectors identified the following deviations from Nuclear Energy Institute – Ground Water Protection Initiative (NEI-GPI) protocols that were not fully addressed within the licensee's program

GPI Objective 1.4 – Remediation Process.

- b. Has the licensee evaluated for the potential for detectable levels of licensed material from planned releases of liquids and/or airborne materials (e.g., rain-out and condensation)?*

The licensee had not evaluated the potential for detectable levels of licensed material from planned releases of liquids and/or airborne materials (e.g., rain-out and condensation).

GPI Objective 3.2 – Review the Program Under the Auspices of NEI

- b. Has the licensee established a periodic review of the GPI program every 5 years, subsequent to the licensee's periodic self-assessment performed per Objective 3.1.b, including at a minimum the licensee's self-assessment under the auspices of NEI?*

The licensee had not established a review process to review the GPI Program every 5 years; the review should include at a minimum the licensee's self-assessment under the auspices of NEI.

4OA6 Management Meetings

.1 Exit Meeting Summary

On October 6, 2009, the inspectors presented the inspection results to Mr. B. Allen and other members of the licensee staff. The licensee acknowledged the issues presented. The inspectors confirmed that none of the potential report input discussed was considered proprietary.

.2 Interim Exit Meetings

Interim exits were conducted for:

- On August 21, 2009, the inspectors presented the power uprate inspection results for URI 05000346/2009002-04 to Mr. T. Chowdhary;
- A review of the implementation of the industry ground water protection voluntary initiative under the public radiation safety cornerstone with Mr. B. Allen, Site Vice President on August 28, 2009; and
- A review of the access control to the radiologically significant areas under the occupational radiation safety cornerstone with Mr. B. Allen, Site Vice President on September 18, 2009.

The inspectors confirmed that none of the potential report input discussed was considered proprietary. Proprietary material, if received during the inspection, was returned to the licensee.

4OA7 Licensee-Identified Violations

The following violations of very low significance (Green) were identified by the licensee and are violations of NRC requirements which meets the criteria of Section VI of the NRC Enforcement Policy, NUREG-1600, for being dispositioned as NCVs.

- A Severity Level IV violation of 10 CFR 50.9, "Completeness and Accuracy of Information," was identified for providing inaccurate information to the NRC. Specifically the licensee provided inaccurate information and non-conservative TS values for minimum emergency diesel generator (EDG) steady state voltages in TS SR 3.8.1.2 and SR 3.8.1.8. The licensee entered this condition into their corrective action program (CR 09-63730). The finding was assessed using the traditional enforcement process because the issue potentially affected the NRC's ability to perform its regulatory function. The finding is of very low safety

significance, because the submittal of inaccurate information was not identified as willful and licensee's procedures required leaving the EDG voltage regulators set at a voltage sufficiently high to meet license requirements under analyzed accident transient loading conditions

- Technical Specification 5.7.2.a.1; requires keys that provide access to areas greater than 1.0 rem/hour at 30 centimeters from the radiation source or from any surfaces penetrated by the radiation, but less than 500 rads/hour at 1 meter, shall be maintained under the administrative control of the radiation protection manager (RPM) and the shift supervisor. Contrary to the above requirement, a tagged master key that reads "this key controls access to a LHRA, emergency use only" was self issued by an operation staff member to access the borated water storage tank (BWST) pit, an area not posted LHRA room. By self issuing the master LHRA key, the licensee failed to maintain the LHRA key under the administrative control of the RPM and his designee. This event was entered into the licensee's corrective action program (CR 09-56901). The radiation protection department immediately took control of the LHRA access key. The control room key locker was inspected and inventoried to ensure no other LHRA keys were inside. The inventory did not identify an additional problem with key control. The RP department took control of the shift supervisor's LHRA keys. In addition, all LHRA keys and two containment/two auxiliary master keys and their locking mechanisms were replaced and re-cored to prevent future uncontrolled key issues. The inspectors reviewed the licensee's assessment of the PI for occupational radiation safety to determine if PI related data was adequately assessed and reported. The issue is of very low safety significance because it did not involve ALARA planning or work controls, an overexposure, substantial potential for overexposure, or limit the ability to assess radiation dose.

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee

B. Allen, Site Vice President
B. Boles, Director, Site Maintenance
P. Boissoneault, Chemistry Manager
T. Chowdhary, Staff Nuclear Engineer
S. Cope, Senior Nuclear Specialist, Emergency Planning
V. Kaminskas, Director, Site Operations
M. Meyer, Advanced Nuclear Engineer
D. Moul, Director, Site Engineering
D. Noble, Radiation Protection Manager
A. Percival, Sr. Nuclear Technologist
C. Price, Director, Site Performance Improvement
C. Stenbergen, Superintendent Operations Training
J. Sturdavant, Sr. Regulatory Compliance Specialist
S. Trickett, Superintendent, Radiation Protection
J. Vetter, Emergency Response Manager
G. Wolf, Regulatory Compliance Supervisor
D. Wuokko, Manager, Regulatory Compliance

LIST OF ITEMS OPENED, CLOSED AND DISCUSSED

Opened

05000346/2009004-02	URI	Potential for Preconditioning in MOV Testing
05000346/2009004-03	URI	Concerns with Analysis Supporting the Modification of Gaskets Used in the Fuel Transfer Tube Blind Flanges

Opened and Closed

05000346/2009004-01	FIN	Loss of the Switchyard J Bus Due to a Faulted Coupling Capacitor Potential Device
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Closed

05000346/2009002-04	URI	SGBD Pipe Whip Restraint R7 Did Not Meet HELB Requirements-Power Uprate
TI 2515/173	TI	Review of the Industry Ground Water Protection Voluntary Initiative

LIST OF DOCUMENTS REVIEWED

The following is a partial list of documents reviewed during the inspection. Inclusion on this list does not imply that the NRC inspector reviewed the documents in their entirety, but rather that selected sections or portions of the documents were evaluated as part of the overall inspection effort. Inclusion of a document on this list does not imply NRC acceptance of the document or any part of it, unless this is stated in the body of the inspection report.

1R01 Adverse Weather Protection

Procedures:

- RA-EP-2830; Flooding; Revision 2

Other:

- Updated Safety Analysis Report; Sections 2.4 (Hydrology) and 3.4 (Water Level (Flood) Design Criteria
- Design Criteria Manual, Section IID (Site Information); Revision 16

1R04 Equipment Alignment

Procedures:

- DB-OP-6011; High Pressure Injection System; Revision 22
- DB-OP-6012; Decay Heat and Low Pressure Injection System Operating Procedure; Revision 42
- DB-OP-6311; 345 KV Switchyard No. 1 Transformer, No. 11 Transformer, and Startup Transformers; Revision 18
- DB-SC-3023; Off-Site AC Sources Lined Up and Available; Revision 21

Drawings:

- OS-3; High Pressure Injection; Revision 32
- OS-4, Sheet 1; Decay Heat Removal/Low Pressure Injection System; Revision 45
- E-1, Sheet 1; AC Electrical System One Line Diagram; Revision 27

Other:

- Wadsworth Switching Order WC-09-12593-SC; Startup 01 345/13.8 KV Transformer; August 20, 2009
- Clearance EDB-Sub003-01-014, Cyc-16; Startup Transformer 01; August 31, 2009

1R05 Fire Protection

Condition Reports:

- 04-7341; RFA to Evaluate Shadow Shielding in MPR 2 for Midcycle Outage
- 05-1379; Re-evaluate Shielding RFA CR 04-7341 for Installation Greater than 90 Days
- 09-65007; Water Treatment Building Chemical Storage Area Inspection
- 09-65237; Missing Chemistry Chemical Control Inspections

Procedures:

- NOP-OP-3001; Chemical Control Program; Revisions 9 and 10
- PFP-AB-105; ECCS Pump Rm 1-1, Fire Area AB; Revision 7
- PFP-AB-124; Clean Waste Receiver Tank Room No. 1, Fire Area A; Revision 3

- PFP-AB-303; No. 3 Mechanical Penetration Room, Rooms 303 and 303PC, Fire Area AB; Revision 5

Work Orders:

- 200356134; Welding for ECP 09-183-01;

Drawings:

- A-221F; Fire Protection General Floor Plan EI 545'0" & 555'0"; Revision 9
- A-222F; Fire Protection General Floor Plan EI 555'0"; Revision 15
- A-223F; Fire Protection General Floor Plan EI 585'0"; Revision 20
- A-230F; Fire Protection Intake Structure; Revision 9

Other:

- Fire Hazard Analysis Report
- Room 105 Fire Impairments List
- Room 124 Hot Work Permit

1R06 Flooding

Condition Reports:

- 05-1499; NRC PI&R Log1-4635 Corrective Actions Adequacy for Underground Wetted Cables
- 05-3342; IN 2005-11, Internal Flooding/Spray-Down of SR Equipment
- 09-62033; Service Water Valve Room Sump Pumps Not Working Properly
- 09-62482; SWP-3 Cable Failure During Test
- 09-62604; Service Water Pump 3 Cable Damage
- 09-62729; Service Water Pump 3 As Found Conduit Condition

Procedures:

- DB-SP-4162; ECCS Sump Pump Flow Check; Revision 8
- RA-EP-2830; Emergency Plan Off Normal Occurrence Procedure; Revision 2
- RA-EP-2880; Internal Flooding; Revision 3

Work Orders:

- 200158884; DB-MP3-3: Replace Cable 3PACD06A
- 200319422; PM 8067, Replace ECCS Rm 1-2 Sump Level Switch LS4621
- 200325193; PM 1456, LS4621 and LSHH4621 Calibration ECCS Sump #2
- 200343003; PM 5773, Clean ECCS Sump 1-2 Pump A
- 200356134200378324; Replace Service Water Sump Pump Coupling Insert
- ; Mechanical Interference: Remove/Install ECP 09-183-01

Drawings:

- C-1594; Barrier Functional List; Revision 4
- C-1596; Door Functional List; Revision 6
- E-304; Electrical Site Plan; Revision 39
- E-309, Sheet 1; Raceway & Grounding Manhole-Sections & Detail; Revision 9
- OS-053, Sheet 2; Station Drainage System; Revision 16

Calculations:

- 15.50; Evaluation of Fire Suppression System Impact on Auxiliary Building and Intake Structure Flooding; Revision 0

- 54.22; Effect of Flooding from Water Treatment Building Into Tunnel, Lowest Essential Valve Room Located at 574'0" in Valve Room; Revision 0
- 63.13; Possible Flooding Levels for Various Rooms; Revision 1
- C-ME-021-02-003; Domestic Water Flooding of SW Tunnel; Revision 0
- C-NSA-99-16.47; Core Damage Frequency due to Flooding of the Service Water Pump Room; Revision 0

Other:

- USAR Section 3.4; Water Level (Flood) Design Criteria
- Review of Regulatory Issue Summary 2001-09 Applicability to Order 200356134 (Door 108)
- Operator Rounds Log (Zone 3); Week of September 20, 2009
- Bechtel Associates Letter; Penetration Seal Review for Flood Barriers, File: 0270, M-255Q, 185511 BT-16845; Dated June 17, 1986

1R11 Licensed Operator Requalification Program

Procedures:

- DB-OP-2000; RPS, SFAS, SFRCS Trip, or SG Tube Rupture; Revision 23
- DBBP-TRAN-0017; Conduct of Simulator Training; Revision 2

Other:

- OTLC-200904 DB-S101; Simulator Drill Guide; Pressurizer Temperature instrument failure, RCS leak, Turbine Trip; Revision 0
- OTLC-200904 DB-S102; Simulator Drill Guide; Loss of SW Loop 1, Primary to Secondary Heat Transfer Upset, Steam Leak in CTMT; Revision 0

1R12 Maintenance Effectiveness

Condition Reports:

- 08-32477; RCPM 2-2 Breakaway Torque
- 08-34341; EPRI Dissolved Oxygen Criteria Exceeded During Startup
- 08-34354; Low Oil Level On RCP 1-1 Lower Motor Bearing
- 08-37848; Feedwater Heater Maintenance Rule (A)(1) Evaluation
- 08-38217; Purification Demin 1-1 Exhausted Earlier Than Expected for Lithium Removal
- 08-40382; Cycle 16 Fuel Defect: Areva Estimates 2 – 3 Defective Fuel Rods
- 08-51323; Reactor Coolant System (RCS) Lithium Out-of-Specification
- 08-51458; Numerous Feedwater Heater Level Control Challenges
- 09-53837; Corrective Actions for Critical Component Degradation Not Identified In Cap
- 09-58862; HPFW Heater Level Sightglass Indicator Issues
- 09-59847; Cycle 16 Fuel Defect: Areva Estimates 3 – 8 Defective Fuel Rods
- 09-59988; High Pressure Feedwater Heater Drain Level Control Improvement Tracking
- 09-60325; MAOM Concern with Quench Tank In-Leakage

Procedures:

- NOBP-ER-3009; FENOC Plant Health Report Program; Revision 3
- NOP-ER-3004; FENOC Maintenance Rule Program; Revision 1

Work Orders:

- 200312919; PM 7088, Calibrate LV371B, HP FDWTR HTR 2-5
- 200366322; Replace Controller LC331B

- 200372086; Replace the Positioner on HD261A
- 600521930; Verify Completion HPFWH Action Plan

Other:

- Davis-Besse Plant Health Red/Yellow Actions; dated August 17, 2009
- Failure Report for Reactor Coolant System; Generated August 11, 2009
- Maintenance Rule Program Manual; Revision 27
- System Health Report; First Quarter 2009

1R13 Maintenance Risk Assessments and Emergent Work Control

Condition Reports:

- 05-03225; Unexpected Containment Atmosphere Results
- 09-61414; EVS Fan 1 Monthly Test Damper Issue
- 09-61416; Hi Usage of Cryogenic N2, Suspect Leak in the 100 PSIG Header
- 09-61441; Emergency Ventilation System Train 1 Controller Failure
- 09-63026; Spurious Auto-Start of SAC1
- 09-63547; SAC 1 Tripped on High Air Temperature
- 09-63763; Stator Cooling Water Filter Has Elevated DP
- 09-63948; ODMI Trigger Point for SCW Filter Differential Pressure Exceeded

Procedures:

- DB-OP-1101; Containment Entry; Revision 8
- DB-SS-3250; Emergency Ventilation System Train 1 Monthly Test; Revision 5
- NG-DB-00117; Shutdown Defense in Depth Assessment; Revision xx
- NOP-OP-1006; Shutdown Defense in Depth; Revision xx
- NOP-OP-1007; Risk Determination; Revision xx

Work Orders:

- 20032675; Clean and Inspect SAC 2 Impeller
- 200370056; EVS Train 1 Controller Not Operating Properly
- 200386281; SA57 Install Temporary Diesel Air Compressor
- 200386284; S462 Inspect, Clean TPCW Y Strainer to SAC1
- 200387072; Add Service Connection ECP 09-0649
- 200387074; Add Filter ECP 09-0651
- 200387284; F40 – Install 1 Micron Cartridges
- 200386839; Inspect SCW deionizer exit strainer
- 600576178; Support SCW Samples at PDI 2486

Drawings:

- OS-26; Main Generator Stator Winding Cooling Water System; Revision 29
- OS-49; Nitrogen System; Revision 21

Other:

- Weekly Maintenance Risk Summary: Week of July 6, 2009; Revision 0
- Weekly Maintenance Risk Summary: Week of August 3, 2009; Revision 0
- Weekly Maintenance Risk Summary: Week of August 24, 2009; Revision 0 and 1
- Weekly Maintenance Risk Summary: Week of August 31, 2009; Revision 0
- Weekly Maintenance Risk Summary: Week of September 7, 2009; Revision 0
- Troubleshooting Template; Nitrogen Supply to the Pressurizer Quench Tank; Dated July 7, 2009

- Troubleshooting Template; Stator Cooling Water Filter; Dated September 3, 2009
- Operator Logs; July 6, 2009
- Operational Decision Making Issue; Nitrogen Leak into CTMT (NN782); Revision 1
- Operational Decision Making Issue; Elevated Differential Across Stator Cooling Water System Main Filter F39; Revision 0 and 1

1R15 Operability Evaluations

Condition Reports:

- 07-26402; DH1A Motor Terminations Not Rated for EQ Application
- 07-28312; DH2736 Motor Terminations
- 09-53674; ECCS Room Coolers 1, 2, and 5 Show Marginal Signs of Biofouling
- 09-59292; ECCS Room Cooler #2 Shows Marginal Signs of Biofouling
- 09-61572; ECCS Room Coolers #1 and #2 Not Meeting Acceptance Criteria
- 09-63458; Misposition of MS744
- 09-63655; MV5090 Electrical Not Qualified for EQ Applications

Procedures:

- DB-OP-6233; Auxiliary Feedwater System; Revision 26
- DB-PF-4736; ECCS Room Cooler Monitoring Test; Revision 4
- DB-PF-9301; Preventive Maintenance for Type SMB and SB Limitorque Operators; Revision 6

Drawings:

- OS-17B, Sheet 1; Auxiliary Feedwater Pump and Turbines; Revision 24

Calculations:

- C-NSA-011.01-019; Analysis of Service Water System Online Flow Balance Test Data For Train 2; Revision 0
- C-NSA-011.01-016; Service Water System Design Basis Flowrate Analysis and Testing Requirements; Revision 1

1R18 Plant Modifications

Condition Reports:

- 09-63763; Stator Cooling Water Filter has Elevated DP

Procedures:

- DB-OP-3012; Radioactive Gaseous Batch Release; Revisions 2 and 15
- NOBP-LP-4003A; FENOC 10CFR 50.59 User Guidelines; Revision 5
- NOP-CC-2033; Engineering Changes; Revision 14

Work Orders:

- 200387072; Add Service Connections, ECP 09-0649
- 200387074; Add SCW Filter, TM/ECP 09-0651

Drawings:

- M-28C; Auxiliary Building Radwaste Ventilation; Revision 26
- OS-26; Main Generator Stator Winding Cooling Water System; Revision 29
- OS-33C; Containment Hydrogen Dilution System; Revision 15
- OS-34, Sheet 1; Auxiliary Building Radioactive HVAC Systems; Revision 18

Other:

- ECP 09-0651; Installation of a temporary by-pass stator water cooling system filter assembly; Revision 0
- ECP 09-0649; Add Service Connections to Stator Cooling Water System; Revision 2
- Offsite Dose Calculation Manual; Revision 23
- Operational Decision Making Issue; Elevated differential across Stator Cooling Water system main filter F39; Revisions 0, 1, and 2
- Regulatory Applicability Determination (10CFR 50.59 Screening) 09-3296 and 09-3401; August, 2009
- USAR 8.1.2.1; Main Generator System
- USAR 10.2.2; Turbine-Generator Description

1R19 Post Maintenance Testing

Condition Reports:

- 09-61770; Trip and Close Power Fuses Installed in Wrong Location on AD301 – Misposition
- 09-61780; Replacement Breaker for Cubicle AD301 Will Not Actuate TOC Switch
- 09-61798; Incorrect Parts for PM 8054
- 09-61822; Replacement Stab Assembly for BF8105 Does Not Fit
- 09-61872; SBODG AC/DC Turbo Pressure Read 22# During Engine Run
- 09-62482; SWP-3 Cable Failure During Test
- 09-62879; Small Air Leak at Tubing Connected to DA233
- 09-64449; Deficiencies Found on HP2A
- 09-64490; Lockwasher Missing on Bolt for DH63 Handwheel Cover
- 09-64545; Issues During Maintenance on DH63, Train 2 Piggyback Valve

Procedures:

- DB-ME-9003; Soldering and Circuit Board Repair; Revision 3
- DB-ME-9004; High Potential (HYPOT) Insulation Testing of Electrical Cables; Revision 3
- DB-MI-3161; Channel Functional Test/Calibration of 48A-ISPRC02B4 Reactor Coolant Loop 1 Hot Leg Wide Range Pressure to SFAS Channel 1; Revision 8
- DB-MI-9072; SFAS Documentation for Module Testing; Revision 3
- DB-OP-6316; Diesel Generator Operating Procedure; Revision 42
- DB-OP-6405; Safety Features Actuation System Procedure; Revision 9
- DB-SC-3070; Emergency Diesel Generator 1 Monthly Test; Revision 21
- DB-SC-4271; SBODG Monthly Test; Revision 16
- DB-SP-3219; HPI Train 2 Pump and Valve Test; Revision 20
- DB-SS-3091; Motor Driven Feed Pump Quarterly Test; Revision 11

Work Orders:

- 200158884; DB-MP3-3: Replace Cable 3PACD06A
- 200270866; PM 7478 DA233 Reverse Leakage Test
- 200274803; PM 7441, AD301 Breaker Swap
- 200287871; PM 0271, MVHP2A Clean and Inspect
- 200287875; PM 4791, Lube #2 HPI Motor
- 200297750; PM 0273, MVHP2B Clean and Inspect
- 200310663; PM 0264, Inspect HPI Pump 2
- 200315673; PM 8054, Replace Air Start Hoses #1
- 200350284; PM 2044, MVDH63 Clean and Inspect
- 200351491; HVDH63 Adjust Tripper Fingers
- 200352062; FTHP3B Replace Bypass Valve

- 200355744; PM 9007: Replace Shaft Driven LO Pump P242-2
- 200366075; Clean and Inspect MDFP Coolers
- 200372934; Annunciator 5-2-D Failed to Alarm with BA105 Trip

Drawings:

- OS-003; High Pressure Injection System; Revision 32
- OS-12A, Sheet 1; Main Feedwater System; Revision 23

1R22 Surveillance Testing

Condition Reports:

- 02-81; Re-Evaluate AFW Availability During Monthly Jog
- 09-56534; Station Battery T.S. Maintenance Program Issues
- 09-59387; BACC – Packing Found On CS1530 By NRC Inspector
- 09-62541; 1P Battery Cell 13 Sediment Buildup
- 09-62602; Decay Heat Pump 1 Vibrations in the Alert Range
- 09-63655; MV5090 Electrical Not Qualified for EQ Applications
- 09-65084; NRC Question with the Motor Operated Valve PM and Testing Program
- 09-65154; FME Found in Station Battery Jar
- 09-65309; NRC Resident Question Regarding the Purpose of DB-ME3004, Battery Monthly

Procedures:

- DB-ME-3000; Station Battery and Charger Weekly Surveillance; Revision 19
- DB-ME-3004; Station Battery Monthly Surveillance; Revision 2
- DB-PF-1001; Administrative Control of Containment Isolation Valves; Revision 4
- DB-PF-3272; Post Maintenance Valve Test; Revision 8
- DB-PF-6704; Pump Performance Curves; Revision 25
- DB-PF-9301; Preventive Maintenance for Type SMB and SB Limitorque Operators; Revision 6
- DB-PF-9302; Testing Motor Operated Valves; Revision 8
- DB-SP-3136; Decay Heat Train 1 Pump and Valve Test; Revision 25
- DB-SP-3337; Containment Spray Train 1 Quarterly Pump and Valve Test; Revision 19
- DB-SP-4150; AFP 1 Monthly Test; Revision 11
- DB-SC-3272; Control Rod Exercising Test; Revision 3

Work Orders:

- 200286519; PM 773 MV50590 – Inspect Hydrogen Dilution Valve

Drawings:

- OS-5; Containment Spray System; Revision 11
- OS-17B, Sheet 1; Auxiliary Feedwater Pumps and Turbines; Revision 24

Other:

- ISTB3; Pump and Valve Basis Document, Volume III, Stroke Time Basis; Revision 35

1EP6 Drill Evaluation

Condition Reports:

- 09-63525; EP Drill – The Simulator and EOF Both Sent an Initial Periodic Update Offsite
- 09-63587; EP Drill – Individual Accountability Deficiencies Noted During Integrated Drill
- 09-63589; EP Drill – Failed Drill Objective
- 09-63611; EP Drill – Protective Action Recommendation Not Fully Understood

- 09-64732; EP Drill – Unanticipated Site Area Emergency Declaration
- 09-64958; Simulator Evaluation, Initial Notification Form Incorrect

Procedures:

- RA-EP-1500; Emergency Classification; Revision 10

Other:

- Davis-Besse Emergency Preparedness Integrated Drill Manual; August 20, 2009
- Davis-Besse Emergency Preparedness Integrated Drill Manual; September 17, 2009
- NEI 99-02; Regulatory Assessment Performance Indicator Guideline; Revision 5

2OS1 Access Control to Radiologically Significant Areas

Condition Reports:

- CR-08-46838; Engineering Spent Fuel Pool Material Accountability Log Requires Update; dated September 14, 2008
- CR-09-56901; Loss of LHRA Key Control; dated April 8, 2009
- CR-09-63493; Trending of Recent Electronic Dosimeter “False” Dose Rate Alarm Events; dated August 20, 2009
- CR-09-64535; Calculation Error on ALARA Plan; dated September 16, 2009

Procedures:

- DBBP-RP-1001; Locked High and Very High Radiation Area Key Authorization; dated August 20, 2009
- DB-HP-01102; Radiation Protection Procedure; Industrial Radiography/Densitometry; dated September 22, 2004
- DB-SA-09-017; Davis-Besse Integrated Performance Assessment; Section; Radiation Protection; dated January 22, 2009
- NOP-LP-2001-02; Generic Implication on CR 09-56901; dated June 03, 2009
- NOP-LP-2001-03; Cause Analysis on CR 09-56901; dated July 17, 2009
- NOP-LP-2001-05; Corrective Action on CR 09-56901; April 17, 2009
- NOBP-LP-4012-57; Occupational Exposure Control Effectiveness for Davis-Besse Nuclear Power Station; January 2008 Through August 2009
- NOBP-NF-3102; Nuclear Operating Business Practice; Control of Non-Special Nuclear Material in the Fuel Pools; dated August 26, 2009
- NOP-OP-4101; Nuclear Operating Procedure; Access Controls for Radiologically Controlled Areas; dated March 23, 2009
- NOP-OP-4107; Nuclear Operating Procedure; Radiation Work Permit; dated May 15, 2009
- NOP-WM-4001; Nuclear Operation Procedure; Foreign Material Exclusion; dated February 27, 2009

Other:

- Davis-Besse 2009 Operational Dose Trend; dated September 06, 2009
- RWP 2009-2002; Containment Entries During Modes 1 and 2 to Include Walkdowns, Inspections and Work activities for All Work Groups; Revision No. 1
- RWP 2009-5401; Containment Entry for All Mode 3 and 4 Operations Following Reactor Shutdown, and Prior to Reactor Startup to Include but not Limited to; RP Surveys/Postings; Walkdowns; Inspections and Minor Maintenance; Dated April 19, 2009
- RWP 2009-5402; Mode 5 Work Activities Following April 2009 Reactor Shutdown; dated April 03, 2009

- RWP 2009-5403; Code Safety Outage; Remove and Replace RC 13A and RC 13B; dated April 02, 2009
- RWP 2009-5404; Pre 16 RFO Walk Downs; Permanent Scaffolds Installation and Alloy 600; dated April 02, 2009
- RWP 2009-5405; Under Reactor Vessels Inspection and Walk Downs; dated April 06, 2009
- FENOC; Davis-Besse Nuclear Power Station Fleet Oversight; Quarterly Report-Second Quarter-2008 through Second Quarter 2009; dated July 24, 2009

2PS3 NRC Temporary Instruction 2515/173 Review of the Industry Ground Water Protection Voluntary Initiative

Condition Reports:

- 07-23488; Tritium Detected in Groundwater Monitoring Wells; dated July 13, 2007
- 07-25151; Tritium Activity Confirmed in Previously sampled Groundwater Monitoring Wells; dated August 14, 2007
- 07-30031; Documentation of Davis Besse Groundwater Tritium Exceeds 2000 pCi/liter; dated June 06, 2009
- 08-48157; Potential Groundwater Monitoring Program Enhancements; dated October 20, 2008
- 08-50324; NEI Groundwater Initiative Assessment FL-SA-08-098 Action for Procedure Revision; dated December 12, 2008
- 09-63726; Tritium Recapture Study needs to be Performed; dated August 26, 2009
- 09-63732; Procedure NOP-OP-2012 Doesn't Include NEI Review of Ground Water Program; dated August 26, 2009

Procedures:

- CE-08-49137; Samples Collected from Monitoring Wells in the Vicinity of Leak Discovered in the Turbine Building Sumps 3" Lines; dated November 7, 2008
- DB-CN-04066; Groundwater Sample Shipment and Evaluation of Sample Results; revision 0
- FL-SA-08-098; NEI-0707 Ground Water Compliance Assessment; dated October 21, 2008
- NOP-ER-2007; Buried Pipe Integrity Program; dated November 25, 2008
- NOP-LP-5003; Communicating Events of Potential Public Interest; Revision; No. 0
- NOP-OP-2012; Nuclear Operation Procedures; Ground Water Monitoring; Revision No. 3
- NOP-OP-4705; Response to Contaminated Spill/Leaks; dated June 09, 2008
- NOP-OP-4705-01 Revision. 02; 10 CFR50.75(g) Leak/Spill Record; East Side Plant, Inside Protected Area (Sample of Monitoring Well-34S); dated June 6, 2009

Other:

- CSI Technologies Inc.; Davis Besse Nuclear Power Station Buried Piping Program Basis Document; dated June 12, 2009
- ERM Reference-55194; Ground water Flow Characteristics Report Davis Besse Nuclear Power Station, Oak Harbor, Ohio; dated January 16, 2007
- ERM Reference-654992; June 2007 Groundwater Field Sampling Plan, Davis Besse Power Station; dated June 08, 2007
- 8003-100-407; Environmental, Inc.; Laboratory Report for Tritium Analysis and Gamma Emitting Isotopes Groundwater Samples; dated May 22, 2009
- 8003-101-61; Environmental, Inc.; Laboratory Report for Tritium Analysis and Gamma Emitting Isotopes Groundwater Samples; dated July 25, 2008
- 8003-100-300; Environmental, Inc.; Laboratory Report for Tritium Analysis and Gamma Emitting Isotopes Groundwater Samples; dated October 31, 2008
- 8003-100-391; Environmental, Inc.; Laboratory Report for Tritium Analysis and Gamma Emitting Isotopes Groundwater Samples; dated November 03, 2008

- 8003-100-399; Environmental, Inc.; Laboratory Report for Tritium Analysis and Gamma Emitting Isotopes Groundwater Samples; dated January 09, 2009
- 8003-100-407; Environmental, Inc.; Laboratory Report for Tritium Analysis and Gamma Emitting Isotopes Groundwater Samples; dated May 22, 2009
- 8003-100-411; Environmental, Inc.; Laboratory Report for Tritium Analysis and Gamma Emitting Isotopes Groundwater Samples; dated July 01, 2009
- 2008 Annual Radiological Environmental Operating Report; Including Radiological Effluent Release Report
- Groundwater Monitoring Well Installation and Monitoring Report Davis Besse Nuclear Power Station; dated March 18 2008
- Environmental Inc, Midwest Laboratory; Appendix A; Inter-laboratory Comparison Program Results for 2008; dated February 2009

40A1 Performance Indicator Verification

Condition Reports:

- 08-41352; CREVS #1 Tripped on High Refrigerant Pressure While in Air Cooled Mode
- 08-48086; RE4598 Has Equipment and Comm Failure Lights Illuminated

Other:

- NOBP-LP-4012; NRC Performance Indicators; Revision No. 03
- Form NOBP-LP-4012-45; Safety System Functional Failures; Forms for July 2008 through June 2009
- Form NOBP-LP-4012-46; MSPI Emergency AC Power System; Forms for July 2008 through June 2009
- Form NOBP-LP-4012-47; MSPI High Pressure Injection System; Forms for July 2008 through June 2009
- Select Operator Logs covering the period of July 2008 through June 2009
- NEI 99-02; Regulatory Assessment Performance Indicator Guideline; Revision 5
- Davis-Besse MSPI Basis Document; Revision 4
- Cycle 16 Maintenance Rule Functional Failures List
- Reactor Coolant System Specific Activity; Reporting Period from January 2008 through June 2009
- Occupational Exposure Control Effectiveness; Reporting Period from January 2008 through June 2009
- RETS ODCM Radiological Effluent Occurrence; Reporting Period from January 2008 through June 2009

40A2 Problem Identification and Resolution

Condition Reports:

- 01-01842; Coupling Capacitor Failure at San Onofre Switchyard
- 04-06456; Lemoyne Line CCPD 3L Phase B and C Starting to Show Signs of Degradation
- 06-00890; Large Transformer and Switchyard Review Recommendations
- 07-31196; Degraded Voltage Inputs to DB-C5754G from SWYD J Bus and Bayshore Line
- 07-31982; Failure of Lemoyne Line CCPD Caused Entry Into Tech Spec 3.8.1.1 Action A
- 07-32102; Burnt Wire in CCPD PDJBC
- 08-32881; ER Template Incorrectly Implemented
- 08-34376; Bayshore Line CCPD Failure Trending Only Condition Report
- 08-36370; Fleet Issue: Delta Between Switchyard Maintenance Template and T&D Practices
- 09-61025; Loss of J Bus, Catastrophic Failure of J Bus B Phase Potential Device

Procedures:

- NOBP-LP-2010; Crest Trending Codes; Revision x
- NOP-LP-2001; Corrective Action Program; Revision xx

Work Orders:

- 200349075; PM 8654 Replace CCPD PD-1L 25 Years
- 200349076; PM 8655 Replace CCPD PD-5LT 25 Years
- 200349077; PM 8656 Replace CCPD PD-3LC 25 Years
- 200375589; PDJA, B & C – Restore TM/ECP 09-0538-002
- 200382250; PM 9714 Measure Secondary Voltage CCPDs

Other:

- NORM-ER-3105; Switchyard Maintenance Strategy Template; Revision 4
- ECP 09-0538-02; TM ECP for Restoration of J Bus CCPDs; Revision 0
- CCPD Secondary Voltage Trends; Dated August 19, 2009
- Operator Logs; June 25, 2009

4OA5 Other Activities

Condition Reports:

- 09-52701; Calculation VF11/B00-016 Does Not Consider Dynamic Amplification Factors; dated January 28, 2009

Procedures:

- BN-TOP-2, Design for Pipe Break Effects, Revision 2, May 1974

Calculations:

- Calculation No. VF11/B00-016; FCR 78-126 Steam Generator Blowdown Line Pipe Whip

Other:

- ANSI/ANS-58.2-1980, Design Basis for Protection of Light Water Nuclear Power Plants Against Effects of Postulated Pipe Rupture, approved December 31, 1980
- Davis Besse Design Criteria Manual, Structures Associated with High Energy Pipe Breaks, Revision 2, Section III.B.8
- Standard Review Plan 3.6.2, Determination of Rupture Locations and Dynamic Effects Associated with the Postulated Rupture of Piping, Revision 1, July 1981
- FENOC Safety Culture Performance Indicator, dated June 24, 2009
- Restraint R7; Revision 5

LIST OF ACRONYMS USED

ADAMS	Agencywide Document Access Management System
ALARA	As-Low-As-Is-Reasonably-Achievable
AOP	Abnormal Operating Procedure
BWST	Borated Water Storage Tank
CAP	Corrective Action Program
CCPD	Capacitive Coupled Potential Device
CFR	Code of Federal Regulations
CR	Condition Report
DAF	Dynamic Amplification Factor
DRP	Division of Reactor Projects
ECCS	Emergency Core Cooling System
EDG	Emergency Diesel Generator
EER	Equipment Equivalency Review
HELB	High Energy Line Break
IMC	Inspection Manual Chapter
IPEEE	Individual Plant Examination of External Events
IR	Inspection Report
LER	Licensee Event Report
LHRA	Locked High Radiation Area
LOCA	Loss of Coolant Accident
MSPI	Mitigating Systems Performance Index
NCV	Non-Cited Violation
NEI	Nuclear Energy Institute
NRC	U.S. Nuclear Regulatory Commission
ODCM	Offsite Dose Calculation Manual
PARS	Publicly Available Records
PI	Performance Indicator
PI&R	Problem Identification and Resolution
PM	Post or Preventative Maintenance
RCS	Reactor Coolant System
RPM	Radiation Protection Manager
RPS	Radiation Protection Specialist
RWP	Radiation Work Permit
SDP	Significance Determination Process
SGBD	Steam Generator Blowdown
SSC	Structures, Systems and Components
TS	Technical Specification
UFSAR	Updated Final Safety Analysis Report
URI	Unresolved Item
USAR	Updated Safety Analysis Report
WO	Work Order

B. Allen

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Sincerely,

/RA/

Jamnes L. Cameron, Chief
Branch 6
Division of Reactor Projects

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