



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**

REGION IV
1600 E. LAMAR BLVD.
ARLINGTON, TX 76011-4511

November 9, 2016

EA-14-008
EA-16-124

Rich Anderson, Site Vice President
Arkansas Nuclear One
Entergy Operations, Inc.
1448 SR 333
Russellville, AR 72802-0967

**SUBJECT: ARKANSAS NUCLEAR ONE – NRC PROBLEM IDENTIFICATION AND
RESOLUTION INSPECTION AND CONFIRMATORY ACTION LETTER
(EA-16-124) FOLLOW-UP INSPECTION REPORT 05000313/2016010 AND
05000368/2016010**

Dear Mr. Anderson:

On October 6, 2016, the U.S. Nuclear Regulatory Commission (NRC) completed a Problem Identification and Resolution inspection. This inspection was conducted in addition to the normal biennial baseline inspection in accordance with NRC Inspection Manual Chapter 0305, "Operating Reactor Assessment Program," as a result of the Arkansas Nuclear One (ANO) facility, Units 1 and 2, being in the Multiple/Repetitive Degraded Cornerstone Column of the Reactor Oversight Process Action Matrix. In conjunction with this inspection, the NRC inspection team also reviewed your progress in implementing the specific actions from the ANO Comprehensive Recovery Plan that were committed to in a Confirmatory Action Letter (CAL) dated June 17, 2016 (NRC's Agencywide Documents Access and Management System (ADAMS) Accession No. ML16169A193) (EA-16-124). The team discussed the results of this inspection with you and other members of your staff. The team documented the results of this inspection in the enclosed inspection report.

Based on the inspection, the team determined that ANO's corrective action program, and your staff's implementation of the corrective action program, were adequate to support nuclear safety.

In reviewing your corrective action program, the team assessed how well your staff identified problems at a low threshold, your staff's implementation of the station's process for prioritizing and evaluating these problems, and the effectiveness of corrective actions taken by the station to resolve these problems. The team also evaluated other processes your staff used to identify issues for resolution. These included your use of audits and self-assessments to identify latent problems and your incorporation of lessons learned from industry operating experience into station programs, processes, and procedures. The team determined that your station's performance in each of these areas supported nuclear safety. The team noted that your Nuclear Independent Oversight organization conducted thorough and critical audits and

assessments of station performance; however, the station did not always address the identified weaknesses in a timely or effective manner.

The team determined that your station's management maintains a safety-conscious work environment in which your employees are willing to raise nuclear safety concerns through at least one of the several means available. However, progress on improving safety culture was determined to be limited.

The team's review of ANO's progress in implementing the portions of the ANO Comprehensive Recovery Plan that were committed to in the CAL described above focused on those actions intended to improve performance in problem identification and resolution processes as well other actions which ANO management had concluded were complete and had been determined to be effective. The inspection included a review of corrective actions to address the finding of substantial safety significance (Yellow) involving the failure to adequately approve the design and to load test a temporary lift assembly (EA-14-008). The attached report documents the basis for closing 14 of the 25 CAL actions, as well as observations related to the station's progress in addressing those actions that were not sufficiently complete or effective to close at this time. The NRC will further review your development and implementation of corrective actions for these risk-significant findings during future inspections.

The NRC inspectors did not identify any findings or violations of more than minor significance.

In accordance with Title 10 of the *Code of Federal Regulations* (10 CFR) 2.390, "Public Inspections, Exemptions, Requests for Withholding," a copy of this letter, its enclosure, and your response (if any) will be available electronically for public inspection in the NRC's Public Document Room or from the Publicly Available Records (PARS) component of the NRC's Agencywide Documents Access and Management System (ADAMS). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Sincerely,

/RA Brian Tindell for/

Neil O'Keefe, Chief
Project Branch E
Division of Reactor Projects

Docket Nos.: 50-313 and 50-368
License Nos.: DPR-51 and NPF-6

Enclosure: Inspection Report 05000313/2016010
and 05000368/2016010
w/ Attachment 1: Supplemental Information
w/ Attachment 2: Information Request

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U.S. NUCLEAR REGULATORY COMMISSION

REGION IV

Docket(s): 05000313; 05000368

License: DPR-51; NPF-6

Report: 05000313/2016010; 05000368/206010

Licensee: Entergy Operations, Inc.

Facility: Arkansas Nuclear One, Units 1 and 2

Location: Junction of Highway 64 West and Highway 333 South
Russellville, Arkansas

Dates: August 29 through September 16, 2016

Team Lead: John Dixon, Senior Project Engineer

Inspectors: M. Chambers, Physical Security Inspector
J. Choate, Project Engineer
H. Freeman, Senior Reactor Inspector
S. Hedger, Operations Engineer
M. Tobin, Resident Inspector

Approved By: N. O'Keefe
Chief, Project Branch E
Division of Reactor Projects

Enclosure

SUMMARY

IR 05000313/2016010; 05000368/2016010; 08/29/2016 – 09/16/2016; Arkansas Nuclear One, Units 1 and 2; Problem Identification and Resolution (Additional Biennial) and Confirmatory Action Letter Follow-up Inspection.

The inspection activities described in this report were performed between August 29, and September 16, 2016, by inspectors from the NRC's Region IV office and the resident inspector at ANO. This report documents no findings of significance. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process."

Assessment of Problem Identification and Resolution

Based on its inspection sample, the team concluded that the licensee maintained a corrective action program in which individuals generally identified issues at an appropriately low threshold. Once entered into the corrective action program, the licensee generally evaluated and addressed these issues appropriately and timely, commensurate with their safety significance, although the team identified that examples of issue screening which under-classified issues compared to program guidance improved but continued to occur. The licensee's corrective actions were generally effective, addressing the causes and extents of condition of problems.

The licensee evaluated industry operating experience for relevance to the facility and entered applicable items in the corrective action program. Improvements were noted in the rigor of both the evaluation and actions to address industry operating experience. The licensee incorporated industry and internal operating experience in its root cause and apparent cause evaluations. The Nuclear Independent Oversight organization performed effective and self-critical audits and assessments of station performance, which provided timely information concerning the effectiveness of improvement efforts; however, the licensee did not always address the identified weaknesses in a timely or effective manner. The team also observed that the licensee improved the use of benchmarking at top-performing industry programs to identify and adopt industry best practices.

The licensee maintained a safety-conscious work environment in which personnel were willing to raise nuclear safety concerns without fear of retaliation. However, progress on improving safety culture was determined to be limited.

No findings were identified.

REPORT DETAILS

4. OTHER ACTIVITIES (OA)

4OA2 Problem Identification and Resolution (71152)

The team based the following conclusions on a sample of corrective action documents that were open during the assessment period, which ranged from January 2016, to the end of the on-site portion of this inspection on September 16, 2016.

.1 **Assessment of the Corrective Action Program Effectiveness**

a. Inspection Scope

The team reviewed approximately 150 condition reports (CRs), including associated root cause analyses and apparent cause evaluations, from approximately 9300 that the licensee had initiated or closed between January 2016 and August 2016. The majority of these (approximately 6200) were lower-level CRs that did not require cause evaluations. The inspection sample focused on higher-significance CRs for which the licensee evaluated and took actions to address the cause of the condition. In performing its review, the team evaluated whether the licensee had properly identified, characterized, and entered issues into the corrective action program, and whether the licensee had appropriately evaluated and resolved the issues in accordance with established programs, processes, and procedures. The team also reviewed these programs, processes, and procedures to determine if any issues existed that may impair their effectiveness.

The team reviewed a sample of performance metrics, system health reports, operability determinations, self-assessments, trending reports and metrics, and various other documents related to the licensee's corrective action program. The team evaluated the licensee's efforts in determining the scope of problems by reviewing selected logs, work orders, self-assessment results, audits, system health reports, action plans, and results from surveillance tests and preventive maintenance tasks. The team reviewed daily CRs and attended the licensee's condition review group and operations focus meetings to assess the reporting threshold and prioritization efforts, and to observe the corrective action program's interfaces with the operability assessment and work control processes. The team's review included an evaluation of whether the licensee considered the full extent of cause and extent of condition for problems, as well as a review of how the licensee assessed generic implications and previous occurrences of issues. The team assessed the timeliness and effectiveness of corrective actions, completed or planned, and looked for additional examples of problems similar to those the licensee had previously addressed. The team conducted interviews with plant personnel to identify other processes that may exist where problems may be identified and addressed outside the corrective action program.

The team reviewed corrective action documents that addressed past NRC-identified violations to evaluate whether corrective actions addressed the issues described in the inspection reports. The team reviewed a sample of corrective actions closed to other corrective action documents to ensure that the ultimate corrective actions remained appropriate and timely. The team reviewed a sample of 50 CRs where the licensee had

changed the significance level after initial classification to determine whether the level changes were in accordance with station procedure and that the conditions were appropriately addressed.

The team concluded that the licensee's corrective action program was adequate to support nuclear safety. Specifically, corrective action procedures and program design were consistent with industry practices relative to 10 CFR 50, Appendix B requirements for conditions adverse to quality and significant conditions adverse to quality. The team concluded that the corrective action program was adequately implemented; complied with regulatory requirements; and that the licensee generally maintained a low threshold for the formal identification of problems and entry into the corrective action program for evaluation.

b. Assessments

1. Effectiveness of Problem Identification

During the 8-month inspection period, licensee staff wrote approximately 9300 CRs. The team determined that most conditions that required writing a CR by Procedure EN-LI-102-ANO-RC, "Corrective Action Program," Revision 4, had been appropriately entered into the corrective action program. However, the team noted several examples where the licensee had failed to properly classify conditions in accordance with procedures, specifically issues that met the criteria to be classified as adverse and therefore be addressed within the corrective action program continued to be misclassified as non-adverse and removed from the corrective action program:

- The licensee initially evaluated three tagouts that had been hanging for greater than 90 days on two different CRs as non-adverse. CR-ANO-1-2016-1736 documented a tagout on the main chiller cooling water system and the breathing air compressor room exhaust fan, and CR-ANO-2-2016-3129 documented a tagout on the liquid radwaste system. Per Procedure EN-OP-102, Attachment 9.13, "Monthly Tagout Audit," a Process Applicability Determination per Procedure EN-LI-100 is to be performed if a tagout has been hanging for greater than 90 days. This Process Applicability Determination is performed to ensure that the licensing basis has not been impacted and that a subsequent 10 CFR 50.59, "Changes, Tests, and Experiments," review is required. In response, the licensee changed the classification on the CRs, and initiated CR-ANO-C-2016-3582 to document providing feedback to the CR screeners on the expected classification for similar conditions in the future. This finding was considered to be an additional example of finding 05000313/2016007-14 and 05000368/2016007-14, "Failure to Properly Implement the Corrective Action Program," because the licensee has not had enough time to implement corrective actions.
- An onsite contractor terminated two employees "for cause," but failed to report the information to Access Authorization per 10 CFR 73.56, "Personnel Access Authorization Requirements for Nuclear Power Plants," and Procedure EN-NS-101, "Unescorted Access Authorization Program," Revision 23, as documented in CR-ANO-C-2016-3472. This CR was

classified as a non-adverse condition by the condition review group, contrary to Procedure EN-LI-102-ANO-RC, Attachment 9.2, Section 4, which lists examples of conditions adverse to quality and includes, "Failure to comply with design or license basis commitments..." The licensee documented in CR-ANO-C-2016-3746 that the condition review group incorrectly screened the condition and CR-ANO-C-2016-3472 was reclassified as a category C condition. This finding was considered to be an additional example of finding 05000313/2016007-14 and 05000368/2016007-14, "Failure to Properly Implement the Corrective Action Program," because the licensee has not had enough time to implement corrective actions.

- The licensee documented in CR-ANO-1-2016-978 that the Unit 2 procedure for closing the equipment hatch contained specific information on the staffing of the hatch with dedicated individuals, minimum number of bolts required, physical limitations within the protected area, and communication requirements, but that the related Unit 1 procedure did not contain similar details. The condition review group classified this concern as non-adverse, contrary to Procedure EN-LI-102-ANO-RC, Section 3 [6] Condition Adverse to Quality (CAQ), which specified...(f) Nonconformances – deficiencies in...procedure which render the quality of an item unacceptable or indeterminate; however, the team noted that the licensee did make changes to the Unit 1 procedure to include the required information. The licensee documented this issue in CR-ANO-C-2016-3754.

Overall, the team concluded that the licensee generally maintained a low threshold for the formal identification of problems and entry into the corrective action program for evaluation. Most of the personnel interviewed by the team understood the requirements for CR initiation and expressed a willingness to enter newly identified issues into the corrective action program at a very low threshold.

2. Effectiveness of Prioritization and Evaluation of Issues

The sample of CRs reviewed by the team focused primarily on issues screened by the licensee as having higher-level significance, including those that received cause evaluations, those classified as significant conditions adverse to quality, and those that required engineering evaluations. The team also reviewed a number of CRs that included or should have included immediate operability determinations to assess the quality, timeliness, and prioritization of these determinations.

The team identified several examples where the licensee downgraded CRs documenting category B conditions to category C or D, including NRC identified violations that are specifically listed as category B in the corrective action program procedure. While the procedure allows management discretion to re-classify a concern, the team observed that the procedure did not contain any guidance to ensure that the use of management discretion to reclassify CRs was consistently applied in a manner that met regulatory requirements.

The team also observed that in response to an NRC observation that all CRs were not being screened for operability impact by a senior reactor operator as required by the operations turnover procedure, the licensee had implemented corrective action to have the on-shift shift technical advisor perform this task. The team identified

through interviews with operators that this resulted in an increased focus on operability determinations and the elimination of CRs that missed operability reviews for the period of time the team reviewed, but it also had an unintended consequence. Since the shift technical advisor is also the operations field supervisor, the amount of time spent reviewing all CRs caused a corresponding reduction in the time spent observing and supervising activities in the plant.

Overall, the team determined that the licensee's process for screening and prioritizing issues that had been entered into the corrective action program supported nuclear safety. The licensee's operability determinations were consistent, accurately documented, and completed in accordance with procedures.

3. Effectiveness of Corrective Actions

In general, the corrective actions identified by the licensee to address adverse conditions were effective. The team noted a number of instances in which corrective actions had been untimely or incompletely accomplished, which are documented in Section 4OA5 below.

Overall, the team concluded that the licensee generally identified effective corrective actions for the problems evaluated in the corrective action program. The licensee generally implemented these corrective actions in a timely manner, commensurate with their safety significance, and reviewed the effectiveness of the corrective actions appropriately.

.2 Assessment of the Use of Operating Experience

a. Inspection Scope

The team examined the licensee's program for reviewing industry operating experience, including reviewing the governing procedures. The team reviewed 10 (out of approximately 70 performed between January and July 2016) industry operating experience communications and the associated site evaluations to assess whether the licensee had appropriately assessed the communications for relevance to the facility. The team also reviewed assigned actions to determine whether they were appropriate.

b. Assessment

Overall, the team determined that the licensee appropriately evaluated industry operating experience for its relevance to the facility. Operating experience information was incorporated into plant procedures and processes as appropriate. The licensee developed improved operating experience program health metrics to better identify issues that were affecting the health of the program. Improvements were noted in the rigor of both the evaluation rigor and actions to address industry operating experience. Actions taken to address trend issues identified by the metrics has resulted in improved evaluations and an improvement in the overall program health as measured by the metrics. For example, the quality of the evaluations has improved and the time for review has decreased. However, the improving trend was not yet consistent or sustained. A significant improvement was noted for August 2016, but more time is needed to determine long-term effectiveness and overall health of the operating experience program.

.3 Assessment of Self-Assessments and Audits

a. Inspection Scope

The team reviewed a sample of nine Nuclear Independent Oversight (NIO) follow-up surveillances and four audits to assess whether the licensee was regularly identifying performance trends and effectively addressing them. The team also reviewed audit reports to assess the effectiveness of assessments in specific areas. The specific self-assessment documents and audits reviewed are listed in Attachment 1.

b. Assessment

Overall, the team concluded that the licensee had an effective self-assessment and audit process. NIO routinely conducted follow-up surveillances of quality assurance findings identified during audits. The team found that these audits and surveillances were self-critical and thorough enough to identify deficiencies and were consistent with NRC observations.

For example, in the Comprehensive Recovery Plan Surveillance dated June 3, 2016, NIO identified that the Organizational Capacity Area Action Plan was “off-track” because the capacity was not meeting demands as indicated by multiple examples. The team’s review of CRs indicated the gap between the site organizational capacity needs and the available organizational capacity has not been closed. NIO also determined that the effectiveness of the Corrective Action Program Area Action Plan was “indeterminate” because implementation was still in progress in the majority of cases; the development of operating experience training had not been completed; changes to the trending and performance review procedure have not yet been utilized; and interim effectiveness measures would not be conducted for nearly 2 months. NIO also noted some improvements in closure quality and alignment between CR screening and the condition review group. However, NIO was concerned with the sustainability of the gains because the gains were accomplished using supplemental staffing.

The team noted that while NIO conducted thorough and critical audits and assessments of station performance, the station did not always address the identified weaknesses in a timely or effective manner.

The team also noted that audits and self-assessments performed by licensee personnel were improved compared to those reviewed during the Inspection Procedure 95003 supplemental inspection. The licensee’s focus on correctly following the benchmarking and self-assessment procedures has resulted in more thorough and critical evaluations of station performance. For example, the self-assessment of the Department Performance Review Meeting and the Aggregate Performance Review Meeting identified several “needs improvement” items that the station is resolving by either generating a procedure change, a training analysis review, or coaching and mentoring.

.4 Assessment of Safety-Conscious Work Environment

a. Inspection Scope

The team interviewed 20 individuals in four focus groups. The purpose of these interviews was to provide insights into whether the licensee had improved aspects of the safety conscious work environment and nuclear safety culture, and to verify the willingness of licensee staff to raise nuclear safety issues that had been confirmed during the Inspection Procedure 95003 supplemental inspection. The focus group participants were selected from work groups that had been identified as priority groups by the ANO Nuclear Safety Culture Monitoring Panel and other work groups including operations, maintenance, engineering, health physics, and security.

During the Inspection Procedure 95003 supplemental inspection completed on February 26, 2016, the NRC confirmed the results of ANO's nuclear safety culture assessments and cause evaluations which had identified areas of concern (and priority attributes) including:

- Leadership safety values and actions (resources, leader behaviors, field presence, strategic commitment to safety),
- Decision making (consistent process and conservative bias),
- Problem identification and resolution (resolution, trending),
- Continuous learning (operating experience, training),
- Effective safety communication (bases for decisions), and
- Questioning attitude (challenge assumptions, challenge the unknown).

The team initiated discussions during the focus group interviews to assess whether the licensee's efforts to address these areas had resulted in any progress.

To supplement the focus group discussions, the team interviewed the Employee Concerns Program manager to assess her perception of the site employees' willingness to raise nuclear safety concerns. The team reviewed the Employee Concerns Program case log and select case files. The team also reviewed the minutes from the licensee's most recent Nuclear Safety Culture Monitoring Panel meetings.

b. Assessment

The focus group discussions indicated that workers believed that licensee management was making efforts to address some of the priority attributes of the areas of concerns listed above. For example, most individuals indicated that focus has shifted towards operating the plant safely over production. While several individuals from each of the focus groups indicated that some station leaders had made positive impact on the working environment, all groups appeared to agree that it was too soon to tell whether

the changes would be sustained. Additionally, some individuals commented that the site was still more reactive than proactive, but they believed that progress has been made.

Many of the participants indicated that they believed that while management was making efforts to close the organizational capacity gaps, the efforts have not been effective because of the time required to hire and train new employees, and the loss of knowledge and capability due to retirement. Additionally, several individuals questioned the focus of these efforts because they believed that more individuals needed to be hired for certain groups (work planning and scheduling in particular) than were being solicited. One example provided concerning this resource gap was having to deal with 40 work package scope additions that needed to be added to the outage schedule without adding resources a few weeks before the outage was to commence.

A few individuals commented that management's efforts to increase their field presence were ineffective; indicating that they believed management was so busy that their field presence efforts were brief and did not result in effective coaching or mentoring. For example, the operations shift technical advisors, who are also the field supervisors, were assigned additional work reviewing all condition reports for operability, and this had reduced the time spent in the field.

Regarding the ANO Employee Handbook, some individuals indicated licensee management was trying to use a pocket reference booklet to change behaviors instead of trying something more effective. This handbook was developed to address several improvement initiatives in several Area Action Plans by providing station personnel with a pocket reference of key expectations. However, all individuals indicated that the handbook was being used, primarily during the morning briefings by supervisors and managers – and a few felt that the use of the handbook appeared to be changing the safety culture. One individual found the handbook was useful in reminding and holding management accountable to the same expectations that the workers were expected to meet.

Based upon these focus group discussions, the team concluded that ANO continues to maintain a safety-conscious work environment where individuals felt free to raise safety concerns without fear of retaliation, intimidation, harassment, or discrimination. Focus group participants reported various avenues available for raising concerns including the condition reporting process, the chain-of-command, the employee concerns program, and the NRC, but most individuals stated that they first raise safety concerns directly to their supervisor. All individuals indicated that they had been trained on using the condition reporting process and nearly all had used the system.

.5 Review of Open Risk-Significant Findings

(Discussed) VIO 05000313/2013012-04 (EA-14-008), Unit 1 - Failure to Follow the Materials Handling Program during the Unit 1 Generator Stator Move, and VIO 05000368/2013012-05, Unit 2 - Failure to Follow the Materials Handling Program during the Unit 1 Generator Stator Move

The licensee's corrective action plan included revising project management Procedures EN-FAP-PM-003, "Project Implementation – Segment 1 & 2" and EN-FAP-PM-004, "Project Implementation – Segment 3 & 4," which superseded Procedure EN-DC-114, "Project Management," to ensure that: (1) projects are

organized and managed with effective support by subject matter experts and effective vendor and technical oversight, and (2) high consequence risks are properly identified and eliminated/mitigated through a structured risk management process. Additional corrective actions included issuing a revised Procedure EN-OM-126, "Management and Oversight of Supplemental Personnel," to establish improved processes for oversight of supplemental personnel, as well as conducting reviews of ongoing and planned site projects to ensure effective measures for risk management and oversight of contracted technical services are established and maintained.

The team reviewed the licensee's root cause evaluations and some completed and planned corrective actions. ANO implemented a site-specific Procedure, EN-OM-126-ANO-RC, "Management and Oversight of Supplemental Personnel," to address specific observations identified by the Vendor Oversight Team, NIOS, and the NRC. Several observations are documented in Section 4OA5.1 VO-1, VO-4, and VO-18 below.

The NRC will further review the licensee's evaluation of these issues and response to these risk-significant findings during future supplemental inspections. Violations VIO 05000313/2013012-04 and VIO 05000368/2013012-05 remain open.

4OA5 Other Activities

Confirmatory Action Letter Follow-up (IP 92702)

.1 Actions to Address Significant Performance Deficiencies

VO-1 Designate a Subject Matter Expert (SME) to oversee implementation of the procedure for Management and Oversight of Supplemental Personnel and contractor oversight for ANO. CR-ANO-C-2014-2318 CA-94, 95, 96, 97, 98, 99, and 165

During the 95003 supplemental inspection, the NRC team concluded that actions to improve contractor oversight have not yet been fully effective; further action was needed because designated ANO oversight personnel lacked adequate guidance and training to perform their oversight role. ANO had not adequately addressed the supervision of supplemental employees who perform work.

To evaluate the licensee's corrective action effectiveness the team reviewed CR-ANO-C-2014-2318 CA-94, 95, 96, 97, 98, 99, and 165 and Procedures EN-OM-126, "Management and Oversight of Supplemental Personnel," Revision 3, and EN-OM-126-ANO-RC, "Management and Oversight of Supplemental Personnel," Revision 0.

The team determined that the new designated subject matter expert had over 30 years of nuclear experience and was external to Entergy Operations, Inc. The team reviewed feedback that the expert provided ANO regarding a sample review of calculations by an independent contractor. The expert fostered a collaborative dialog between ANO and the contractor to ensure that contractor-identified discrepancies were resolved in accordance with the licensee's procedures. The team determined that the expert added significant value in reviewing the licensee's implementation of vendor oversight using Procedure EN-OM-126, and by working with the new ANO Vendor Oversight Team to

develop a new ANO-specific Procedure EN-OM-126-ANO-RC. ANO also incorporated the subject matter expert role into the responsibilities of Procedure EN-OM-126-ANO-RC.

Based on the actions taken by the licensee, data evaluated by the team, and observations performed on site, the team concluded that the actions taken to address VO-1 were effective. Therefore, VO-1 is closed.

VO-4 Establish a Vendor Oversight Team to drive continuous improvement in Vendor Oversight. CR-ANO-C-2015-2838 CA-15

During the 95003 supplemental inspection, the NRC team concluded that actions to improve contractor oversight have not yet been fully effective; further action was needed because oversight plans for contract outage workers were inadequate and inconsistent with no minimum standards, qualification requirements for contractors to act as supervisors did not have a consistent standard, and designated ANO oversight personnel lacked adequate guidance and training to perform their oversight role.

To evaluate the licensee's corrective action effectiveness, the team reviewed CR-ANO-C-2015-2838 CA-15, Procedure EN-FAP-OM-017, "Continuous Improvement Program (CIP)," Revision 1, and meeting minutes for the Vendor Oversight Team.

The team determined that the Vendor Oversight Team had been established in accordance with Procedure EN-FAP-OM-017, which established the group structure, quorum requirements, and a team charter. Six specific performance issues were identified for improvement based on the root cause evaluation performed on vendor oversight.

The team reviewed the meeting minutes and was able to confirm that the Vendor Oversight Team was following quorum requirements, adhering to the charter, and using multiple methods to measure the effectiveness of overseeing contractors with respect to the six targeted performance issues. A specific outcome of the Vendor Oversight Team reviewing various inputs into the overall performance of contractor oversight was the development of a site-specific vendor oversight procedure to be able to build on the fleet procedure and tailor it to ANO's specific improvement needs. The new Procedure EN-OM-126-ANO-RC incorporated more detailed responsibilities, more frequent supervision, and more frequent interaction between Entergy and the contractor. However, the team noted that the Vendor Oversight Team developed their insights from reviews of other processes rather than making independent field observations.

Based on the actions taken by the licensee, data evaluated by the team, and observations performed on site, the team concluded that the actions taken to address VO-4 were effective. Therefore, VO-4 is closed.

VO-18 Revise Project Management procedures to ensure projects are organized and managed with (1) effective support by subject experts and (2) effective vendor and technical oversight. CR-ANO-C-2014-2318 CA-15 and 193

During the 95003 supplemental inspection, the NRC team noted that ANO's extent of cause review for the cause evaluation identified the following weaknesses needing improvement: assessing whether the organization of temporary work groups and large multi-discipline project teams ensured the ability to provide adequate oversight; assessing whether technical/administrative procedures provided sufficient guidance to identify and address items with potentially high consequences; assessing whether non-engineering procedures with the potential to affect nuclear safety identified circumstances where engineering support should be obtained; improving guidance to ensure that the identification and management of risk items with potentially high consequences; developing a strategy to reinforce human performance behaviors in the areas of procedure use and adherence, challenging assumptions, and field presence by leaders; and revising procedures to clarify the control of engineering support.

To evaluate the licensee's corrective action effectiveness, the team reviewed CR-ANO-C-2014-2318 CA-15 and 193, CR-ANO-C-2016-3046, CR-ANO-C-2016-3336, CR-ANO-C-2016-3539, CR-ANO-C-2016-3540, Procedures EN-OM-126, EN-OM-126-ANO-RC, EN-FAP-PM-003, "Project Implementation – Segment 1 & 2," Revision 3, and EN-FAP-PM-004, "Project Implementation – Segment 3 & 4," Revision 1, and the licensee's effectiveness assessment.

The team determined that while the project implementation Procedures EN-FAP-PM-003 and EN-FAP-PM-004 had been revised, Procedure EN-OM-126-ANO-RC for management and oversight of supplemental workers had recently been substantially revised (in May 2016). This has not allowed enough time to demonstrate that the station is correctly implementing oversight of supplemental workers per procedural requirements in a sustained manner. The team concluded that action VO-18 and the changes to Procedure EN-OM-126-ANO-RC were significant contributors to the success of improving vendor and technical oversight. The team determined that not enough observations using the requirements of the new procedure existed to assess the effectiveness of ANO's oversight of contractors.

The team also determined that the licensee initially closed out the effective review for this action based on a review of information through mid-2015. As a result, the licensee failed to incorporate licensee, NIOS, and NRC observations from the 2015 Unit 2 refueling outage, the 95003 supplemental inspection, and the results of recent procedure changes in the effectiveness review provided to the team.

Based on the limited amount of time since Procedure EN-OM-126-ANO-RC was approved and the continued deficiencies identified by the licensee, NIOS and the NRC, the team determined that VO-18 will remain open. The team determined that the corrective actions for the following items need to be reviewed to determine if this item can be closed: response to NIOS 1st Level Escalation Letters NQ-2016-032, NQ-2016-033, and NQ-2016-034, CR-ANO-C-2016-3046, CR-ANO-C-2016-3336, CR-ANO-C-2016-3539, and CR-ANO-C-2016-3540, Vendor Oversight Team meeting minutes, and reviews and observations from Procedure EN-OM-126-ANO-RC.

The team concluded that action VO-18 should remain open. This action will be reviewed in a future inspection after the licensee determines that sufficient monitoring time has passed to monitor performance and determine whether sustained improvement has occurred, and pending completion of an updated effectiveness review by the licensee.

.2 Actions to Address Identifying, Assessing and Correcting Performance Deficiencies

CA-5 Train investigators, managers and Performance Improvement (PI) Staff on proper causal techniques, manager oversight expectations and engagement, and conducting quality reviews of completed cause evaluations and corrective actions. Establish initial and refresher training requirements in these areas. CR-ANO-C-2015-1240 CA-35 and CR-ANO-C-2015-1284 CA-11

During the 95003 supplemental inspection, the NRC team identified that department performance improvement coordinators were not consistently trained and that training provided to cause evaluators was inconsistent. Instead, ANO had provided familiarization guides for department performance improvement coordinators, cause evaluators, and corrective action review board (CARB) members. ANO also determined that training material provided by the fleet for CARB was outdated, not reflective of current procedures, and weak by industry standards. No training on how to conduct organizational and programmatic reviews was provided by the training. The NRC team found that none of the guides included formal training.

To evaluate the licensee's corrective action effectiveness, the team reviewed CR-ANO-C-2015-1240 CA-35, CR-ANO-C-2015-1284 CA-11, and CR-HQN-2014-291 CA-9.

In the response to CR-HQN-2014-291 CA-9, the licensee had established initial training requirements for causal investigators (root and apparent), responsible managers, and CARB members fleetwide. The CR response documented that the performance improvement staff members were either CARB members or investigators and as such, no additional training requirements were established. The team determined that the response provided evidence of updated training and reference guides. The performance improvement manager established the lists of causal investigators, responsible managers, and CARB members and ensured that they received the revised training prior to being assigned to a role in the corrective action program.

The team found that the CR response stated that no requalification for responsible managers was recommended but provided no basis for excluding this group. The licensee responded that responsible managers generally continue on to become full CARB members, which does have periodic refresher training requirements. The team noted that the list of individuals qualified or qualifying as CARB members was four times larger than that of those qualified or qualifying as responsible managers, which supports this position. The team concluded that the licensee had established effective initial and refresher training requirements that encompassed proper causal techniques, manager oversight expectations and engagement, and conducting quality reviews of completed cause evaluations and corrective actions. The licensee also established a

outside nuclear safety culture observer that provided feedback to supervisors and managers on adhering to oversight expectations, engagement, and maintaining high standards for the quality of the cause evaluations.

Based on the actions taken by the licensee, data evaluated by the team, and observations performed on site, the team concluded that the actions taken to address VO-1 were effective. Therefore, CA-5 is closed.

- CA-7 Establish/refine key corrective action program station and group level performance indicators. CR-ANO-C-2015-1240 CA-36 and CR-ANO-C-2015-2836 CA-25

During the 95003 supplemental inspection, the NRC team concurred with ANO's determination that ANO leaders did not consistently uphold standards, manage ANO personnel staffing and training, and monitor performance to maintain corrective action program as a priority for the station. In addition, the NRC team determined that ANO failed to implement a change in trending software to ensure that data was available to support trending.

To evaluate the licensee's corrective action effectiveness, the team reviewed CR-ANO-C-2015-1240 CA-36 and CR-ANO-C-2015-2836 CA-25, CR-ANO-C-2015-2836 CA-35, CR-HQN-2015-1117, CR-ANO-C-2016-3583, Procedures EN-LI-102-ANO-RC, "Corrective Action Program," and FFAM-CAA-DPIC, "Department Performance Improvement Coordinator (DPIC)," Revision 7.

The team reviewed the performance indicators for the corrective action program and identified that 31 performance indicators were originally selected by the fleet performance improvement managers, but only 12 were chosen for implementation. These performance indicators appeared to not be verified at the same rigor as other performance indicators, and department performance improvement coordinators and some principal users of performance indicators for assessing performance and trending were not all aware of these indicators for their organizations. The licensee also indicated that Entergy was close to revising the fleet's corrective action program performance indicators, leading the team to conclude that it would be inappropriate to assess the effectiveness of this action.

The team determined that action CA-7 will remain open. This action will be reviewed in the future, pending finalization of the CAP performance indicators and determination by the licensee that those indicators are being effectively used by station leaders and department performance improvement coordinators to monitor the performance of CAP implementation, including actions in CR-ANO-C-2016-3583 and CR-ANO-C-2016-4459.

- CA-9 Revise the CARB process to require the Performance Improvement Manager to present the status of the condition reporting process using established metrics to the CARB. CR-ANO-C-2015-1240 CA-34

During the 95003 supplemental inspection, the NRC team agreed with ANO's assessment that CARB oversight was not effective in ensuring significant

conditions adverse to quality and other important issues are evaluated in-depth, are thoroughly documented, and that corrective action plans are timely and applicable. The NRC team identified that effectiveness reviews for completed actions focused on whether the actions were completed rather than whether they were effective, identified past challenges to timely improvement of the corrective action program, and that corporate changes made performance improvement more difficult at ANO.

To evaluate the licensee's corrective action effectiveness, the team reviewed CR-ANO-C-2015-1240 CA-34 and Procedures EN-LI-102-ANO-RC, "Corrective Action Program," Revision 4 and EN-FAP-LI-003, "Corrective Action Review Board (CARB) Process," Revision 18. The team also attended a condition review group meeting when the status of the condition reporting process was presented.

The team found that the responsible organization had deviated from CA-34, in that it had revised Procedure EN-LI-102-ANO-RC rather than EN-FAP-LI-003 as directed, and had added the condition review group (with CARB quorum requirements) as an option to where the status was to be presented. The response to CA-34 included a justification for the changes and documented CARB approval.

The team verified that the licensee had incorporated requirements for the Performance Improvement Manager to present the status of the condition reporting process to the CARB on a monthly basis into Procedure EN-LI-102-ANO-RC.

Based on the pending changes to the Entergy fleet corrective action program performance indicators (discussed in CA-07 above), the team determined that CA-9 will remain open. This action will be reviewed during a future inspection, pending finalization of the CAP performance indicators and determination by the licensee that those indicators are being effectively used by station leaders and department performance improvement coordinators to monitor the performance of CAP implementation. The NRC will then attend a sample of CARB meetings to assess the effectiveness of the meeting in assessing and addressing CAP performance trends. The NRC will also review the resolution of updating Procedure EN-FAP-LI-003 and CR-ANO-C-2016-4459.

- CA-11 Revise EN-LI-102 "Corrective Action Program" to require a focused self-assessment every 2 years focused primarily on whether staffing levels support effective corrective action program implementation and oversight.
CR-ANO-C-2015-1240 CA-65

During the 95003 supplemental inspection, the NRC team assessed the scope of ANO's evaluations, interim and planned corrective actions, timeliness of actions, and scheduled effectiveness reviews. The NRC team concurred with ANO's determination that ANO leaders did not consistently uphold standards, manage ANO personnel staffing and training, and monitor performance to maintain corrective action program as a priority for the station.

To evaluate the licensee's corrective action effectiveness, the team reviewed CR-ANO-C-2015-1240 CA-65, and Procedure EN-LI-102-ANO-RC, "Corrective Action Program."

The team verified that the licensee had incorporated guidance to assess the staffing resources supporting the corrective action program during focused self-assessments to be performed approximately every two years into Procedure EN-LI-102-ANO-RC, Revision 0, on July 30, 2015. The team confirmed that this guidance was still in the effective version (Revision 4) of the procedure dated July 21, 2016.

Based on the actions taken by the licensee, action CA-11 is closed.

CA-12 Develop metrics to evaluate and monitor the health of the operating experience program. CR-ANO-C-2015-2832 CA-27 and 28

During the 95003 supplemental inspection, the NRC team's review of ANO's operating experience program identified that the program allowed ANO to decide that no action was needed to address operating experience reports that were determined to be applicable to ANO if sufficient pre-existing barriers existed such that the outcome would be minimized at ANO. The NRC team concluded that although ANO appropriately evaluated whether external operating experience was applicable, the corrective actions developed were sometimes insufficient. In addition, ANO had not established an effective method to evaluate vendor-related operating experience.

To evaluate the licensee's corrective action effectiveness, the team reviewed CR-ANO-C-2015-2832 CA-27 and 28; Procedures EN-OE-100, "Operating Experience Program," Revision 25, EN-OE-100-02, "Operating Experience Evaluations," Revision 1, and PI-003, "Operating Experience Desk Guide," Revision 0; operating experience program health metric data between January and August 2016; and a sample of operating experience evaluations performed in 2016. To gain a better understanding of the actions taken to develop metrics and to evaluate their results, interviews with licensee staff involved in the operating experience program and performance improvement were conducted.

The team determined that new performance indicators to measure the operating experience program has helped the licensee to better identify issues that are affecting the program's health. Actions taken to address those issues has resulted in improving program performance. While previous months required enhanced monitoring, the August 2016 metrics reached an acceptable level.

Based on the actions taken by the licensee, data evaluated by the team, and observations performed on site, action CA-12 is closed.

CO-3 Align ANO and fleet key performance indicators with the industry and establish goals that are challenging and consistent with industry practices. CR-ANO-C-2015-2836 CA-22

During the 95003 supplemental inspection, the NRC team agreed with ANO's assessment that there was a lack of a corporate comprehensive oversight

structure to monitor behaviors, competencies, and processes, and there was also a lack of metrics to recognize that leadership safety values and actions had allowed a significant decline in overall ANO safety performance starting in 2007. This resulted in an incomplete picture of plant performance, which resulted in an overall decline in ANO safety performance.

To evaluate the licensee's corrective action effectiveness, the team reviewed CR-ANO-C-2015-2836 CA-22, CR-HQN-2015-01117, Procedure EN-FAP-OM-005, "Nuclear Performance Indicator Program," Revision 3, as well as industry standard performance indicators.

The team found that industry standards were incorporated into fleet Procedure EN-FAP-OM-005, and were applied to the Nuclear Performance Indicator Program at ANO. ANO's performance indicators were determined to be aligned with industry standards and are scheduled for yearly updates to maintain alignment with industry standards and ensure the goals are challenging. The team concluded that the previous practice of allowing indicators that were not Green to be reported as Green based on a plan to return them to Green prior to the end of the year was eliminated through a procedure revision.

Based on the actions taken by the licensee, data evaluated by the team, and observations performed on site, action CO-3 is closed.

- OC-6 Create a simple tool to analyze externally identified performance issues both
LF-14 individually and in aggregate to present actionable data to the Aggregate
Performance Review Meeting (APRM). CR-ANO-C-2015-2829 CA-23 and
CR-ANO-C-2015-2831 CA-24 and 38

During the 95003 supplemental inspection, the NRC team determined that the multi-year gradual performance decline occurred in part because of policy changes, changing workforce composition, and leadership responses. Performance monitoring tools and management responses were ineffective in recognizing and addressing the decline until they began to impact performance. While nuclear safety remained a priority, actions to balance competing priorities, manage problems, and prioritize workload resulted in reduced safety margins.

To evaluate the licensee's corrective action effectiveness, the team reviewed CR-ANO-C-2015-2829 CA-23 and CR-ANO-C-2015-2831 CA-24 and 38; Procedures EN-LI-121-ANO-RC, "Trending and Performance Review Process," Revision 4, EN-LI-104, "Self-Assessment and Benchmark Process," Revision 12, and FFAM-CAA-DPIC; and the meeting minutes for the July department performance review meetings.

The team determined that although the tool created is, in some cases, being used properly, the sample of data reviewed showed that the new tool is not being used consistently. The team determined that the new tool's usage varied between departments. Without consistent implementation, the team was unable to conclude that this action would result in long-term improvement. ANO completed a self-assessment evaluation and created actions to address problems identified, but had not completed those actions. Therefore, actions OC-6 and LF-14 will remain open. These actions will be reviewed during a future inspection, pending

a determination by the licensee that the new tool is being effectively used by station leaders and department performance improvement coordinators to monitor the performance. The NRC will then attend a sample of department and aggregate performance review meetings to assess the effectiveness of the meeting in assessing and addressing performance trends. The actions in CR-ANO-C-2016-4289 will also be reviewed.

- TR-3 Define and incorporate practical guidance in Procedure EN-LI-121, "Trending and Performance Review," to support consideration of training as a potential solution for organizational performance issues. CR-ANO-C-2015-4626 CA-10

During the 95003 supplemental inspection, the NRC team agreed with ANO's assessment that ANO leaders were not consistently and effectively using the performance analysis worksheet to identify training as a solution for some organizational performance issues, and were not sufficiently committed to training as a solution for weaknesses in organizational performance.

To evaluate the licensee's corrective action effectiveness, the team reviewed CR-ANO-C-2015-4626 CA-10 and Procedures EN-LI-121 and EN-LI-121-ANO-RC.

The team determined that the licensee created site-specific Procedure EN-LI-121-ANO-RC to incorporate several changes, including creating a worksheet to evaluate whether training should be used as part of the solution to the issue. In addition, guidance was placed into the procedure to ensure a consistent application of the training needs analysis across various departments and performance issues at department performance review meetings and aggregate performance review meetings. The team reviewed various condition review group interactions and observed that this guidance and worksheet were being used effectively. The team also reviewed the resulting corrective actions to consider work order changes, procedure improvement forms, or training evaluation analysis requests.

Based on the actions taken by the licensee, data evaluated by the team, and observations performed on site, action TR-3 is closed.

.3 Actions to Address Human Performance Issues

- LF-4 As an interim action, establish weekly leadership alignment meetings for supervisors and above to reinforce actions and behaviors needed to achieve recovery objectives. CR-ANO-C-2015-2829 CA-33 and 38

During the 95003 supplemental inspection, the NRC team agreed with ANO's assessment that leader communications: lacked sufficient face-to-face engagement; message content intended to align the workforce had not been effective in creating a sense of urgency and teamwork in the resolution of ANO's decline in performance; and have not reinforced safety values, vision and strategy, stated goals and progress, and aligned and engaged the leadership team.

To evaluate the licensee's corrective action effectiveness, the team reviewed CR-ANO-C-2015-2829 CA-33 and 38, Procedure EN-FAP-OM-001, "Leadership Forums for Continuous Improvement," Revision 20, and observed several leadership and alignment meetings.

The team determined that ANO had established a weekly Leadership and Alignment meeting with mandatory attendance for supervisors and above. The team attended several meetings and reviewed approximately 6 months of meeting minutes and concluded that the discussions during those meetings were reinforcing actions and behaviors needed to achieve recovery objectives. Discussions of key concepts and improvement items occurred at each meeting, as well as a review of the previous week's key items. The team also observed the presentation of several supervisor's face-to-face engagement with the work force and the resulting pluses and deltas, and determined that those work group meetings presented consistent messages from those discussed among the leaders, ensuring alignment between each level of the organization.

Based on the actions taken by the licensee, data evaluated by the team, and observations performed on site, action LF-4 is closed.

- LF-8 As an interim measure, establish and implement external coaching for a sample of department and station performance review meetings in the Trending and Performance Review process. CR-ANO-C-2015-2829 CA-24 and 40

During the 95003 supplemental inspection, the NRC team agreed with ANO's assessment that leaders had not established an adequate infrastructure to support nuclear safety culture behaviors; leaders did not have adequate focus on developing leaders and their performance in reinforcing standards; and some leaders lack the skill set to reinforce standards.

To evaluate the licensee's corrective action effectiveness, the team reviewed CR-ANO-C-2015-2829 CA-24 and 40, LO-ALO-C-2016-00044, and Procedure EN-LI-121-ANO-RC. Interviews were conducted with licensee staff knowledgeable of department performance review meeting and aggregate performance review meeting processes.

The team reviewed the summaries of department performance review meeting and aggregate performance review meeting sessions observed by external coaches between January and July 2016. Evidence of corrective action based on the assessments was also reviewed by the team. The external coach identified numerous items needing improvement during the meetings. The licensee documented these issues in CRs and developed corrective actions, including procedure changes, training evaluation requests, coaching and mentoring. An interim effectiveness review performed by an external coach in August 2016 resulted in the development of further corrective action to improve specific departments' implementation of the performance review process. The external coach identified that the departments' implementation of procedures in preparation for the meetings varied without any guidance. A full effectiveness review is scheduled in conjunction with the effectiveness review for Procedure EN-LI-121-ANO-RC revisions in November 2016 (CR-ANO-C-2015-2829 CA-22).

Based on the actions taken by the licensee, data evaluated by the team, and observations performed on site, action LF-8 is closed.

- LF-10 Establish and implement a paired observation program. This is a “coach the
NF-10 coach” program to improve the quality of interactions between supervisors and those they supervise. CR-ANO-C-2015-2829 CA-34 and 49

During the 95003 supplemental inspection, the NRC team identified that the paired observation program was not always effective. For example, during a paired observation between an Assistant Operations Manager and a Mechanical Maintenance Supervisor, the Assistant Operations Manager stepped out of his paired observer role and focused his attention on assisting the Maintenance Supervisor in troubleshooting an activity and working directly with operations staff in making decisions affecting the work activity.

To evaluate the licensee’s corrective action effectiveness, the team reviewed CR-ANO-C-2015-2829 CA-34 and 49, and Procedures PI-001, “Paired Observation Program,” Revision 1, and PI-002, “Behavior Based Safety,” Revision 0.

The team reviewed data generated from the paired observation program and the nuclear professional program, and conducted field observations of these programs to determine whether ANO was effectively implementing the programs. The team concluded that data gathered from these programs was being used to inform all levels of the workforce. Supervisors and managers were trending the data to determine which areas still need improvement and are focusing future interactions on those deltas.

Based on the actions taken by the licensee, data evaluated by the team, and observations performed on site, actions LF-10 and NF-10 are closed.

- PQ-3 Perform scoping reviews to assess extent of procedure and work instruction quality issues. CR-ANO-C-2015-3033 CA-03, 04, 05, 06, 07, 08, 09 and 12

During the 95003 supplemental inspection, the NRC team identified that planners typically only reviewed the feedback on the last work order and not the work order feedback log when planning for the next job. In response, ANO developed actions to assess the extent of work instruction quality issues, and to conduct industry certification training for procedure writers.

To evaluate the licensee’s corrective action effectiveness, the team reviewed CR-ANO-C-2015-3033 CA-03, 04, 05, 06, 07, 08, 09, and 12; Procedures PPA AP-907-005, “Procedure Writers Manual,” Revision 2, OP 1015.030, “Procedure Writers Guide,” Revision 19, COPG-001, “Operations Procedure Writers Desk Guide,” Revision 24, CPG-001, “ANO Procedure Writers Guide,” Revision 0, and EN-WM-105-ANO-RC, “Work Planning Guide,” Revision 0; Procedure Quality Improvement Plan; and 6 months of procedure issues entered into the licensee’s corrective action program.

The team reviewed the licensee’s current procedures and guidance for procedure writing and compared it to industry standard Procedure

PPA AP-907-005. This review found that the licensee currently had two sets of guidance on procedure writing, one for the procedures that had been upgraded to industry standards, and one for procedures that had not yet been upgraded. Due to the extent of the procedure upgrade process, the licensee planned to have these two sets of guidance in effect for an extended period while procedures were systematically upgraded in priority order. This was intended to permit making small changes needed for immediate work without having to upgrade the entire procedure. However, once all procedures have been upgraded, the older guidance will be superseded by the new Procedure CPG-001 with specific attachments for writing departmental procedures. The team concluded that this was a reasonable approach.

The licensee used the checklist in the industry standard Procedure PPA AP-907-005 to assess the extent of procedure and work instruction quality issues. Licensee staff assessed 66 procedures (including operations, chemistry, radiation protection, maintenance, engineering, work control, and administrative procedures), and nine work instructions and found that the average document satisfied roughly 83 percent of the checklist criteria. The team confirmed that the licensee implemented all checklist criteria from the industry standard in the new ANO procedure. The licensee determined that the most common deviations from industry standards involved human factoring to ensure clarity, including:

- Inconsistent emphasis on action verbs
- Inadequate use of sign-offs for prerequisites, initial conditions, and procedure steps
- Prerequisite sections not always included in procedures
- Vague terminology necessitated use of judgment, which could challenge consistent implementation
- Action steps inappropriately included in limits and precautions section, and Notes, Cautions and Warnings

The team also interviewed various craft and operations personnel to discuss the procedure improvement process and the current state of procedures at ANO. Half of those interviewed mentioned how the procedure improvement process had a history of being backed up with changes that were unlikely to be done by the next time the procedure was to be used. However, personnel discussed how the process has been improving over the past 12 months since additional staffing was assigned to review Procedure Improvement Forms. The team verified these statements by reviewing CRs between March and September 2016 involving procedure improvement and comparing them to the December 2015 data provided in the licensee's Procedure Quality Improvement Plan.

Based on the actions taken by the licensee, data evaluated by the team, and observations performed on site, action PQ-3 is closed.

PQ-5 Risk rank station procedures as safety significant, important, or normal to facilitate procedure upgrade project scoping. CR-ANO-C-2015-3033 CA-13

During the 95003 supplemental inspection, the NRC team agreed with ANO's assessment that the leadership team had not consistently provided the organizational structure, staff priorities, or dedicated resources to support high quality procedures and work instructions, and had not consistently applied current industry guidance for procedure content, structure, and human factoring.

To evaluate the licensee's corrective action effectiveness, the team reviewed CR-ANO-C-2015-3033 CA-13, CR-ANO-C-2015-00850, Unit 1 and Unit 2 Probabilistic Safety Analysis Summaries, the Procedure Quality Project Plan, and Procedures PPA AP-907-005, and CPG-001.

Licensee staff applied industry guidance for procedure content, structure, and human factoring by implementing industry standard Procedure PPA AP-907-005. The team found the licensee had adequately used this guidance in the creation of Procedure CPG-001, which will be used to upgrade all site procedures.

The team identified that the licensee failed to include the Unit 1 Control Rod Drive system procedures in the category of "Safety Significant," which was required due to the system being safety-related. The licensee updated their Procedure Quality Project Plan to include the procedure and will upgrade the procedure per the current schedule.

The team also identified that ANO's procedure ranking did not take the most recent revision of the Unit 1 Probabilistic Safety Assessment (PSA) Summary. The procedure ranking was scheduled to be complete prior to the PSA update, and did not include a verification that system risk ranking did not change following the PSA update. The team identified that the new Unit 1 PSA Summary showed that two systems, nuclear service water and control rod drive, had increased in safety significance and should therefore be ranked as "Safety Significant" instead of "Important." The licensee acknowledged that the procedure ranking was not fully consistent with the new PSA information and scheduled the upgrades for the procedures for the two systems appropriately.

Based on the actions taken by the licensee, data evaluated by the team, and observations performed on site, action PQ-5 is closed.

.4 Actions to Address Equipment Reliability and Engineering Program Deficiencies

DM-20 Develop and implement a supply vs. demand model and metrics to determine and monitor resource needs to meet work load demand. The metrics will be used to measure resource demand and supply so that scheduled work has the correct resources assigned to complete the work scope. CR-ANO-C-2015-3034 CA-22 and 28

During the 95003 supplemental inspection, the NRC team identified that ANO planned work assuming that all maintenance workers would be available to support work. This necessitated that any emergent work be addressed by the fix-it-now team, or else some planned work must be rescheduled. As a result,

emergent maintenance frequently disrupted planned work. Work was frequently delayed or removed from the schedule because preparations were not completed prior to equipment being taken out of service. Examples included unavailable workers, required parts were not available, or incomplete maintenance risk evaluations. The fix-it-now team was expected to work off minor maintenance and backlog work, but because a work plan did not exist, workers pursued other activities.

To evaluate the licensee's corrective action effectiveness, the team reviewed CR-ANO-C-2015-3034 CA-22 and 28, Procedure EN-LI-104 and T+1 Meeting Weekly Critique.

The team determined that the new supply vs. demand model did not provide an easily interpretable comparison of the supply and demand model. The work hours scheduled for planned work frequently exceeded the available work hours with the existing maintenance personnel, necessitating scheduling overtime into weekly plans, or relying on the sharing of resources. In addition, the team noted the following unrealistic assumptions associated with the model:

- weekly schedules did not account for vacation or sick leave,
- all emergent work was assumed to be assigned to the fix-it-now team, despite program and resource constraints that limit the type of work the fix-it-now team may perform, and
- examples were noted where expected resource sharing would not work because both organizations were scheduled to perform more work than they could accomplish.

As a result of the flawed assumptions, the team concluded that the new supply vs. demand model did not accurately represent the resources available to accomplish work such that scheduled work frequently exceeded the available resources. In addition, interviews indicated that walkdowns and training are sometimes postponed or cancelled to account for emergent work when the fix-it-now team is not sufficient. Due to these issues, the team concluded that the new supply vs. demand model was not an effective tool to ensure work scheduling and implementation was effective, or in identifying resource shortages. Interviews with various organizations about staffing determined that staffing was still not adequate to support scheduled work. The licensee acknowledged these observations and planned to review the staffing data gathered by the various assessment and review the aggregate work schedule to compare the availability of each work department to the amount of scheduled work to determine if the staffing data is an accurate reflection of work performed. This review will account for training support, walkdowns, advanced qualifications, procedure reviews, etc.

The team determined that action DM-20 will remain open. This action will be reviewed during a future inspection, pending a determination by the licensee that the new tool is effectively represents the resources available to perform scheduled work and is being effectively used to match work and available resources. The team determined that all of the original items need to be reviewed along with any new information that the licensee has developed to

either describe the supply vs. demand model that they are using or the basis behind a new model, including CR-ANO-C-2016-4231 and CR-ANO-C-2016-4267.

.5 Actions to Address Safety Culture Issues

Three similar actions were created in the ANO Comprehensive Recovery Plan to observe and provide feedback on safety culture behaviors at meetings. While each action was being implemented by the same condition report action, each area action plan was addressing slightly different problems and therefore intended slightly different outcomes. Due to the similarity of actions, they were reviewed together by the team.

- CA-2 Establish a Nuclear Safety Culture Observer function and expectations to observe and provide feedback on leader behaviors (nuclear safety culture and safety conscience work environment) in key forums and to provide trends for review by the Nuclear Safety Culture Monitoring Panel. CR-ANO-C-2015-2829, CA-31
- LF-9 Establish a Nuclear Safety Culture Observer function to observe and provide feedback on leader behaviors in key forums and to provide observation data for review by the Nuclear Safety Culture Monitoring Panel. CR-ANO-C-2015-2829, CA-31
- SC-14 Establish and implement a Nuclear Safety Culture Observations process including elements of leader behaviors, nuclear safety culture, and safety conscience work environment. The observer monitors leader performance on a daily basis and provides feedback to correct adverse trends in behaviors. CR ANO-C-2015-2829, CA-31

During the 95003 supplemental inspection, the NRC team noted that ANO had identified that the site did not have an adequate explicit management focus on safety culture and the associated infrastructure to support a healthy nuclear safety culture. This apparent cause allowed the specific nuclear safety culture weaknesses to exist at ANO and affected the ability of the leadership team to recognize and address the overall decline in nuclear safety culture.

To evaluate the licensee's corrective action effectiveness, the team reviewed CR-ANO-2015-2829 CA-31, nuclear safety culture observation database entries between March and August 2016, and the minutes from the past four Nuclear Safety Culture Monitoring Panel meetings. The team also attended a number of ANO meetings to observe how the nuclear safety culture observer process identified issues and provided feedback, as well as observing how that feedback was received.

The corrective action directed the licensee to establish and implement a nuclear safety culture observer process and to assign a leader for selected ANO meetings, such as:

- operational focus meetings
- CARB meetings

- leadership and alignment meetings
- department performance review meetings
- aggregate performance review meeting
- bridge call meetings

The safety culture observer was to monitor behaviors and provide constructive feedback at the end of meetings. This corrective action also directed the licensee to establish a nuclear safety culture observation form to include the top leader behaviors to be demonstrated and reinforced. It stated, in part, that while the behaviors monitored may change over time, the form should include the following, or similarly stated, ten specific leadership attributes/behaviors.

The team found that the licensee had established the nuclear safety culture observer process in Procedure EN-QV-136-ANO-RC, "Nuclear Safety Culture Monitoring," Revision 1, which directed the meeting chairperson to designate an observer for the following meetings:

- operational focus meetings
- plant health committee meetings
- CARB meetings
- aggregate performance review meetings
- critical evolution meetings

The revised procedure did not include all of the meetings listed in the corrective action assignment, and no criteria for which meetings to include or exclude were documented. The team noted that the leadership and alignment, department performance review, and bridge call meetings were listed in the corrective action but it did include the plant health committee meeting, which was not listed in the corrective action assignment. While the corrective action did not require all of the meetings listed to have a nuclear safety culture observer assigned, the team noted that the action was closed and approved by the closure review board without challenging or documenting the basis for the differences between the specified action and the completed action. The team also noted that while SC-14 was intended to have the observer monitor leader performance on a daily basis, the meetings selected did not assure monitoring would be performed on a daily basis, so the team was unable to conclude that the action was sufficient to close SC-14.

The team noted that the nuclear safety culture observation form did not directly include the ten leadership attributes/behaviors listed in the corrective action, nor did the corrective action response document a comparison between the attributes/behaviors actually selected for inclusion on the form to demonstrate that the form encompassed the attributed/behaviors listed in the corrective action. Since the action was not completed as written, it was inappropriate to close the action without adequate documentation. However, the team confirmed that the Procedure EN-QV-136-ANO-RC adequately addressed the inclusion of the ten leadership attributes/behaviors by incorporating all of the "Traits of a Healthy Nuclear Safety Culture" in the safety culture observation form. Therefore, the team concluded that the safety culture observation form met the intent of the associated action.

The team found that the licensee had established the nuclear safety culture observer process using two external experts as observers and that the corrective action directed that ANO keep the process in place until completion of Unit 1 refueling outage 1R26 (fall of 2016) with at least one external observer. At the time of the inspection, the licensee had one external observer on site who was providing coaching and mentoring to licensee personnel who were performing the function of the nuclear safety culture observer. The licensee was transitioning to having the observations be performed by licensee personnel. The team concluded that these initial observations performed by both the external observer and the licensee personnel were providing meaningful and effective feedback meetings. Supervisors and managers have been responsive to feedback and have started to exhibit self-correcting behaviors during the meetings. However, the team concluded that there was not enough examples of using ANO managers as safety culture observers to determine the effectiveness of feedback to close these items.

The team found that the nuclear safety culture monitoring panel and senior leadership had been apprised of the findings and trends from the nuclear safety culture observations, which afforded senior management the opportunity to monitor and provide direction associated with the site nuclear safety culture. The team also found that while the observations listed in the nuclear safety culture database appeared to be objective and independent, it was not clear whether these observations had been provided by the external experts or by internal staff members.

The team determined that CA-2, LF-9, and SC-14 will remain open. These actions will be reviewed during a future inspection after the external observers/coaches have left and the licensee has determined that the station personnel assigned to be safety culture monitors are providing effective feedback. The team will then review CR-ANO-C-2016-3774, observe a sample of meetings, assess which meetings are being monitored, and review completed nuclear safety culture observation forms to determine the effectiveness of the ANO nuclear safety culture observer program.

- DM-2 Establish a decision making nuclear safety culture observation form to include the top leader behaviors to be demonstrated and reinforced at ANO meetings. The form should include decision making practices that emphasize prudent choices over those that are simply allowable. CR-ANO-C-2015-2832 CA-41

During the 95003 supplemental inspection, the NRC team noted that ANO identified that decision making at all levels in the ANO organization failed to recognize, mitigate and manage risk. Multiple examples in prior NRC findings and ANO recovery evaluations indicated that poor decision making at ANO had allowed design and safety margins to be eroded. The NRC team determined that ANO had not recently performed any periodic assessments. ANO personnel stated that such a review was only required if deemed necessary by the Corrective Action and Assessment Manager.

To evaluate the licensee's corrective action effectiveness, the team reviewed CR-ANO-C-2015-2832 CA-41, Procedure EN-QV-136-ANO-RC, and the nuclear safety culture observation database entries between March and August 2016.

The corrective action directed the licensee to establish a decision making nuclear safety culture observation form to include top leader behaviors to be demonstrated and reinforced at ANO meetings to support implementing the guidance in Procedure EN-QV-136-ANO-RC. The corrective action stated that the form should include decision making practices that emphasize prudent choices over those that are simply allowable including: (1) Decisions are developed with a consistent structure, (2) Contrary opinions are resolved, (3) Bases for decisions are understood, and (4) Decisions are documented appropriately. The corrective action stated that the intent of this action was to observe that decision making behaviors are observed and coached as appropriate.

The team found that instead of specifically list the four decision making practices from the corrective action, the corrective action response described how "Traits of a Healthy Nuclear Safety Culture" addressed each one of those practices. The team concluded that the licensee's nuclear safety culture observation form was adequate as it incorporated all of the corrective action requirements and went above and beyond to included all of the "Traits of a Healthy Nuclear Safety Culture."

Based on the actions taken by the licensee, data evaluated by the team, and observations performed on site, action DM-2 is closed.

4OA6 Meetings, Including Exit

Exit Meeting Summary

On October 6, 2016, the inspectors presented the inspection results to Mr. R. Anderson, Site Vice President, and other members of the licensee staff. The licensee acknowledged the issues presented. The licensee confirmed that any proprietary information reviewed by the inspectors had been returned or destroyed.

ATTACHMENTS:

1. Supplemental Information
2. Information Request

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee Personnel

T. Arnold, Training Manager
L. Blocker, Nuclear Independent Oversight Manager
B. Bayer, Maintenance Manager
P. Butler, Design and Program Engineering Manager
C. Couch, Department Performance Improvement Coordinator
J. Couch, Coordinator Safety
D. Edgell, Recovery Manager
C. Garbe, Engineering
B. Gordon, Senior Manager Site Projects
J. Gray, Operations Department Performance Improvement Coordinator
E. Harris, Corporate Quality Assurance Manager
G. Hudnall, Corrective Action Program Manager
D. James, Recovery Director
D. Marvel, Recovery Manager
L. Marvin, Employee Concerns Program Coordinator
N. Mosher, Regulatory Assurance
L. Nietert, Operating Experience Specialist
S. Pyle, Regulatory Assurance Manager
G. Stephenson, Performance Improvement
G. Sullins, Regulatory and Performance Improvement Director
P. Sullivan, Production Manager
G. Thompson, Performance Improvement Manager
J. Toben, Nuclear Safety Culture Manager
C. Warren, Advisor to Site Vice President

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Discussed

05000313/2013012-04	VIO	Unit 1 - Failure to Follow the Materials Handling Program during the Unit 1 Generator Stator Move (Section 4OA2.5)
05000368/2013012-05	VIO	Unit 2 - Failure to Follow the Materials Handling Program during the Unit 1 Generator Stator Move (Section 4OA2.5)

LIST OF CONFIRMATORY ACTION LETTER ITEMS CLOSED AND DISCUSSED

Closed

Significant Performance Deficiency

VO-1 (Section 4OA5.1)

VO-4 (Section 4OA5.1)

Identifying, Assessing and Correcting Performance Deficiencies

CA-5 (Section 4OA5.2)

CA-11 (Section 4OA5.2)

CA-12 (Section 4OA5.2)

CO-3 (Section 4OA5.2)

TR-3 (Section 4OA5.2)

Human Performance

LF-4 (Section 4OA5.3)

LF-8 (Section 4OA5.3)

LF-10 (Section 4OA5.3)

NF-10 (Section 4OA5.3)

PQ-3 (Section 4OA5.3)

PQ-5 (Section 4OA5.3)

Safety Culture

DM-2 (Section 4OA5.5)

Discussed

Significant Performance Deficiency

VO-18 (Section 4OA5.1)

Identifying, Assessing and Correcting Performance Deficiencies

CA-7 (Section 4OA5.2)

CA-9 (Section 4OA5.2)

LF-14 (Section 4OA5.2)

OC-6 (Section 4OA5.2)

Equipment Reliability and Engineering Programs

DM-20 (Section 4OA5.4)

Safety Culture

CA-2 (Section 4OA5.5)

LF-9 (Section 4OA5.5)

SC-14 (Section 4OA5.5)

LIST OF DOCUMENTS REVIEWED

Audits/Self Assessments

<u>Number</u>	<u>Title</u>	<u>Date</u>
	Snapshot, Assessment/Benchmark Report	July 13, 2016
ALO-2016-044 CA 9	Interim Effectiveness Review, APRM/DPRM Process Changes	August 27, 2016
LO-ALO-2014-82	Self-Assessment Title: OE Program	August 10, 2015
LO-HQNLO- 2015-68	Self-Assessment Title: Snapshot Benchmark of B1 Monitoring	December 16, 2015
NQ-2015-057	Nuclear Independent Oversight Surveillance Report QS-2015-ANO-037	March 17, 2016
NQ-2016-032	Nuclear Independent Oversight Surveillance of ANO Comprehensive Recovery Plan – July 2016 Report	August 18, 2016
QA-1-2016-ANO- 1	Fitness for Duty/Access Authorization Audit	July 11, 2016
QA-10-2016- ANO-1	Maintenance Audit Report	July 21, 2016
QA-16-2012- HQN-01	Quality Assurance Audit Report, Audit Area: Security	December 20, 2012
QA-4-2016-ANO- 1	Engineering (Design Control) Audit Report	April 20, 2016
QA-7-2016-ANO- 1	Training Audit Report	May 5, 2016
QS-2015-ANO- 037	Nuclear Oversight follow-up surveillance of Quality Assurance Finding (QAF), CR ANO-C-2014-00437, Cat B.	March 17, 2016

Audits/Self Assessments

<u>Number</u>	<u>Title</u>	<u>Date</u>
QS-2016-ANO-002	Nuclear Independent Oversight Follow-Up Surveillance of the Quality Assurance Finding (QAF) identified during the 2015 Emergency Planning Audit and described in CR-ANO-C-2015-01957.	February 12, 2016
QS-2016-ANO-003	Nuclear Oversight 3rd follow-up for INPO Area for Improvement (MA.1-1) (CR-ANO-C-2013-03003) INPO 'AFI" Maintenance and supplemental workers do not correctly assemble critical equipment to specifications in a few important cases	March 17, 2016
QS-2016-ANO-005	First Nuclear Independent Oversight Follow-up Surveillance of the Quality Assurance Finding (QAF) identified during the 2015 QA Corrective Action Program (CAP) Audit and described in CR-ANO-C-201 5-02321.	March 17, 2016
QS-2016-ANO-008	Nuclear Oversight fifth follow-up surveillance of Quality Assurance Finding (QAF) CR-ANO-C-2014-0379 for ineffective implementation of integrated risk and mitigating strategies	April 28, 2016
QS-2016-ANO-010	Third Nuclear Independent Oversight Follow-Up Surveillance of the Quality Assurance Finding (QAF) Identified during the 2014 Maintenance Audit and described in CR-ANO-C-2014-01912	May 2, 2016
QS-2016-ANO-011	Nuclear Independent Oversight Follow-Up Surveillance of the Quality Assurance Finding (QAF) identified in CR-ANO-C-2015-03263	May 5, 2016
QS-2016-ANO-012	Nuclear Independent Oversight Follow-Up Surveillance of ANO Comprehensive Recovery Plan – April 1, 2016 – May 23, 2016.	June 3, 2016
QS-2016-ANO-015	Nuclear Oversight Follow-up Surveillance for WTHQN-201 6-0049 CA# 17	August 4, 2016

Condition Reports (CR-ANO-)

C-2014-2318	C-2016-1487	C-2016-3559	1-2016-1670	1-2016-2622
C-2015-850	C-2016-2272	C-2016-3573	1-2016-1736	1-2016-2625
C-2015-1240	C-2016-2354	C-2016-3582	1-2016-1880	1-2016-2643
C-2015-2829	C-2016-2358	C-2016-3583	1-2016-2545	1-2016-2701
C-2015-2832	C-2016-2390	C-2016-3746	1-2016-2551	2-2013-2502
C-2015-2838	C-2016-2722	C-2016-3754	1-2016-2556	2-2016-587
C-2015-3031	C-2016-2777	C-2016-3758	1-2016-2560	2-2016-739

C-2015-3033	C-2016-3046	C-2016-3809	1-2016-2562	2-2016-978
C-2015-4626	C-2016-3211	1-2015-4357	1-2016-2563	2-2016-1916
C-2016-134	C-2016-3336	1-2016-957	1-2016-2574	2-2016-3091
C-2016-354	C-2016-3472	1-2016-975	1-2016-2577	2-2016-3107
C-2016-463	C-2016-3476	1-2016-978	1-2016-2578	2-2016-3109
C-2016-488	C-2016-3510	1-2016-1127	1-2016-2580	2-2016-3122
C-2016-504	C-2016-3540	1-2016-1490	1-2016-2589	2-2016-3129
C-2016-766	C-2016-3551	1-2016-1588	1-2016-2597	2-2016-3216
C-2016-782	C-2016-3552	1-2016-1599	1-2016-2607	

Effectiveness Review Challenge Board

<u>Title</u>	<u>Date</u>
Corporate and Independent Oversight	2 nd Quarter 2016
Corrective Action Program	2 nd , 3 rd Quarter 2016
Decision Making and Risk Management	2 nd , 3 rd Quarter 2016
Design and Licensing Basis	2 nd Quarter 2016
Flood Protection	3 rd Quarter 2016
Leadership Fundamentals	2 nd , 3 rd Quarter 2016
Lift Rig and Vendor Oversight	2 nd Quarter 2016
Nuclear Fundamentals	2 nd Quarter 2016
Nuclear Safety Culture	2 nd , 3 rd Quarter 2016
Organizational Capacity	2 nd , 3 rd Quarter 2016
Plant Health	2 nd Quarter 2016
Preventative Maintenance	2 nd Quarter 2016

Effectiveness Review Challenge Board

<u>Title</u>	<u>Date</u>
Procedure and Work Instruction Quality	2 nd Quarter 2016
Training	2 nd Quarter 2016

Procedures

<u>Number</u>	<u>Title</u>	<u>Revision</u>
ANO-PL-01	ANO Leadership Manual	0
COPG-001	Operations Procedure Writers Desk Guide	24
CPG-001	ANO Procedure Writers Guide	0
EN-DC-115	Engineering Change Process	18
EN-DC-213	Engineering Quality Review	6
EN-FAP-LI-002	Project Review Boards	2
EN-FAP-OM-001	Leadership Forums for Continuous Improvement	20
EN-FAP-OM-005	Nuclear Performance Indicator Program	3
EN-FAP-OM-017	Continuous Improvement Program (CIP)	1
EN-FAP-OM-023	Entergy Nuclear Change Management	0
EN-FAP-PM-003	Project Implementation – Segment 1 & 2	1, 3
EN-FAP-PM-004	Project Implementation – Segment 3 & 4	1, 3
EN-FAP-QV-400	Quality Control Hold Point Independent Review	0
EN-IS-114	Fall Protection	11
EN-LI-102-ANO-RC	Corrective Action Program	0, 1, 2, 3, 4
EN-LI-104	Self-Assessment and Benchmark Process	12
EN-LI-106	NRC Correspondence	16
EN-LI-118-ANO-RC	Cause Evaluation Process	2, 3
EN-LI-121	Trending and Performance Review Process	18, 19
EN-LI-121-ANO-RC	Trending and Performance Review Process	0, 1, 2, 3, 4
EN-LI-123-12-ANO-RC	Comprehensive Recovery Plan and Performance Metrics	1
EN-LI-123-A6	Project Review Board Guide	0

Procedures

<u>Number</u>	<u>Title</u>	<u>Revision</u>
EN-NS-220	Managing the Safety/Security Interface	1
EN-OE-100	Operating Experience Program	25
EN-OE-100-02	Operating Experience Evaluations	1
EN-OM-126	Management and Oversight of Supplemental Personnel	0, 1, 2, 3
EN-OM-126- ANO-RC	Management and Oversight of Supplemental Personnel	0
EN-OM-126-03	Qualification of Supplemental Supervisors	3
EN-OM-126-03- ANO-RC	Qualification of Supplemental Supervisors	0
EN-QV-136- ANO-RC	Nuclear Safety Culture Monitoring	1
EN-WM-105- ANO-RC	Work Planning Guide	0
FFAM-CAA- DPIC	Department Performance Improvement Coordinator (DPIC)	7
FFAM-QA- MANAGER	Nuclear Independent Oversight Manager Familiarization Guide	3
FFAM-QA- SUPERVISOR	Quality Assurance Supervisor Familiarization Guide	4
OP 1000.006	Procedure Control	68, 69
OP 1015.030	Procedure Writers Guide	19
OP 1102.002	Plant Startup	104
OP 1402.069	Main Steam Isolation Valve (MSIV) Disassembly, Inspect, Repair & Reassembly	5
OP 2202.002	Plant Heatup	78
PI-001	Paired Observation Program	0, 1
PI-002	Behavior Based Safety Program	0
PI-003	Operating Experience Desk Guide	0

Miscellaneous

<u>Number</u>	<u>Title</u>	<u>Revision</u> <u>Date</u>
13110-033	Entergy ANO Units 1 & 2 Summary Report on Extent of Condition Review of Engineering Changes	1

Miscellaneous

<u>Number</u>	<u>Title</u>	<u>Revision Date</u>
ASLP-MGMT- CAP-01	CAP/PI Training DPIC, RM, PI	
	Leadership and Alignment Meeting Presentations	January – August 2016
	Nuclear Fundamentals Update	July 2016
	Paired Observation Update	July 2016
	Performance Review Meeting Report ANO / Security	May 2016
	Performance Review Meeting Report ANO / Chemistry	July 2016
	Performance Review Meeting Report ANO / Supply Chain	July 2016
	Procedure Quality Project Plan	September 2016
CR-HQN-2015- 1117		
CR-HQN-2016- 207		
CR-HQN-2016- 824		
CR-PLP-2015- 2741		
LO-ALO-C-2016- 44		
OE-NOE-2015- 190 CA 11	NRC-21-EVENT-2015-60-01, Sequoyah Unit 1 Contractor Deviation from Procurement Specifications During Relocation of Reactor Pressure Vessel Material Surveillance Capsules	November 11, 2015
OE-NOE-2015- 214 CA 12	ICES-317756-20151003-(1) Quality Control (QC) Inspections Have Not Been Identified During the Quality Control Inspection Coordinator (QCIC) Review of Work Orders	November 23, 2015
OE-NOE-2015- 246 CA 13	NRC Information Notice (IN) 2015-12, Unaccounted for Error Terms Associated with the Irradiation Testing and Environmental Qualification (EQ) of Important-to-Safety Components	February 3, 2016
OE-NOE-2015- 268 CA 14	NRC-IN-2015-13 – Main Steam Isolation Valve Failure Events	March 29, 2016

Miscellaneous

<u>Number</u>	<u>Title</u>	<u>Revision Date</u>
OE-NOE-2016-8 CA 15	RIS 2015-17, Review and Submission of Updates to Final Safety Analysis Reports, Emergency Preparedness Documents, and Fire Protection Documents	February 10, 2016
OE-NOE-2016-72 CA 9	WANO-ICES-317837-20140214 (S) – Falling Fatality Due to Illegal Crossing of Guard Rail	May 9, 2016
OE-NOE-2016-126 CA 15	CR-WF3-2016-02659-Immediate Sharing – Bulk Hydrogen System	May 18, 2016
OE-NOE-2016-127 CA 12	CR-RBS-2016-1341 Negative Trend in Operations Procedures	June 29, 2016
OE-NOE-2016-151 CA 14	NRC-2015-Reg Guide 5.74 Managing the Safety/Security Interface	July 18, 2016
OE-NOE-2016-187 CA 10	PB4-15-0064-ST-EN-01, Product Bulletin Turbine, Hydraulic Actuator Port Plug, Transportation & Storage, Westinghouse Nuclear Steam Turbines	June 29, 2016
PPA AP-907-005	Procedure Writers Manual	2
PR-PRHQN-2015-464		
PSA-ANO1-01	ANO-1 PRA – Summary Report for Level 1 Model 5p0	0
PSA-ANO2-01	ANO-2 PSA – Summary Report for Level 1 Model 5p0	0
Work Order 392010-01	CV-2691-VALVE	August 9, 2013
Work Order 395233-02	CV-2692-VALVOP	February 7, 2015
Work Order MWO 392017-01	CV-2692-VALVE	August 9, 2013
Work Order 430697-01	CV-2691-VALVE	January 18, 2016
Work Order 430698-01	CV-2692-VALVE	February 10, 2016

Information Request
Biennial Problem Identification and Resolution Inspection
Arkansas Nuclear One
August 3, 2016
Inspection Report: 05000313/2016010 and 05000368/2016010
On-site Inspection Dates: August 29 – September 16, 2016

This inspection will focus on January 1, 2016, through September 16, 2016. All requested information is limited to this period or to the date of this request unless otherwise specified. To the extent possible, the requested information should be provided electronically in word-searchable Adobe PDF (preferred) or Microsoft Office format. Any sensitive information should be provided in hard copy during the team's first week on site; do not provide any sensitive or proprietary information electronically.

Lists of documents ("summary lists") should be provided in a similarly sortable format. Please be prepared to provide any significant updates to this information during the team's first week of on-site inspection. As used in this request, "corrective action documents" refers to condition reports, notifications, action requests, cause evaluations, and/or other similar documents, as applicable to Arkansas Nuclear One.

Please provide the following information no later than August 18, 2016:

1. Document Lists

Note: For these summary lists, please include the document/reference number, the document title, initiation date, current status, and long-text description of the issue.

- a. Summary list of all corrective action documents related to significant conditions adverse to quality that were opened, closed, or evaluated during the period
- b. Summary list of all corrective action documents related to conditions not adverse to quality from June and July 2016
- c. Summary lists of all corrective action documents that were upgraded or downgraded in priority/significance during the period (limited to those downgraded from, or upgraded to, apparent-cause level or higher)
- d. Summary list of all corrective action documents initiated during the period that "roll up" multiple similar or related issues, or that identify a trend
- e. Summary list of safety system deficiencies that required prompt operability determinations (or other engineering evaluations) to provide reasonable assurance of operability
- f. Summary list of backlogs for procedure changes, work order changes, drawing changes, engineering document changes, etc.
- g. Summary list of plant safety issues raised or addressed by the Employee Concerns Program (or equivalent) (sensitive information should be made available during the team's first week on site—do not provide electronically)

2. Full Documents with Attachments

- a. Root Cause Evaluations completed during the period; include a list of any planned or in progress
- b. Apparent Cause Evaluations completed during the period; include a list of any planned or in progress
- c. Quality Assurance audits performed during the period
- d. Audits/surveillances performed during the period on the Corrective Action Program, of individual corrective actions, or of cause evaluations
- e. Functional area self-assessments and non-NRC third-party assessments (e.g., peer assessments performed as part of routine or focused station self- and independent assessment activities; do not include INPO assessments) that were performed or completed during the period; include a list of those that are currently in progress
- f. Any assessments of the safety-conscious work environment
- g. Corrective action documents generated for the following, if they were determined to be applicable (for those determined not to be applicable, provide a summary list):
 - i. Vendor safety information letters (or equivalent) issued or evaluated during the period
 - ii. Other external events and/or Operating Experience evaluated for applicability during the period, include a separate list of "A2" evaluations
- h. Corrective action documents generated for the following:
 - i. Adverse trends in equipment, processes, procedures, or programs that were evaluated during the period, include a separate list of how tracking procedures/work orders were worked was stopped to correct/modify before continuing
 - ii. Action items generated or addressed by offsite review committees during the period
 - iii. NCVs: 2015002-01, 2015003-02, 2015004-01, 2015004-02, 2015008-01, 2015008-03, 2015008-04, 2015008-05, 2016001-01, and 2016001-03

3. Logs and Reports

- a. Corrective action performance trending/tracking information generated during the period and broken down by functional organization (if this information is fully included in item 3.c, it need not be provided separately)
- b. Corrective action effectiveness review reports generated during the period to include average age, due date extensions and performance metrics for apparent cause level and higher conditions, including CARB failures and postponements

- c. Management Review Meeting package, or similar information
- d. Employee Concern Program (or equivalent) logs (sensitive information should be made available during the team's first week on site—do not provide electronically)

4. Procedures

Note: For these procedures, please include all revisions that were in effect at any time during the assessment period.

- a. Corrective action program procedures, to include initiation and evaluation procedures, operability determination procedures, apparent and root cause evaluation/determination procedures, and any other procedures that implement the corrective action program
- b. Quality Assurance program procedures (specific audit procedures are not necessary)
- c. Employee Concerns Program (or equivalent) procedures
- d. Procedures which implement/maintain a Safety Conscious Work Environment

5. Other

- a. List of risk-significant components and systems, ranked by risk worth
- b. Organization charts for plant staff and long-term/permanent contractors
- c. Electronic copies of the UFSAR (or equivalent), technical specifications, and technical specification bases, if available
- d. For each day the team is on site:
 - i. Planned work/maintenance schedule for the station
 - ii. Schedule of management or corrective action review meetings (e.g. operations focus meetings, condition report screening meetings, CARBs, MRMs, challenge meetings for cause evaluations, etc.)
 - iii. Agendas for these meetings

6. Confirmatory Action Letter

- a. Copy of latest Effectiveness Review Challenge Board Quarterly Review for all Area Actions Plans
- b. Closure documents for the following items:
 - i. Significant Performance Deficiencies: DM 9, DM 10, DM 11, FP 6, VO 1, VO 4, VO 18, VO 19, VO 21, VO 23, VO 24, and OC 5, and CO 5

- ii. Identification, Assessment, and Correction of Performance Deficiencies: CO 3, CA 1, CA 5, CA 7, CA 9, CA 10, CA 11, CA 12, CA 15, CA 16, LF 14, and TR 03
- iii. Human Performance: LF 1, LF 4, LF 8, LF 10, NF 10, PQ 3, and PQ 5
- iv. Equipment Reliability and Engineering Programs: DM 20
- v. Safety Culture: CA 2, DM 2, DM 3, LF 9, SC 5, and SC 14

All requested documents should be provided electronically where possible. Regardless of whether they are uploaded to an internet-based file library (e.g., Certrec's IMS), please provide copies on CD or DVD. One copy of the CD or DVD should be provided to the resident inspector at Arkansas Nuclear One; three additional copies should be provided to the team lead, to arrive no later than August 18, 2016:

John Dixon
U.S. NRC Region IV
1600 East Lamar Blvd.
Arlington, TX 76011-4511

PAPERWORK REDUCTION ACT STATEMENT

This request does not contain new or amended information collection requirements subject to the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 et seq.). Existing information collection requirements were approved by the Office of Management and Budget, control number 3150-0011.