



**UNITED STATES  
NUCLEAR REGULATORY COMMISSION**  
REGION I  
2100 RENAISSANCE BLVD., SUITE 100  
KING OF PRUSSIA, PA 19406-2713

July 20, 2015

Mr. Eric Larson  
Site Vice President  
FirstEnergy Nuclear Operating Company  
Beaver Valley Power Station  
P.O. Box 4  
Shippingport, PA 15077-0004

**SUBJECT: BEAVER VALLEY POWER STATION – PROBLEM IDENTIFICATION AND  
RESOLUTION INSPECTION REPORT 05000334/2015008 AND  
05000412/2015008**

Dear Mr. Larson:

On June 25, 2015, the United States Nuclear Regulatory Commission (NRC) completed an inspection at your Beaver Valley Power Station, Units 1 and 2. The enclosed report documents the inspection results, which were discussed on June 25, 2015, with you, and other members of your staff.

This inspection examined activities conducted under your license as they relate to identification and resolution of problems and compliance with the Commission's rules and regulations and conditions of your license. Within these areas, the inspection involved examination of selected procedures and representative records, observations of activities, and interviews with personnel.

Based on the samples selected for review, the inspectors concluded that FirstEnergy Nuclear Operating Company (FENOC) was generally effective in identifying, evaluating, and resolving problems. FENOC personnel identified problems and entered them into the corrective action program at a low threshold. FENOC prioritized and evaluated issues commensurate with the safety significance of the problems and corrective actions were generally implemented in a timely manner.

If you disagree with the cross-cutting aspect assigned to the 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 I, and the NRC Resident Inspector at Beaver Valley Power Station.

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

Sincerely,

*/RA/*

Silas R. Kennedy, Chief  
Reactor Projects Branch 6  
Division of Reactor Projects

Docket Nos. 50-334, 50-412  
License Nos. DPR-66, NPF-73

Enclosure:  
Inspection Report 05000334/2015008 and 05000412/2015008  
w/Attachment: Supplementary Information

cc w/encl: Distribution via ListServ

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

Sincerely,

**/RA/**

Silas R. Kennedy, Chief  
 Reactor Projects Branch 6  
 Division of Reactor Projects

Docket Nos. 50-334, 50-412  
 License Nos. DPR-66, NPF-73

Enclosure:  
 Inspection Report 05000334/2015008 and 05000412/2015008  
 w/Attachment: Supplementary Information

cc w/encl: Distribution via ListServ

DISTRIBUTION w/encl:

DDorman, RA  
 DLew, DRA  
 HNieh, DRP  
 MScott, DRP  
 RLorson, DRS  
 JTrapp, DRS

SKennedy, DRP  
 CBickett, DRP  
 JDeBoer, DRP  
 SEIkhiamy, DRP  
 JKrafty, DRP, SRI  
 BReyes, DRP, RI  
 PGarrett, DRP, Resident AA

RPowell, DRP  
 KMorganButler, RI, OEDO  
 RidsNrrPMBeverValley Res  
 RidsNrrDorlLp1-2 Res  
 ROPreports Res

DOCUMENT NAME: G:\DRP\BRANCH6\+++BEAVER VALLEY\BV INSPECTION REPORTS & EXIT NOTES\  
 BV INSPECTION REPORTS 2015\BV PIR REPORT 2015008.DOCX

ADAMS Accession No.: **ML15201A478**

<input checked="" type="checkbox"/> SUNSI Review		<input checked="" type="checkbox"/> Non-Sensitive <input type="checkbox"/> Sensitive		<input checked="" type="checkbox"/> Publicly Available <input type="checkbox"/> Non-Publicly Available	
OFFICE	RI/DRP	RI/DRP	RI/DRP		
NAME	SShaffer/ SWS	RPowell/ RJP	SKennedy/ SRK		
DATE	07/16 /15	07/16 /15	07/ 20 /15		

OFFICIAL RECORD COPY

**U.S. NUCLEAR REGULATORY COMMISSION**

REGION I

Docket Nos.: 50-334, 50-412

License Nos.: DPR-66, NPF-73

Report Nos.: 05000334/2015008 and 05000412/2015008

Licensee: FirstEnergy Nuclear Operating Company (FENOC)

Facility: Beaver Valley Power Station Units 1 and 2

Location: Shippingport, PA 15077

Dates: June 8, 2015 to June 25, 2015

Team Leader: S. Shaffer, Senior Project Engineer

Inspectors: B. Reyes, Resident Inspector  
B. Pinson, Project Engineer  
S. Horvitz, Project Engineer

Approved by: Silas R. Kennedy, Chief  
Reactor Projects Branch 6  
Division of Reactor Projects

## SUMMARY

IR 05000334/2015008 and 05000412/2015008; June 8 to 25, 2015, Beaver Valley Power Station Units 1 and 2, Biennial Baseline Inspection of Problem Identification and Resolution. The inspectors identified one finding in the area of effectiveness of problem identification.

This NRC team inspection was performed by three regional inspectors and one resident inspector. The inspectors identified one finding of very low safety significance (Green) during this inspection. The significance of most findings is indicated by their color (i.e., greater than Green, or Green, White, Yellow, Red) and determined using Inspection Manual Chapter (IMC) 0609, "Significance Determination Process," dated June 2, 2011. Cross-cutting aspects are determined using IMC 0310, "Components Within Cross-Cutting Areas," dated December 4, 2014. All violations of NRC requirements are dispositioned in accordance with the NRC's Enforcement Policy, dated June 7, 2012. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 5.

### Problem Identification and Resolution

The inspectors concluded that FENOC was generally effective in identifying, evaluating, and resolving problems. FENOC personnel identified problems, entered them into the corrective action program at a low threshold, and prioritized issues commensurate with their safety significance. In most cases, FENOC appropriately screened issues for operability and reportability, and performed causal analyses that appropriately considered extent of condition, generic issues, and previous occurrences. The inspectors also determined that FENOC typically implemented corrective actions to address the problems identified in the corrective action program in a timely manner.

The inspectors concluded that, in general, FENOC adequately identified, reviewed, and applied relevant industry operating experience to Beaver Valley Power Station operations. In addition, based on those items selected for review, the inspectors determined that FENOC's self-assessments and audits were thorough.

Based on the interviews the inspectors conducted over the course of the inspection, observations of plant activities; and reviews of individual corrective action program and employee concerns program issues; the inspectors did not identify any indications that site personnel were unwilling to raise safety issues nor did they identify any conditions that could have had a negative impact on the site's safety conscious work environment.

### **Cornerstone: Initiating Events**

- **Green.** A Green self-revealing finding of NOP-LP-2001, "Corrective Action Program," was identified after FENOC failed to generate a condition report for a condition adverse to quality. Specifically, FENOC did not initiate a condition report when a lifted lead was identified during preventative maintenance and installation of the Unit 1 main transformer. As a result, corrective actions were not taken and this led to an unplanned downpower from 100 percent to 15 percent reactor power on January 31, 2014.

The performance deficiency was more-than-minor because it was associated with the Equipment Performance attribute of the Initiating Events cornerstone, and adversely affected the cornerstone objective of limiting the likelihood of events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. This finding was determined to be of very low safety significance (Green), because it did not cause a reactor trip and the loss of mitigation equipment. This finding has a cross-cutting aspect in the area of Human Performance, Field Presence, because FENOC failed to ensure supervisory and management oversight of work activities, including contractors and supplemental personnel [H.2]. (Section 4OA2)

## REPORT DETAILS

### 4. OTHER ACTIVITIES (OA)

#### 4OA2 Problem Identification and Resolution (71152B)

This inspection constitutes one biennial sample of problem identification and resolution as defined by Inspection Procedure 71152. All documents reviewed during this inspection are listed in the Attachment to this report.

#### .1 Assessment of Corrective Action Program Effectiveness

##### a. Inspection Scope

The inspectors reviewed the procedures that described FENOC's corrective action program at Beaver Valley Power Station. To assess the effectiveness of the corrective action program, the inspectors reviewed performance in three primary areas: problem identification, prioritization and evaluation of issues, and corrective action implementation. The inspectors compared performance in these areas to the requirements and standards contained in 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action," and FENOC procedure NOP-LP-2001, "Corrective Action Program," Revision 35. For each of these areas, the inspectors considered risk insights from the station's risk analysis and reviewed condition reports selected across the seven cornerstones of safety in the NRCs Reactor Oversight Process. Additionally, the inspectors attended multiple Management Ownership and Alignment meetings; Management Review Committee meetings; and Corrective Action Review Board meetings. The inspectors selected items from the following functional areas for review: engineering, operations, maintenance, emergency preparedness, radiation protection, chemistry, physical security, and oversight programs.

##### (1) Effectiveness of Problem Identification

In addition to the items described above, the inspectors reviewed system health reports, a sample of completed corrective and preventative maintenance work orders; completed surveillance test procedures; operator logs; and periodic trend reports. The inspectors also completed field walkdowns of various systems on site, such as the intake structure, emergency diesel generator, and auxiliary building. Additionally, the inspectors reviewed a sample of condition reports written to document issues identified through internal self-assessments, audits, emergency preparedness drills, and the operating experience program. The inspectors completed this review to verify that FENOC entered conditions adverse to quality into their corrective action program as appropriate.

##### (2) Effectiveness of Prioritization and Evaluation of Issues

The inspectors reviewed the evaluation and prioritization of a sample of condition reports issued since the last NRC biennial Problem Identification and Resolution inspection completed in December 2013. The inspectors also reviewed condition reports that were assigned lower levels of significance that did not include formal cause evaluations to ensure that they were properly classified. The inspectors' review included the appropriateness of the assigned significance, the scope and depth of the causal analysis, and the timeliness of resolution. The inspectors assessed whether the

evaluations identified likely causes for the issues and developed appropriate corrective actions to address the identified causes. Further, the inspectors reviewed equipment operability determinations, reportability assessments, and extent-of-condition reviews for selected problems to verify these processes adequately addressed equipment operability, reporting of issues to the NRC, and the extent of the issues.

(3) Effectiveness of Corrective Actions

The inspectors reviewed FENOC's completed corrective actions through documentation review and, in some cases, field walkdowns to determine whether the actions addressed the identified causes of the problems. The inspectors also reviewed condition reports for adverse trends and repetitive problems to determine whether corrective actions were effective in addressing the broader issues. The inspectors reviewed FENOC's timeliness in implementing corrective actions and effectiveness in precluding recurrence for significant conditions adverse to quality. The inspectors also reviewed a sample of condition reports associated with selected non-cited violations and findings to verify that FENOC personnel properly evaluated and resolved these issues. In addition, the inspectors expanded the corrective action review to five years to evaluate FENOC actions related to the main transformer and switchyard.

b. Assessment

(1) Effectiveness of Problem Identification

Based on the selected samples, plant walkdowns, and interviews of site personnel in multiple functional areas, the inspectors determined that FENOC identified problems and entered them into the corrective action program at a low threshold. FENOC staff at Beaver Valley Power Station initiated approximately 10,000 condition reports between January 2013 and May 2015. The inspectors observed supervisors at the Management Ownership and Alignment meetings; Management Review Committee meetings; and Corrective Action Review Board meetings appropriately questioning and challenging condition reports to ensure clarification of the issues. Based on the samples reviewed, the inspectors determined that FENOC trended equipment and programmatic issues, and appropriately identified problems in condition reports. The inspectors verified that conditions adverse to quality identified through this review were entered into the corrective action program as appropriate. Additionally, inspectors concluded that personnel were identifying trends at low levels. In general, inspectors did not identify any issues or concerns that had not been appropriately entered into the corrective action program for evaluation and resolution. In response to several questions and minor equipment observations identified by the inspectors during plant walkdowns, FENOC personnel promptly initiated condition reports and/or took immediate action to address the issues.

Additionally, the inspectors identified one example of more than minor significance where FENOC personnel were not effective in identifying problems. This finding is documented in Section 4OA2.1.c.

(2) Effectiveness of Prioritization and Evaluation of Issues

The inspectors determined that, in general, FENOC appropriately prioritized and evaluated issues commensurate with the safety significance of the identified problem. FENOC screened condition reports for operability and reportability, categorized the condition reports by significance, and assigned actions to the appropriate department for evaluation and resolution. The condition report screening process considered human performance issues, radiological safety concerns, repetitiveness, adverse trends, and potential impact on the safety conscious work environment.

Based on the sample of condition reports reviewed, the inspectors noted that the guidance provided by FENOC corrective action program implementing procedures appeared sufficient to ensure consistency in categorization of issues. Operability and reportability determinations were generally performed when conditions warranted and in most cases, the evaluations supported the conclusion. Causal analyses appropriately considered the extent of condition or problem, generic issues, and previous occurrences of the issue.

(3) Effectiveness of Corrective Actions

The inspectors concluded that corrective actions for identified deficiencies were generally timely and adequately implemented. For significant conditions adverse to quality, FENOC identified actions to prevent recurrence. The inspectors concluded that corrective actions to address the sample of NRC non-cited violations and findings since the last problem identification and resolution inspection were timely and effective.

c. Findings

Introduction. A Green self-revealing finding of NOP-LP-2001, "Corrective Action Program," was identified after FENOC failed to generate a condition report (CR) for a condition adverse to quality. Specifically, FENOC did not initiate a condition report when a lifted lead was identified during preventative maintenance and installation of the Unit 1 main transformer. As a result, corrective actions were not taken and this led to an unplanned downpower from 100 percent to 15 percent reactor power.

Description. On January 30, 2014, while performing a startup following a forced outage, Unit 1 received annunciators "Main Transformer Cooling Trouble or DC Preferred Source Loss" and "Main Transformer Oil Flow Low" and dispatched operators to investigate. FENOC's troubleshooting efforts revealed that main transformer temperature control winding temperature was out-of-service due to a suspected wiring issue. Operations discussed taking manual control of transformer cooling if established limits were reached and implemented a temporary log to monitor transformer temperatures more frequently. On January 31, 2014, Unit 1 was operating at 100 percent power when an engineer performing a field walkdown discovered that the main transformer temperature controller (TTC), which provides control for transformer cooling stages, was not functioning as expected. The TTC outer display was reading zero amps, which indicates that it is not receiving power, and transformer oil and winding temperatures were not being calculated. Stage 3 cooling, which relies solely on winding temperature, will not automatically start if there is no power going to the TTC. Further inspection revealed that current transformer high voltage 'A' phase #5 (CT-HA.5), which provides power to the TTC, had a lifted lead (wire W/305) on the secondary circuit and

was therefore open-circuited and unavailable. After troubleshooting, FENOC made the decision to downpower Unit 1 to 15 percent reactor power to remove the main generator from service and land wire W/305 on the main transformer.

Current transformers (CTs) are instrument transformers that are used to supply a reduced value of current to meters, protective relays, and other instruments. CTs provide isolation from the high voltage primary, permit grounding of the secondary for safety, and step-down the magnitude of the measured current to a value that can be safely handled by the instruments. The transformer CT lead connections are made in the transformer control panel on shorting terminal blocks. When current is passed through the primary of a CT, an electromagnetic field (EMF) is induced in the CT's secondary winding causing current to flow. When the CT secondary circuit is open-circuited, no current flows and the EMF builds to a very high level. When this occurs the CT acts as a step-up transformer resulting in a high voltage being developed across the secondary winding of the CT. This high secondary voltage could lead to significant damage to the panel or the transformer.

The inspectors reviewed FENOC's root cause analysis of this event and determined that FENOC missed several opportunities to generate a condition report for the lifted wire W/305 and enter this issue into their corrective action program (CAP). Wire W/305 was observed lifted on two occasions during preventative maintenance in work orders 200395819 and 200518671, which were worked on August 23, 2011, and August 25, 2013, respectively. In both cases no CR was initiated and station transformer drawings were not updated to reflect the as-found field configuration. General Electric (GE) was contracted to perform inspections and testing while ASEA Brown Boveri (ABB) was to provide technical support and quality control during installation of the main transformer on Unit 1. On January 22, 2014, while performing CT ratio and polarity checks, a GE contractor identified wire W/305 was lifted. The GE contractor notified a FENOC electrician that wire W/305 was lifted; however, a CR was not generated. An ABB contractor also identified that wire W/305 was not landed while performing a warranty inspection on January 29, 2014; however, the contractor assumed that the wire would be landed and therefore did not inform FENOC. In each of these instances, no attempt was made to restore the wire to its proper configuration. Consequently, the main transformer was installed with wire W/305 lifted, which resulted in a CT open secondary circuit; stage 3 transformer cooling being unavailable due to the TTC not having power; and ultimately, an unplanned downpower to prevent transformer damage.

The inspectors reviewed the requirements of NOP-LP-2001, "Corrective Action Program." NOP-LP-2001, step 4.1.1.1 states, "contractors working under the FENOC quality program shall initiate CRs in accordance with this procedure." Additionally, step 4.1.2 states that "all adverse conditions shall be entered in the CR process." Step 3.1 defines an adverse condition as "any event, defect, characteristic, state or activity that prohibits or detracts from safe, efficient nuclear plant operation or a condition that could credibly impact nuclear safety, personnel safety, plant reliability or compliance with federal, state, or local regulations." The inspectors determined that FENOC failed to meet the requirements of NOP-LP-2001 when a CR was not initiated upon identifying that wire W/305 was lifted during preventative maintenance and installation of the main transformer.

Analysis. The inspectors determined that failure to initiate a CR upon identification of an adverse condition, in accordance with NOP-LP-2001, was a performance deficiency that was within the ability of FENOC to foresee and correct, and therefore should have been prevented. The performance deficiency was more-than-minor because it was associated with the Equipment Performance attribute of the Initiating Events cornerstone, and adversely affected the cornerstone objective of limiting the

likelihood of events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. Specifically, FENOC failed to initiate a CR upon identification of a lifted lead on the Unit 1 main transformer during preventative maintenance and installation. This led to an unplanned downpower from 100 percent to 15 percent reactor power, thus upsetting plant stability.

The inspectors evaluated this finding using IMC 0609, Attachment 4, "Initial Characterization of Findings," issued June 19, 2012, and IMC 0609, Appendix A, "The Significance Determination Process (SDP) for Findings At-Power," issued June 19, 2012. Using IMC 0609, Appendix A, Exhibit 1, "Initiating Events Screening Questions," this finding was determined to be of very low safety significance (Green), because it did not cause a reactor trip and the loss of mitigation equipment.

This finding has a cross-cutting aspect in the area of Human Performance, Field Presence, because FENOC failed to ensure supervisory and management oversight of work activities, including contractors and supplemental personnel. Specifically, FENOC did not ensure that supervisory and management oversight of contractors during the Unit 1 main transformer installation was adequate, and as a result, corrective actions were not taken when an adverse condition was identified, which led to an unplanned downpower. [H.2]

Enforcement. This finding is against NOP-LP-2001 for FENOC's failure to initiate a CR when an adverse condition was identified during preventative maintenance and installation of the Unit 1 main transformer. NOP-LP-2001 is not a procedure recommended by Regulatory Guide 1.33, "Quality Assurance Program Requirements (Operation)," Revision 2, and the work being performed was not on a safety-related system. Therefore, this finding does not involve enforcement action because no violation of a regulatory requirement was identified. The issue was entered into FENOC's CAP as CR 2015-08947. Because this finding did not involve a violation and was of very low safety significance (Green), it is identified as a FIN. **(FIN 05000334/2015008-01, Failure to Initiate a Condition Report for an Adverse Condition)**

## .2 Assessment of the Use of Operating Experience

### a. Inspection Scope

The inspectors reviewed a sample of condition reports associated with review of industry operating experience to determine whether FENOC appropriately evaluated the operating experience information for applicability to Beaver Valley Power Station and had taken appropriate actions, when warranted. The inspectors also reviewed evaluations of operating experience documents associated with a sample of NRC generic communications to ensure that FENOC adequately considered the underlying problems associated with the issues for resolution via their corrective action program.

In addition, the inspectors observed various plant activities to determine if the station considered industry operating experience during the performance of routine and infrequently performed activities.

b. Assessment

The inspectors determined that FENOC appropriately considered industry operating experience information for applicability, and used the information for corrective and preventive actions to identify and prevent similar issues when appropriate. The inspectors determined that operating experience was appropriately applied and lessons learned were communicated and incorporated into plant operations and procedures when applicable. The inspectors also observed that industry operating experience was routinely discussed and considered during the conduct of Management Ownership and Alignment meetings and pre-job briefs.

c. Findings

No findings were identified.

.3 Assessment of Self-Assessments and Audits

a. Inspection Scope

The inspectors reviewed a sample of audits, including the most recent audit of the corrective action program, departmental self-assessments, and assessments performed by independent organizations. Inspectors performed these reviews to determine if FENOC entered problems identified through these assessments into the corrective action program, when appropriate, and whether FENOC initiated corrective actions to address identified deficiencies. The inspectors evaluated the effectiveness of the audits and assessments by comparing audit and assessment results against self-revealing and NRC-identified observations made during the inspection.

b. Assessment

The inspectors concluded that self-assessments, audits, and other internal FENOC assessments were generally critical, thorough, and effective in identifying issues. The inspectors observed that FENOC personnel knowledgeable in the subject completed these audits and self-assessments in a methodical manner. FENOC completed these audits and self-assessments to a sufficient depth to identify issues which were then entered into the corrective action program for evaluation. In general, the station implemented corrective actions associated with the identified issues commensurate with their safety significance.

c. Findings

No findings were identified.

.4 Assessment of Safety Conscious Work Environment

a. Inspection Scope

During interviews with station personnel, the inspectors assessed the safety conscious work environment at Beaver Valley Power Station. Specifically, the inspectors interviewed personnel to determine whether they were hesitant to raise safety concerns to their management and/or the NRC. The inspectors also interviewed the station Employee Concerns Program coordinator to determine what actions are implemented to ensure employees were aware of the program and its availability with regards to raising safety concerns. The inspectors reviewed the Employee Concerns Program files to ensure that FENOC entered issues into the corrective action program when appropriate.

b. Assessment

During interviews, Beaver Valley Power Station staff expressed a willingness to use the corrective action program to identify plant issues and deficiencies and stated that they were willing to raise safety issues. The inspectors noted that no one interviewed stated that they personally experienced or were aware of a situation in which an individual had been retaliated against for raising a safety issue. All persons interviewed demonstrated an adequate knowledge of the corrective action program and the Employee Concerns Program. Based on these limited interviews, the inspectors concluded that there was no evidence of an unacceptable safety conscious work environment and no significant challenges to the free flow of information.

c. Findings

No findings were identified.

4OA6 Meetings, Including Exit

On June 25, 2015, the inspectors presented the inspection results to Mr. Eric Larson, Site Vice President and other members of the Beaver Valley Power Station staff. The inspectors verified that no proprietary information was retained by the inspectors or documented in this report.

ATTACHMENT: SUPPLEMENTARY INFORMATION

**SUPPLEMENTARY INFORMATION****KEY POINTS OF CONTACT**Licensee Personnel

E. Larson, Site Vice President  
 C. McFeaters, Director of Site Operations  
 S. Baldwin, Mechanical Maintenance Supervisor  
 D. Batina, Employee Concerns Program  
 C. Battistone, Oversight Assessor  
 W. Cohen, Regulatory Compliance Manager  
 A. Crotty, Electrical System Engineering Supervisor  
 T. Delmonico, Mechanical Maintenance Supervisor  
 J. Fontaine, RP Supervisor of ALARA  
 J. Gibbs, Mechanical Maintenance Supervisor  
 B. Haney, Supervisor  
 R. Hepp, Nuclear Engineer  
 D. Huff, Site Maintenance Manager  
 M. Jansto, System Engineer  
 D. Jones, In-Service Testing Coordinator  
 E. Loehlein, Site Operations Manager  
 M. Mayer, Configuration Control Engineering Specialist  
 T. Migdal, Operations Support Superintendent  
 A. Ray, Field Operations Supervisor  
 D. Salera, Manager Site Chemistry  
 S. Sawtschenko, Emergency Response Manager  
 B. Sepelak, Compliance Supervisor  
 J. Sharpless, Security Support Supervisor  
 K. Sloan, Shift Manager  
 T. Steed, Director Performance Improvement  
 M. Testa, Consulting Engineer  
 E. Thomas, Compliance Supervisor  
 D. Wacker, Regulatory Compliance Engineer  
 D. Wilson, Air-Operated Valve Engineer  
 B. Winters, Staff Nuclear Specialist

**LIST OF ITEMS OPENED, CLOSED, DISCUSSED, AND UPDATED**Opened and Closed

05000334/2015008-01	FIN	Failure to Initiate a Condition Report for an Adverse Condition
---------------------	-----	---

## LIST OF DOCUMENTS REVIEWED

### Section 40A2: Problem Identification and Resolution

#### Audits and Self-Assessments

CA-SA-BV-2013-0001, Beaver Valley Nuclear Safety Culture Assessment  
 FO-SA-2012-0037, Switchyard Control  
 MS-C-14-03-01, Operations Multi-Site Audit Report  
 MS-C-14-10-19, Fleet Oversight Audit Report  
 MS-C-14-11-24, Emergency Preparedness Multi-Site Audit Report  
 SN-SA-2013-0321, Fleet Oversight RP Fundamentals  
 SN-SA-2013-0358, 11/05/13 Unusual Event  
 SN-SA-2013-0366, Chemistry Work Management Implementation  
 SN-SA-2013-0367, 1R22 M&TE control assessment  
 SN-SA-2014-0036, Analysis of Security Access Control Program in relation to 71130.02  
 SN-SA-2014-0355, Radiation Protection Fundamentals  
 SN-SA-2014-0365, Snapshot Assessment on NLO Adherence for CA-2013-06053-011  
 SN-SA-2014-0426, Unusual Event, 3/2/14, U1 Containment Fire Alarm (EAL HU4)  
 SN-SA-2014-0428, Snapshot of Self-Assessment for 2R17 Engineering Readiness Review  
 SN-SA-2014-0440, 2013 – 2<sup>nd</sup> 6 Months – SMT Safety Culture Review  
 SN-SA-2014-0502, 2014 Evaluated Exercise Performance Results  
 SN-SA-2014-0543, 2014 2<sup>nd</sup> Quarter Nuclear Safety Culture Monitoring Panel Meeting  
 SN-SA-2014-0654, Beaver Valley Radwaste and Radioactive Shipments  
 SN-SA-2014-0663, Beaver Valley 1R22 Shutdown and Startup Chemistry  
 SN-SA-2014-0669, 2014 3<sup>rd</sup> Quarter Nuclear Safety Culture Monitoring Panel Meeting  
 SN-SA-2015-0011, Beaver Valley 2014 Annual Snap-Shot Self-Assessment on Clearance  
     Process, Procedure and Practices  
 SN-SA-2015-0041, Maintenance Fundamentals  
 SN-SA-2015-0042, Focused Nuclear Safety Culture Monitoring Panel Meeting – Site Protection  
 SN-SA-2015-0047, Third Quarter 2014 NSCMP WP.2a Increase  
 SN-SA-2015-0051, Assess the Quality of a Random Sampling of Older CAAP Products  
 SN-SA-2015-0078, Operations Procedure Action Plan  
 SN-SA-2015-0134, Effectiveness Review of CR-2014-00175 "BVPS Unit 1 Reactor Trip due to  
     Main Unit Transformer Electrical Differential Protection System Actuation"  
 SN-SA-2015-0727, Breakdown of Open Short Term Corrective Actions

Condition Reports

2012-03347	2014-02205	2014-16358
2012-10642	2014-02298	2014-16901
2012-13706	2014-02473	2014-17260
2013-03706	2014-02541	2014-17261
2013-05095	2014-02548	2014-17537
2013-09223	2014-03030	2014-17624
2013-09519	2014-03346	2014-17775
2013-10162	2014-03502	2014-18279
2013-13701	2014-03945	2015-00135
2013-15192	2014-04165	2015-00212
2013-15379	2014-04205	2015-00456
2013-16097	2014-04220	2015-00786
2013-16100	2014-04301	2015-00934
2013-16102	2014-04304	2015-01082
2013-17679	2014-04517	2015-01090
2013-17848	2014-04630	2015-01135
2013-17888	2014-05216	2015-01136
2013-17930	2014-05237	2015-01137
2013-18383	2014-05987	2015-01323
2013-18410	2014-06185	2015-01428
2013-18743	2014-07289	2015-01564
2013-18805	2014-07495	2015-01710
2013-18962	2014-08011	2015-01918
2013-19151	2014-08021	2015-02799
2013-19250	2014-08694	2015-02969
2013-19448	2014-09149	2015-03421
2013-19533	2014-09199	2015-03801
2013-19653	2014-09246	2015-03940
2013-19653	2014-09256	2015-04327
2013-19737	2014-09256	2015-04928
2014-00011	2014-09535	2015-05365
2014-00081	2014-09736	2015-05467
2014-00175	2014-09989	2015-05749
2014-00176	2014-10656	2015-05926
2014-00177	2014-10891	2015-06045
2014-00177	2014-11282	2015-06086
2014-00187	2014-12240	2015-06119
2014-00250	2014-12718	2015-06224
2014-00274	2014-12720	2015-06791
2014-00392	2014-13074	2015-08077
2014-00937	2014-14172	2015-08146
2014-01088	2014-14265	2015-08326
2014-01634	2014-14992	2015-08591
2014-01655	2014-15536	2015-08609
2014-01723	2014-15819	2015-08947
2014-01887	2014-16324	

Operating Experience

IN 2012-03, Design Vulnerability in Electric Power System  
IN 2014-03, Turbine-Driven Auxiliary Feedwater Pump Overspeed Trip Mechanism Issues  
IN 2014-07, Degradation of Leak Chase Channel Systems for Floor Welds of Metal  
Containment Shell and Concrete Containment Metallic Liner  
IN 2014-12, Crane and Heavy Lift Issues Identified during NRC Inspections  
IN 2015-02, Antifreeze Agents in Fire Water Sprinkler Systems  
RIS 15-01, Qualification Requirements for Bolt and Stud Non-Destructive Examinations

Non-Cited Violations and Findings

FIN 05000334/2013405-01, 05000412/2013405-01; Failure to Ensure Complete Implementation of EOPs  
FIN 05000334/2014002-02; Main Transformer Failure due to Static Electrification  
NCV 05000334/2013005-01; Moisture Separator Reheater Valve Misposition Results in Plant Transient  
NCV 05000334/2013005-2; Insufficient VHRA Control Undervessel  
NCV 05000334/2014002-01; Inadequate Post Maintenance Testing Procedures Resulted in TDAFW Pump Inoperability  
NCV 05000334/2014003-01, 05000412/2014003-02; Removal of Missile Barrier Renders Containment Inoperable  
NCV 05000334/2014005-02, 05000412/2014005-02; Failure to Properly Ship Category 2 Radioactive Material  
NCV 05000334/2014007-01, 05000412/2014007-01; Procedure Inadequacy for Minimum Pump Flow Requirements  
NCV 05000412/2013008-01; Untimely Problem Identification and Corrective Action for Degraded Auxiliary Feedwater Pump Steam Supply Valve  
NCV 05000412/2014004-01; Inadequate Plant Startup Procedure Led to Manual Reactor Trip

Procedures

1/2OM-53C.4A.100.3, Airborne Threat, Issue 1 Revision 10  
2-CHM-SAM-3.37, Reactor Coolant, Revision 58  
A5.735A, Emergency Preparedness Plan, Section 1, Definitions, Revision 24  
A5.735A, Emergency Preparedness Plan, Section 4, Emergency Conditions, Revision 30  
NOBP-ER-3101, Large Transformers, Revision 6  
NOBP-LP-2001, Corrective Action Program, Revision 35  
NOBP-LP-2003, Employee Concerns Program, Revision 4  
NOBP-LP-2008, FENOC Corrective Action Review Board  
NOBP-LP-2010, FENOC Trend Coding, Revision 11  
NOBP-LP-2011, FENOC Cause Analysis, Revision 17  
NOBP-LP-2012, Fleet Oversight Standards and Expectations, Revision 9  
NOBP-LP-2022, Compliance Auditing, Revision 13  
NOBP-LP-2023, Performance Assessment, Revision 15  
NOBP-LP-2031, Fleet Oversight External Independent Audit Process, Revision 6  
NOBP-LP-2033, Corrective Action Program Curriculum Review Committee Charter, Revision 2  
NOBP-LP-2100, Fleet Operating Experience Process, Revision 11

NOBP-LP-2102, Evaluating and Tracking Changes to Regulations, Regulatory Guidance, Industry Guidance, or Other Information, Revision 0  
NOBP-WM-2502, Management and Oversight of On-Site Supplemental Personnel, Revision 10  
NOP-LP-2001, Corrective Action Program, Revision 36  
NOPL-LP-2003, Safety Conscious Work Environment, Revision 2  
NORM-LP-2003, Analytical Methods Guidebook, Revision 5

Work Orders

200395819  
200460819  
200518671  
200520021  
200520638

Miscellaneous

**LIST OF ACRONYMS**

ADAMS	Agency-wide Documents Access and Management System
CFR	Code of Federal Regulations
IMC	Inspection Manual Chapter
NRC	Nuclear Regulatory Commission
PARS	Publicly Available Records System
SDP	Significance Determination Process
ABB	ASEA Brown Boveri
CAP	corrective action program
CR	condition report
CT	current transformer
CT-HA.5	current transformer high voltage 'A' phase #5
EMF	electromagnetic field
GE	General Electric
SDP	Significance Determination Process
TTC	transformer temperature controller