



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**
REGION II
245 PEACHTREE CENTER AVENUE NE, SUITE 1200
ATLANTA, GEORGIA 30303-1257

May 4, 2012

Mr. Joseph G. Henry
President
Nuclear Fuel Services, Inc.
P.O. Box 337, MS 123
Erwin, TN 37650

SUBJECT: NUCLEAR FUEL SERVICES, INC. - NRC TEAM INSPECTION REPORT NO. 70-143/2012-007

Dear Mr. Henry:

On April 5, 2012, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection that assessed your progress in addressing the findings identified in the 2009/2010 Independent Safety Culture Assessment (ISCA II) at your Nuclear Fuel Services, Inc. (NFS) facility in Erwin, Tennessee. The inspection afforded NRC the opportunity to identify any weaknesses or deficiencies that may require additional corrective actions. The enclosed inspection report documents the inspection results, which were discussed at the exit meeting on April 5, 2012, with you and other members of your staff.

The inspection examined activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations and with the conditions of your November 16, 2010 Confirmatory Order (Order). The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel.

Based on the results of this inspection, no violations of the Order were identified. However, two unresolved items (URIs) were noted regarding NFS' response to the ISCA II findings. The first URI involved the ISCA II finding, "Implement corrective action program tracking and trending improvements." The NRC determined that your actions to address this ISCA II finding were not fully implemented due to the inconsistent application and analysis of trending information among the various departments of the facility. The second URI involved ISCA II report findings regarding improvements to the overall quality of the corrective action program. The NRC determined that the security and material control and accountability departments were not consistently applying the new corrective action program procedures.

Therefore, per Section III.4.(d) of the Order, these two URIs, and any other weaknesses or deficiencies you identify as part of your own on-going self assessment will require additional corrective actions by June 2012 to comply with the Order. These additional corrective actions will be evaluated at a future inspection to determine compliance with the Order.

In accordance with Title 10 of the Code of Federal Regulations (10 CFR) Section 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosures, and your response, if you choose to provide one, will be made available electronically for public inspection in the NRC Public Document Room or from the NRC's document system (ADAMS), accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>.

Should you have any questions concerning this inspection, please contact us.

Sincerely,

/RA/

Alan J. Blamey, Chief
Fuel Facility Inspection Branch 1
Division of Fuel Facility Inspection

Docket No. 70-143
License No. SNM-124

Enclosure:
NRC Inspection Report No. 70-143/2012-007
w/Attachment: Supplementary Information

cc w/encl:
Christa B. Reed
Director, Operations
Nuclear Fuel Services, Inc.
Electronic Mail Distribution

Mark P. Elliott
Quality, Safety, & Safeguards Director
Nuclear Fuel Services, Inc.
Electronic Mail Distribution

Debra G. Shults
Director, TN Dept. of Environment & Conservation
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cc w/encl: (Cont'd on page 3)

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ADAMS: Yes ACCESSION NUMBER: ML12125A328

SUNSI REVIEW COMPLETE FORM 665 ATTACHED

OFFICE	RII:DFFI	RII:DFFI	RII:DFFI	RII:DFFI			
SIGNATURE	/RA/	/RA/	/RA/	/RA/			
NAME	M Crespo	N Coover	M Romano	M Toth			
DATE	5/ /2012	5/ /2012	5/ /2012	5/ /2012	5/ /2012	5/ /2012	5/ /2012
E-MAIL COPY?	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO

(cc w/encl: cont'd)
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Letter to Mr. Henry from Alan Blamey dated May 4, 2012

SUBJECT: NUCLEAR FUEL SERVICES, INC. - NRC TEAM INSPECTION REPORT NO. 70-143/2012-007

Distribution w/encl:

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U. S. NUCLEAR REGULATORY COMMISSION
REGION II

Docket No.: 70-143

License No.: SNM-124

Report No.: 70-143/2012-007

Licensee: Nuclear Fuel Services, Inc.

Facility: Erwin Facility

Location: Erwin, TN 37650

Dates: April 2, 2012 to April 5, 2012

Inspectors: M. Crespo, Senior Fuel Facility Inspector (Team Lead)
N. Covert, Fuel Facility Inspector (Section A)
J. Foster, Fuel Facility Inspector (Sections C, D, and E)
P. Glenn, Fuel Facility Inspector (Section B)
M. Romano, Fuel Facility Inspector (Sections F and G)
M. Toth, Fuel Facility Inspector (Sections C, D, and E)

Approved by: A. Blamey, Chief
Fuel Facility Inspection Branch 1
Division of Fuel Facility Inspection

Enclosure

EXECUTIVE SUMMARY

Nuclear Fuel Services, Inc. (NFS)
NRC Integrated Inspection Report 70-143/2012-007
April 2 – 5, 2012

The inspection was conducted by regional inspectors during normal and off normal shifts. The inspectors performed a selective examination of NFS activities that were accomplished by tours of the facility, interviews and discussions with NFS personnel, and a review of facility records.

NFS Safety Culture Improvement Plan

On November 16, 2010, NRC issued NFS a Confirmatory Order (Order) that required NFS to develop and implement an appropriate safety culture improvement plan to address the findings identified in the 2009/2010 Independent Safety Culture Assessment (ISCA II). Per Section III.4(d) of the Order, NFS was also required to assess the effectiveness of its improvement plan and implement additional corrective actions for any weaknesses or deficiencies identified by June 2012. During this inspection, two unresolved items (URIs) were identified based on NFS' response to ISCA II findings.

During a review of the Corrective Action Program (CAP) tracking and trending improvements, the inspectors validated the associated procedure for tracking and trending were updated and being used. However, the inspectors identified inconsistent implementation of the trending procedure. In several departments, trend codes were not consistently assigned and in some cases trends were not evaluated, and therefore, no corrective actions were developed to address the trend. The NRC determined that NFS' actions to address this finding were incomplete due to the inconsistent application and analysis of trending information among the various departments at the facility. This issue will be tracked as Unresolved Item (URI) 70-143/2012-007-01.

During a review of the CAP overall quality improvements, the inspectors noted that most of the organizational infrastructure was in place to support the new CAP. However, the Security and Material Control and Accountability departments were not consistently entering information into the CAP, and investigations were not performed at the levels consistent with the CAP. The inconsistent application of the CAP will be tracked as URI 70-143/2012-007-02.

Therefore, per Section III.4(d) of the Order, these two URIs, and any other weaknesses or deficiencies you identify as part of NFS' on-going self assessment will require additional corrective actions by June 2012 to comply with the Order.

Attachment

Key Points of Contact
List of Items Opened, Closed, and Discussed
Inspection Procedures Used
Documents Reviewed
List of Acronyms Used

REPORT DETAILS

Summary of Plant Status

Normal operations were on-going during the inspection period with the following process areas operating: 1) Naval Fuel Manufacturing Facility; 2) Blended Low Enriched Uranium Preparation Facility, which included the Uranium (U) -Oxide, U-Metal, Solvent Extraction, and the down-blending lines; and 3) Building 301 Commercial Development lines, which included the Column Dissolvers and the Ammonium Diuranate system.

Background and Inspection Approach

Confirmatory Order (Order), EA-10-076, dated November 16, 2010, required NFS to develop and implement an appropriate safety culture improvement plan to address the findings identified in the 2009/2010 Independent Safety Culture Assessment (ISCA II), provided to NRC on June 29, 2010 [ML1018200960]. Per Section III.4(d) of the Order, NFS was also required to assess the effectiveness of its improvement plan and implement additional corrective actions for any weaknesses or deficiencies identified by June 2012. During this inspection, NFS was conducting an additional self-assessment of its actions to address the ISCA II report findings and the results of that self-assessment will be evaluated during a future inspection.

The ISCA II report identified 110 findings and characterized them into seven topical areas. Twenty eight findings were characterized as high priority findings. This inspection focused on the 28 high priority findings in the seven topical areas and their corrective action items. The results of the inspection were detailed under each of the seven topical areas below.

A. Corrective Action Program (CAP) Effectiveness

1. Inspection Scope and Observations

The inspectors evaluated NFS' actions to address the ISCA II finding regarding senior management accountability and oversight of the safety culture improvement plan (SCIP). The inspectors reviewed five associated corrective actions from the SCIP, the quality assurance (QA) audit and supporting documentation of the completed corrective actions associated with the SCIP high priority findings. The inspectors also reviewed the QA closure standards used in the audit and also validated that procedure NFS-GH-949, "Regulatory Agency Communication Program," had been developed and properly implemented. During the SCIP action closure audit, NFS identified items and classified them as unsatisfactory or satisfactory with comments. The inspectors reviewed NFS' audit results and completed corrective actions.

The inspectors interviewed select personnel designated as SCIP area owners and executive sponsors. The inspectors also interviewed the QA Manager regarding the internal effectiveness review (EFR) audit being performed for 21 selected SCIP corrective actions, the EFR audit methodology, associated findings, and additional corrective actions. At the time of the inspection, one corrective action remained to be evaluated as part of the SCIP action EFR audit. The inspectors did not identify any issues that would prevent NFS from completing the audit by the June 2012 due date.

The inspectors noted that the completion status for some SCIP action items stated “No further actions planned at this time,” as part of the completion notes in the plan. For most cases, the inspectors determined that this statement was justified and explained as part of the closure. The inspectors identified one example of incomplete documentation to address the ISCA II finding related to resources. Of the five recommendations, NFS addressed three with “NFS continues to evaluate staffing levels across the organization. No further action planned at this time.” However, in the documentation provided to inspectors, there was no objective evidence to support that statement. During the week of the inspection, the issue was discussed with NFS and they concurred with the observation. Nuclear Fuel Services also provided additional documentation to the inspectors to support their basis for closure. As a result, the inspectors determined that no issues of significance existed with NFS’ actions to address these findings.

To evaluate the ISCA II finding regarding the implementation of CAP tracking and trending improvements, the inspectors reviewed the one finding, four recommendations, and nine associated corrective actions for CAP tracking and trending improvements. The inspectors conducted interviews and reviewed procedures to validate that revised and newly developed procedures had been put into effect, were being properly implemented by the site, and correctly addressed the issues identified in the ISCA II report.

The inspectors validated that all the associated procedures had been revised and were in effect. In addition, the inspectors did not identify any items of significance with respect to the content of the newly revised or created procedures. However, the inspectors did identify inconsistent implementation of the trending procedure requirements. Specifically, one of the corrective actions stated to assign Department Performance Improvement Coordinators (DPICs) to improve program execution of problem identification. At the time of the inspection, NFS had assigned six DPICs among the operations, engineering, work control, and safety departments. These four departments had implemented the new trending program and exhibited varying levels of performance with respect to this new program. However, the inspectors noted that the remaining departments did not consistently assign trend codes. In addition, the inspectors noted instances of trends not being evaluated, and if they were evaluated, no corrective actions were implemented to address the trend.

The inspectors reviewed procedure, NFS-CAP-004, “Common Factors Analysis,” which was a newly developed procedure to facilitate evaluation of applicable trends. At the time of the inspection, two common cause analyses (CCAs) were in progress and one CCA had been completed (P29400-I12839). The inspectors noted that the completed analysis was thorough, but several of the actions had been extended by approximately one year from the original due date. In addition, a review of the “Trend Analysis” procedure, NFS-CAP-007, stated that trend data would be reviewed on some determined time interval and the results incorporated into a trend analysis report and distributed to the Corrective Action Review Board (CARB) members and DPICs. At the time of the inspection, a trend analysis report had not been performed or an established time interval determined.

In addition, the corrective actions associated with this finding had not been selected as part of the EFR audit, and no additional self assessments or audits were scheduled to be performed on the new CAP tracking and trending program. Therefore, based on the observations above, the inspectors concluded that the actions taken by NFS to address

Finding 2009/2010 AFI-CAP-02 were not fully implemented. In accordance with the Order, NFS was required to plan and implement additional corrective actions to address this finding by June 2012, to be in compliance. NFS' additional actions to address Finding 2009/2010 AFI-CAP-02 will be tracked as Unresolved Item (URI) 70-143/2012-007-01, Deficiencies in tracking and trending in the CAP.

To evaluate NFS' actions regarding the ISCA II findings concerning quality upgrades to the CAP (such as improvements to investigations, corrective actions, and CAP commitments), the inspectors reviewed a total of three findings, 16 recommendations, and 25 associated corrective actions for event investigations, corrective actions, and PIRCS quality and closure improvements. The inspectors conducted interviews and reviewed procedures to verify that newly developed or revised procedures had been put into effect, were being implemented by the site, and addressed the issues identified in the ISCA II report. The inspectors interviewed personnel in different departments including security, operations, maintenance, material control and accountability (MC&A), chemistry, and engineering. In addition, the inspectors interviewed select personnel in different positions and CAP roles, including management, front-line supervisors, CAP Manager and analyst, DPICs, and PIRC Screening Committee attendees. The inspectors attended PIRCS screening committee and Plan of the Day (POD) meetings. The inspectors also reviewed CAP and other departments' metrics, including CAP backlog data, CAP training lesson plans, and attendance rosters.

The inspectors determined that NFS had developed and implemented adequate CAP initiatives to address the high priority findings cited in the ISCA II. Nuclear Fuel Services' CAP structure and procedures were in place to address event investigations, corrective actions, and PIRCS quality and closure improvements. For the corrective actions taken, NFS had revised procedures, trained personnel on the revisions, implemented the revisions, and had some run time on the new process. In addition, an internal QA audit was being performed by NFS for 21 selected SCIP corrective actions to measure effectiveness of their initiatives. Nuclear Fuel Services identified no findings with respect to this item.

The inspectors identified that for most of the departments, the organizational infrastructure was in place to support the new CAP structure. Specifically, NFS had a CAP group including a manager and analysts, four departments had DPICs, and members of most of the department management and senior management staff participated in various CAP and/or metrics meetings. However, the inspectors identified that MC&A and Security departments were much less involved in the new CAP process. The inspectors identified that these two departments did not have DPICs, and the MC&A department was not attending the PIRCS meetings.

Through a review of procedures, PIRCS, MC&A Program Reports, Security logs, and interviews, the inspectors identified additional differences in MC&A's and Security's involvement in the CAP process. Procedure NFS-GH-65, "Problem Identification," revision 6, provided guidance to all NFS' departments for determining when full team root causes, small team root causes, upper tier investigations, and lower tier investigations should be performed. Specific guidance was provided for Security and MC&A with regards to what types of investigations were to be performed for different events. The inspectors identified that when problems occurred, items for these two departments were not consistently entered into PIRCS. In addition, investigations were not performed at the levels consistent with those listed in NFS-GH-65.

The inspectors acknowledged that these two departments maintained sensitive information and special care must be taken when handling this information, especially when handling problem identification and resolution issues. However, even if the departments remained segregated from the facility's CAP, the inspectors determined that the Security and MC&A departments were not consistently applying the new CAP procedures, nor did NFS enforce the same criteria on them. Therefore, based on the observations above, the inspectors concluded that the actions taken by NFS to address Findings AFI-CAP-04, AFI-CAP-06, and AFI-CAP-07 were not fully implemented for Security and MC&A. As a result, NFS' additional actions to address these findings will be tracked as URI 70-143/2012-007-02, Deficiencies in consistent application of the CAP in Security and MC&A.

2. Conclusion

Two URIs were identified involving deficiencies with regard to NFS' actions to address some of the findings from the ISCA II regarding the effectiveness of the CAP.

B. Work Control

1. Inspection Scope and Observations

The inspectors reviewed plant procedures and interviewed several plant employees and managers including, but not limited to operators, front-line supervisors, area supervisors, area managers, and senior management to verify that the work control, equipment reliability, and integrated safety analysis (ISA) programs adequately addressed findings from the ISCA II report. The inspectors observed several meetings including the Plan of the Week (POW), PIRCS screening, and Work Planning meetings. The inspectors also reviewed several closure packages that included documentation demonstrating the completion of required actions that were assessed for each ISCA II finding under work control. The packages included items such as procedure revisions, organization charts, training records, meeting minutes, presentations and handouts, and work packages.

The inspectors reviewed the organizational structure and verified that the work control organization was adequately staffed and included prescribed roles and responsibilities. The inspectors also reviewed the work control process and determined that NFS had a tiered approach to address various levels of work that required the attention of maintenance. The process was methodical in that it required planning, coordination, approval, briefings, post completion considerations, and documentation prior to work execution. Although the process was fairly new in implementation, it had instituted a system of checks and balances.

The inspectors reviewed the Equipment Reliability Program (ERP). During the review, the inspectors determined that NFS had established a clear scope for the program that included ensuring that maintenance activities were effective, equipment was engineered for maintainability, and that persistent and chronic equipment problems were identified and corrected. Additionally, the ERP scope included a data collection system that would aid in determining the root causes of equipment issues and deficiencies. At the time of the inspection, NFS was considering expanding or clarifying the title of the ERP in an effort to provide more focus on the scope of the program.

The inspectors evaluated NFS' efforts associated with increasing the robustness of the ISA program. The inspectors reviewed several procedures that had been created to ensure the documentation of the technical basis for process and equipment modifications prior to implementing the modifications. Specifically, NFS incorporated concepts such as guiding questions and screening criteria to aid evaluations. Also, NFS enhanced the configuration control process by requiring that a technical basis be included in addition to enhancing review requirements for facility changes. Nuclear Fuel Services created a formal qualification program for ISA reviewers that encompassed read and signs, classroom training, internal training, on-the-job training that included various tasks and assignments, and degree/educational requirements. Nuclear Fuel Services also conducted a benchmark study at two fuel facilities in an effort to compare ISA and management measures implementation.

2. Conclusion

Based upon NFS' actions to address the ISCA II findings, no deficiencies or weaknesses were identified in work control.

C. Organizational and Individual Accountability

1. Inspection Scope and Observations

The inspectors reviewed NFS' program initiatives, procedure revisions, and conducted interviews of operators, managers, and an engineer to verify NFS had addressed the findings of the ISCA II report. The inspectors reviewed NFS' initiatives that included stopping in the face of uncertainty, increasing effective oversight of work activities, and holding individuals accountable for their actions. Additionally, the inspectors reviewed meeting schedules, briefing topics, site policies, and employee handouts to verify NFS reinforced these initiatives throughout the facility.

Through interviews with a Senior Engineering Watch (SEW) and the SEW coordinator, the inspectors verified that the roles and responsibilities of the SEW position addressed the finding of increasing effective oversight of work activities. The inspectors noted this position placed an independent and knowledgeable presence on the process floors that assisted operators in problem identification and upset conditions. The inspectors verified that the SEW position carried a stop work authority if they questioned or doubted an operation or action.

The inspectors reviewed a recent revision to the "Comprehensive Assessment Program" procedure that discussed the Senior Management Observation and the Coaching/R+ programs. The inspectors noted these programs allowed management to observe evolutions, question operators, and give immediate feedback that reinforced desired work behaviors. The inspectors verified these program elements addressed increasing management presence and oversight on the process floor.

The inspectors reviewed NFS' evaluation procedure for unusual incidents and noted the inclusion of an evaluation step within the procedure that prompted emergency response coordinators to determine whether a stop work order should be given to mitigate or prevent further damage. The inspectors noted that this evaluation step focused on the issue of how to proceed in the face of uncertainty.

The inspectors reviewed POD and POW agendas, attended a POD meeting, and determined single-point accountability was addressed through these processes. The inspectors noted responsibility was assigned to individuals for specific tasks with assigned due dates and that each person was required to provide a status update for each of their activities. The inspectors noted that various engineering disciplines were required to be in attendance for these meetings.

2. Conclusion

Based upon NFS' current actions to address the ISCA II findings, no deficiencies or weaknesses were identified in organizational and individual accountability.

D. Questioning Attitude

1. Inspection Scope and Observations

The inspectors reviewed meeting notes from an all-employee meeting in November 2009 and an employee handout distributed to the staff in January 2010. The inspectors verified that the meeting notes discussed questioning attitude, decision making, and accountability regarding past events and violations. The inspectors verified that the handout re-enforced the behavioral standards and expectations. The inspectors reviewed procedures to verify that management expectations relative to questioning attitude and organizational behaviors were documented. The inspectors reviewed the expectations and guidelines formalized in a procedure and noted that the guidance to 'display a questioning attitude in a professional and courteous manner' was present.

Through the document reviews, the inspectors verified that NFS' executive management communicated the expectation that all employees and management were expected to demonstrate a questioning attitude. The inspectors reviewed a meeting agenda briefed by NFS' senior management and noted that the agenda topics focused on enhancing safety culture and safety-related performance. The topics included the threshold of uncertainty, managing against workarounds, communications, and the safety over production philosophy.

The inspectors reviewed NFS' safety conscious work environment (SCWE) and safety culture policies and noted expectations for both the hourly and salary workforce were defined. The inspectors determined NFS created a program where management personnel could display organizational values to the workforce by conducting or initiating the following: top down reinforcement of these ideals from senior managers, mandatory 'Path Forward' small group discussions, and issuance of an employee handout to all employees regarding conduct of operations and the safety improvement initiative.

The inspectors reviewed the home page of NFS' internal network and verified that NFS' vision, core values, workplace priorities, and conduct of business attributes, including accountability and questioning attitude, were present. The inspectors noted that NFS' intent for the safety messages on the website was to reinforce the workforce understanding of key safety policies and to serve as a continual reminder of the importance of safety.

2. Conclusion

Based upon NFS' current actions to address the ISCA II findings, no deficiencies or weaknesses were identified in questioning attitude.

E. Safety Conscious Work Environment

1. Inspection Scope and Observations

The inspectors reviewed supervisory training modules and verified that the training emphasized effective communication, team building, and conflict resolution. The inspectors reviewed a SCWE refresher training module that was given to all employees and verified that behavior expectations for maintaining a SCWE were specified in the training. The inspectors verified that NFS formalized the SCWE expectations by providing a SCWE Guide to supervisors and managers.

The inspectors reviewed NFS' safety culture improvement plan and verified that messages and explanations pertaining to organizational values and personnel accountability were documented. The plan contained comprehensive compliance objectives for all employees with a focus on safety and compliance.

The inspectors reviewed procedures and verified that workplace behavior expectations were clarified. The inspectors verified that the procedures specifically addressed actions that could create a chilling effect and mitigation strategies for those actions if they should occur. The procedures included guidance to avoid making negative decisions that may affect the SCWE at the facility and established oversight authority to the Executive Review Board to review and disposition discretions. The inspectors also reviewed NFS' Discipline Policy and noted that the policy laid out clear guidance for Human Resources in the disposition of these actions. The procedures contained a discussion of misconduct which included discriminatory actions against any employee with involvement in a protected activity. The inspectors verified that the programs developed addressed the perceived retaliation from management and peers for raising safety concerns.

The inspectors reviewed elements and standards used in the performance appraisals of supervisors and managers. The inspectors verified that the managers and supervisors had a commitment to uphold organizational values including safety culture. The appraisal process rated the manager's performance on supporting a SCWE and for effectively detecting and taking actions to address chilling effects from harassment, intimidation, retaliation, or discrimination. In the instance that a manager's ratings were low in any one area, the performance appraisal process required that a development plan be formed and improvement was required. Through the establishment of this process, NFS demonstrated the ability to identify, retrain, and/or remove those individuals who were not successful at developing and supporting a SCWE for the employees. The inspectors verified that the process demonstrated intolerance for inappropriate behaviors and noted that the performance appraisal process reinforces organizational behaviors, such as questioning attitude.

2. Conclusion

Based upon NFS' current actions to address the ISCA II findings, no deficiencies or weaknesses were identified in SCWE.

F. Resource Management

1. Inspection Scope and Observations

The inspectors reviewed NFS' actions to address the resource management issues identified in the ISCA II report to determine if they adequately met each of the findings and the requirements of the Order. Specifically, the inspectors looked into staffing and resource management related to departmental workload, task assignments, and backlogs. While the ISCA II findings primarily focused on the Engineering department, they also had recommendations in several other departments, including Training, Work Control, Human Performance, ISA, Industrial Safety, and CAP.

The inspectors interviewed the Engineering Director and several members of the Engineering staff, reviewed new and revised engineering procedures, engineering service requests, and line items in the POD resource loaded schedule. The inspectors also discussed the 2011 Zero Based Budget analysis for tasks and resources in the Engineering department. The inspectors noted that the fully integrated, resource loaded schedule had been in effect for approximately 18 months. This schedule was reviewed and discussed daily at the morning meetings. Tasks were loaded into this database by department and responsible individual. The planners and schedulers took into account the level of effort required and the resources necessary to complete projects. To address the single point of accountability portion of the ISCA II finding, each task had an owner.

The inspectors reviewed the new "Engineering Work Management" procedure, NFS-ENG-009, and discussed the flow of engineering work, requests, and scheduling with the Engineering Director. The DPICs assisted in the scheduling of work, tasks, corrective actions, and investigations for their department and since this was particularly weighted on the engineering group, the DPICs had improved the resource identification and allocation. Engineering service requests were not only included with an owner in the POD, but backlogs were assessed, trended, and discussed with senior management in the monthly metrics meeting.

The inspectors also interviewed the CAP, Training, and the Human Performance Managers. The inspectors discussed the Zero Based Budget analysis done for their respective departments and reviewed the analysis of each. Since the ISCA II report, the CAP department added two staff, the Industrial Safety department added two, the ISA team continued to hire, and the Work Management group had increased its staff. The Training and Human Performance departments' staffs had not increased, but the budget analysis and benchmark results were commensurate with current staffing levels. In addition, the inspectors reviewed the recent meeting minutes from NFS' new Resource Planning Committee that detailed workforce planning and attrition data in light of current and future business development projects. The inspectors determined that NFS was taking appropriate steps to address both attrition rates and workforce succession planning.

2. Conclusion

Based upon NFS' current actions to address the ISCA II findings, no deficiencies or weaknesses were identified in resource management.

G. Technical / Professional Competencies

1. Inspection Scope and Observations

The inspectors reviewed NFS' actions to address the technical and professional competency issues identified in the ISCA II report to determine if they adequately met each of the findings and the requirements of the Order. Specifically, the inspectors looked at leadership development, continuous learning (training and development), specific production and engineering training, the Operating Experience (OE) Program, and the human performance fundamentals and tools for the organization. The inspectors interviewed the Training Manger, Human Resources Director, Director of Quality, Safety, and Safeguards, Human Performance Manager, and several engineers and operators. The inspectors also attended the POD, POW, and human performance team meetings. While the ISCA II findings primarily focused on engineers, the recommendations for training improvements were widespread, including basics of production and human performance training for all NFS employees.

The inspectors discussed NFS' establishment, charter, and path forward for the Senior Training Advisory Committee (STAC). The STAC was formed approximately a year ago and was comprised of several senior managers that met monthly to oversee and direct the training focus. The committee set the strategy for the development and implementation of training, which recently focused on the development of front line supervisors. The inspectors also discussed recent Institute of Nuclear Power Operations (INPO) training that several NFS staff had attended. The inspectors verified that NFS had benchmarked training fundamentals with other nuclear facilities. In addition, the inspectors reviewed the OE program. A relatively new program, the OE program collected, evaluated, and communicated both internal and external experiences. This program was implemented through the DPICs and both the PIRCS and OE screening meetings. The inspectors reviewed several recent screening packages and noted that the sources range from internal PIRCS issues to Department of Energy (DOE), NRC, and INPO data.

The inspectors discussed the Leadership Development and Succession planning strategy with NFS' senior management. The inspectors determined the meetings, content, and path forward were adequate for identifying and cultivating emerging leaders and successors. The inspectors also interviewed the new Human Performance Manager and discussed the status of human performance roll out in the organization. The ISCA II Finding specifically addressed the necessity for human performance tools for knowledge workers and those in the engineering organization. Nuclear Fuel Services established a Process Engineering Human Performance group to look into the process engineering environment and workload two years ago. Since that time, the process and project engineering groups had merged, and the team had begun establishing tools based on INPO 05-002, "Human Performance Tools for Engineering and Other Knowledge Workers." Nuclear Fuel Services was still in the process of establishing additional tools.

The inspectors also reviewed the documentation for several new training and qualification programs, specifically those for process engineers and members of the ISA team. The inspectors determined the training and qualification requirements to be comprehensive and commensurate with the position level. The inspectors noted that additional training plans, specifically the Process Engineering Technical Competency and Development Plans, the Industrial Safety Qualification Plan, and the Site Specific Safety Basis Awareness Training, were still in development.

2. Conclusion

Based upon NFS' current actions to address the ISCA II findings, no deficiencies or weaknesses were identified in technical / professional competencies.

H. Exit Meeting

The inspection scope and results were presented to members of NFS' staff at various meetings throughout the inspection period and were summarized on April 5, 2012, to J. Henry and staff. Nuclear Fuel Services acknowledged the findings. Proprietary information was discussed but not included in the report.

SUPPLEMENTARY INFORMATION

1. KEY POINTS OF CONTACT

NFS personnel

L. Arbogast, Laboratory Operations Manager
J. Birmingham, Human Resources Director
C. Brown, Material Control and Accountability Manager
J. Buckles, Human Performance Manager
R. Dailey, Engineering Director
R. Danna, Section Manager
M. Dotson, Work Management Manager
J. Dunn, Security Supervisor
M. Elliott, Quality, Safety, and Safeguards Director
R. Fletcher, Area Supervisor
K. Greer, Work Control Unit Manager
J. Henry, President
K. Huff, Work Control Planner
N. Jacobs, Senior Engineer Watch Coordinator
J. Lee, Security Operations Manager
N. Kenner, SCIP Manager
N. Marchioni, Employee Concerns Program Coordinator
M. McKinnon, Manufacturing Operations Section Manager
M. Moore, Environmental Protection and Industrial Safety Inspection Manager
J. Nagy, Assurance Director
V. Peterson, Corrective Action Program Manager
A. Rander, Deputy Engineering Director
S. Sanders, Training Manager

2. LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

70-143/2012-007-01	URI	Deficiencies in tracking and trending in the CAP
70-143/2012-007-02	URI	Deficiencies in consistent application of the CAP in Security and MC&A

3. INSPECTION PROCEDURE USED

71152, Problem Identification and Resolution

4. DOCUMENTS REVIEWED

Records:

Maintenance Work Package 152468
Maintenance Work Package 156290
Maintenance Work Request 200151
Closure Documentation – 2009/2010 AFI-WC-03
Closure Documentation – 2009/2010 AFI-WC-04
Closure Documentation – 2009/2010 AFI-WC-05
2011 Integrated Safety Analysis Health Physics Training

Work Control PIRCS Report
 Plan of the Week Package 4/4/12
 PIRCS Screening Package 4/4/12
 SCWE Guide for Supervisors and Managers
 Safety & Compliance Conscious Work Environment Refresher Training
 Employee Handout, Conduct of Operations and Safety Improvement Initiative, 01/13/2012
 All Employee Meeting, Slide Presentations, January 2010
 All Employee Meeting, Slide Presentations, March 2010
 All Employee Meeting, Agenda and Slide Presentation, October 2010
 Employee Commitment Worksheets
 POD/POW Agenda handouts

Procedures:

NFS-OPS-001, Rev. 2, Conduct of Operations
 NFS-GH-945, Rev. 2, Comprehensive Assessment Program
 NFS-GH-946, Rev. 1, Operational Decision Making
 C-HR-11-001-A, Nuclear Fuel Services Expectations and Guidelines
 NFS-MGT-10-023, Executive Review Board
 NFS-HR-04-005, Progressive Discipline Procedure
 NFS-MGT-04-006 Rev. 4, Safety Conscious Work Environment Policy
 NFS-MGT-05-007 Rev. 8, Safety Culture Policy
 NFS-MGT-08-014 Rev. 0, NFS Core Values
 SOG EP-01 Rev. 3, Operational Guidelines for the Evaluation of Unusual Incidents
 NFS-GH-65, Rev. 6, Problem Identification
 NFS-GH-918, Rev. 9 and 10, Directed Investigation program
 NFS-GH-922, Rev. 12, The NFS Problem Identification, Resolution, and Correction System
 NFS-GH-949, Rev. 2, Regulatory Agency Communication Program
 NFS-CAP-009, Rev. 0, The NFS Corrective Action Program
 NFS-CAP-008, Rev. 0, Full and Small Team Investigations
 NFS-CAP-007, Rev. 0, Trend Analysis
 NFS-CAP-004, Rev. 0, Common Factors Analysis
 NFS-CAP-002, Rev. 0, Problem Resolution: Developing Effective Corrective Actions
 NFS-CAP-EFFECT-EVAL, Rev. 0, Assigning and Performing Effectiveness Reviews
 NFS-Q-176, Revs. 4 and 5, Corrective Action Program
 NFS-Q-212, Rev. 1, Nonconformance and Corrective Action Trend Analysis Reporting for
 the Fuel Program
 EP-01, Rev. 3, Standard Operational Guidelines (SOG) for Evaluation of Unusual Incidents

Self-Assessments

QA-12-01, SCIP Audit
 QA-12-03, Management Measures – Procedures, Training and Qualifications
 QA-12-13, Quality Assurance Audit

Problem Reports

33596, 29658, 33759, 32814, 30661, 31857, 31870, 25410, 30649, 29717, 33092, 31870

Investigations

12894, 14211, 13611, 12839, 13938

Corrective Actions

17234, 10713, 16956, 16951, 16953, 15504, 15501, 15351, 16956

Other Documents:

2010 Performance Review- Managers Form
 2009/2010 Independent Safety Culture Assessment (ISCA II)
 NFS Safety Culture Improvement Plan
 Training records for Effective Performance Reviews Training to managers
 Toolbox Training for PIRCS 26015, 29658
 Quality Assurance (QA) SCIP Action Effectiveness review, Attachment 1
 PIRCS Screening Meeting packages
 MCA Program Report, February 2012

5. LIST OF ACRONYMS

CAP	Corrective Action Program
CARB	Corrective Action Review Board
CCA	Common Cause Analysis
DOE	Department of Energy
DPIC	Department Performance Improvement Coordinator
EA	Enforcement Action
EFR	Effectiveness Review
ERP	Equipment Reliability Program
INPO	Institute of Nuclear Power Operators
ISA	Integrated Safety Analysis
ISCA II	2009/2010 Independent Safety Culture Assessment
MC&A	Material Control and Accounting
NFS	Nuclear Fuel Services
NRC	Nuclear Regulatory Commission
OE	Operating Experience
Order	Confirmatory Order
PIRCS	Problem, Identification, Resolution and Correction System
POD	Plan of the Day
POW	Plan of the Week
QA	Quality Assurance
SCIP	Safety Culture Improvement Plan
SCWE	Safety Conscious Work Environment
SEW	Senior Engineering Watch
STAC	Senior Training Advisory Committee
U	Uranium
URI	Unresolved Item